

Cumulative Subject Index for Volumes 163–169¹

- A**
- Acetamide
in preparation of lead–calcium hydroxyapatite solid solutions by wet method, **163**, 27
- Acetate salts
as ion sources for LiMn₂O₄ spinels, effects on synthesis with tartaric acid gel and electrochemical performance, **163**, 231
- Acid treatment
delithiation of LiMnO₂, **169**, 66
delithiation of LiNiO₂, **163**, 340
- Actinides
long-life, transmutation, rare earth tungsten bronzes as inert matrices for, **169**, 182
- Adsorption
hydrogen by CeNiGa, **168**, 28
- Alkali metal nitrates
reactions with metal salts, properties of ZrO₂ formed by, role of metal precursors and alkali metal ions, **163**, 202
- Alkali metals
alkali metal–In–Bi systems, Zintl phases in, synthesis and structure, **163**, 436
- Alluaudite structure
lithium in, crystal chemistry, **163**, 194
- Aluminosilicate wet gel
transformation to solid state, **165**, 111
- Aluminum
addition to LiNiO₂, effect on formation of layer-structured compound, **167**, 97
AlB₂, electronic structure and normal-state conductivity, **169**, 168
AlGaPON mixed nitrided galloaluminophosphates, structural analysis by EELS, XAS, and XPS, **163**, 163
 α -Al₂O₃ (0001) substrates for preparation of (111)-oriented epitaxial Fe_{3–x}O₄ films, **163**, 239
AlPO₄-5/laser dye composites, host–guest interactions and laser activity in, **167**, 302
[Al₃P₄O₁₆][(CH₃)₂NHCH₂CH₂NH(CH₃)₂][H₃O], synthesis and characterization, **167**, 282
alumina–yttria system, high-energy ball milling in, modeling, **164**, 88
aluminophosphate open framework materials, crystallization from fluoride media, cyclam as structure-directed agent in, **167**, 267
aluminosilicate wet gel, transformation to solid state, **165**, 111
Ca₂Al³⁺(OH)₆Cl·2H₂O, X-ray powder diffraction structural study, **167**, 137
Ca₃CoAl₄O₁₀, crystal structure, **166**, 191
CaO–Al₂O₃–CoO system, subsolidus phase equilibrium in, **166**, 191
Ca_{1–x}Sr_xAl₂O₄, synthesis and evolution of crystalline phases, **168**, 229
CeO₂- γ -Al₂O₃ mixed oxides, ²⁷Al NMR: origin of 40 ppm peak, **169**, 113
Co₂Fe_yAl_{1–y}(OH)₆Cl·*n*H₂O, trivalent cation substitution effect, **167**, 508
Cs₂AlP₃O₁₀, synthesis and layer structure, **167**, 258
EuAlF₅ and *M*(II)_{1–x}Eu_xAlF₅ (*M* = Ca, Sr, Ba), single-crystal growth and structural classification, **164**, 150
Li₃AlB₂O₆, synthesis, structure, and thermal stability, **163**, 369
Li₂O–Al₂O₃–B₂O₃, compounds and phase relations, **165**, 187
Mg/Al(III) layered double hydroxides obtained by coprecipitation and sol–gel method, **168**, 156
Mn–Al layered double hydroxides, synthesis and thermal decomposition, **167**, 152
Nd³⁺:YAB, spectroscopic and crystal field investigation, **167**, 386
Pt/Al₂O₃ catalysts prepared by sol–gel, thermal stability, **168**, 343
 α -sialon materials doped with Tb, Ce, or Eu, luminescence properties, **165**, 19
sol–gel boehmite, crystallization via hydrothermal annealing, **166**, 182
Sr₃Al₁₀SiO₂₀, synthesis and structural characterization by XRD and solid-state NMR, **169**, 53
thio-LISICON, synthesis, **168**, 140
Yb_{1–y}Al_{3–x}Ge_x and Yb_{1–y}Al_{3–x}Si_x, homoatomic clustering in, **163**, 113
- Ammonium
1-hydroxy-1-phosphono-pentyl-phosphonic acid dimethyl ammonium salt, crystal structure, neutron diffraction study, **167**, 441
[(NH₄(18-Crown-6))₄MnX₄][TiX₄]₂ (*X* = Cl, Br), cubic *F*23 crystals, defects and luminescence behavior, **163**, 286
(NH₄)₂₁[H₃Mo₅V₆(NO)₆O₁₈₃(H₂O)₁₈]·53H₂O, single-crystal neutron structure analysis, **165**, 199
(NH₄)₃H(SO₄)₂, disordered high-temperature structure, relationship to room-temperature phase, **165**, 136
(NH₄)In(OH)PO₄
with spiral chains of InO₄(OH)₂, hydrothermal synthesis and crystal structure, **165**, 209
synthesis and crystal structure, **166**, 362
tetra-*n*-butylammonium dysprosium(III) complex, crystal and electronic structures, **168**, 457
(Anilinium)(18-crown-6)[Ni(dimit)₂]
polymorphs, structure and magnetic properties, **168**, 661
- Annealing
hydrothermal, sol–gel boehmite synthesis by, **166**, 182
- Anodes
SOFC, Y₂O₃–ZrO₂–TiO₂ and Sc₂O₃–Y₂O₃–ZrO₂–TiO₂ solid solutions materials for, optimization, **165**, 12
- Anodic aluminum oxide template
in sol–gel synthesis of LiCo_{0.5}Mn_{0.5}O₂ as highly ordered nanowire arrays, effects on structural properties, **165**, 247
- Antiferromagnetic ordering
tetrachloroferrate(III) salts of BDH-TTP and BDA-TTP, **168**, 503
three-dimensional, in BaLn₂MnS₅ (*Ln* = La, Ce, Pr), spin dimer analysis, **169**, 143
- Antiferromagnetism
*R*₂Ba₂CuPtO₈ (*R* = Ho, Er, Tm, Yb, Lu, Y), **165**, 297
Ba₃*M*Ru₂O₉ (*M* = Y, In, La, Sm, Eu, Lu) 6H-perovskites, **165**, 317
Bi_{0.4}Sr_{2.5}Cr_{1.1}O_{4.9} and Bi_{0.4}Sr_{2.5}Fe_{1.1}O₅, **167**, 48
*R*CrO₄ (*R* = Pr, Gd, Tb, Tm, Yb), **164**, 313

¹Boldface numbers indicate volume; lightface numbers indicate pagination.

- $\text{Cu}_2\text{UO}_2(\text{PO}_4)_2$ built up from $[\text{CuO}_2]_\infty$ chains, **165**, 89
 $\text{FeIn}_2\text{S}_2\text{Se}_2$ layered compound, **164**, 326
 La_3MO_7 ($M = \text{Ru, Os}$) fluorite-related phases, **167**, 182
 LnMnO_3 ($\text{Ln} = \text{Ho, Er, Tm, Yb, Lu}$), **165**, 131
 $\text{Na}_2\text{M}_3(\text{PO}_4)_3$ ($M_3 = \text{GaMn}_2, \text{GaCd}_2, \text{InMn}_2, \text{FeMnCd}$) with alluaudite structure, **168**, 208
 $\text{Sr}_2\text{MnO}_{3.5+x}$ reduced single-layer compound, **167**, 145
- Antimony**
 Bi_3SbO_7 , high-resolution X-ray and neutron powder diffraction studies, **163**, 332
 $\text{Bi}_{2-x}\text{Sb}_x\text{Se}_3$ crystals, free current carrier concentration and point defects, **165**, 35
 $\text{Ca}_{14}\text{MnSb}_{11}$ zintl compound, neutron diffraction study, **168**, 162
 $\text{LaGa}_x\text{Sn}_y\text{Sb}_2$, structure, **167**, 41
 $[\text{NH}_3(\text{CH}_2)_n\text{NH}_3][\text{Sb}\{\text{CH}_3\text{C}(\text{O})(\text{PO}_3)_2\}]$ ($n = 4, 5$) one-dimensional diphosphonates, synthesis and characterization, **168**, 263
 $\text{PdIn}_{1.26}\text{Sb}_{0.74}$ and $\text{Pd}_{13}\text{In}_{5.25}\text{Sb}_{3.75}$, crystal structure and electronic structure, **164**, 110
 LnTsb ($T = \text{Rh, Ir}$), preparation and structure, **168**, 18
 RESn_xSb_2 ($RE = \text{La, Ce, Pr, Nd, Sm}$; $x = 0.5, 0.7$), magnetic and transport properties, **164**, 292
 $(\text{Sr}_3\text{Ba}_6)\text{Sb}_{10}$, synthesis and crystal structure, **164**, 169
- Apatite**
 alkaline-earth-doped $\text{La}_{9.33}(\text{GeO}_4)_6\text{O}_2$, structural study, **168**, 294
 $\text{Na}_{6.45}\text{Ca}_{3.55}(\text{SO}_4)_6(\text{F}_x\text{Cl}_{1-x})_{1.55}$, crystal structure, **163**, 398
 $\text{Pb}_6\text{Ca}_2\text{Li}_2(\text{PO}_4)_6$, conductivity and structure, **166**, 237
- Arsenic**
 $[\text{As}_2\text{V}_8^{\text{IV}}\text{V}_2^{\text{V}}\text{O}_{26}(\text{H}_2\text{O})] \cdot 8\text{H}_2\text{O}$ with large cavities with nanosized channels in 3-D neutral framework, **169**, 160
 BiMnAsO_5 , synthesis and structure, **168**, 224
 $\text{BiMn}_2\text{AsO}_6$, synthesis and structure, **167**, 245
 $\text{Mn}_7(\text{HOAsO}_3)_4(\text{XO}_4)_2$, hydrothermal synthesis, spectroscopy, magnetic behavior, and crystal structure, **165**, 171
 $\text{PbO}-\text{As}_2\text{O}_3$ glasses containing Mo ions, characterization and physical properties, **166**, 104
 two-dimensional organic metal $(\text{EO-TTP})_2\text{AsF}_6$, optical study, **168**, 497
 $\text{Zr}_{1-\delta}\text{V}_{1+\delta}\text{As}$, crystal structure predictions, **169**, 96
- Atomic bond length**
 rutile synthesized at low temperature, **169**, 176
- Aurivillius-type compounds**
 $\text{Bi}_{2.5}\text{Na}_{m-1.5}\text{Nb}_m\text{O}_{3m+3}$ ($m = 2-4$), neutron powder diffraction and electron microscopy structural studies, **167**, 86
 $\text{Bi}_4\text{MO}_8\text{X}$ ($X = \text{Cl, M} = \text{Ta}$; $X = \text{Br, M} = \text{Ta, Nb}$) layered intergrowth phases, structure and electrophysical properties, **166**, 148
 crystal chemistry
 $\text{Bi}_7\text{Ti}_4\text{NbO}_{21}$, **164**, 261
 structural model, **164**, 252
 four-layer ferroelectrics $\text{SrBi}_4\text{Ti}_4\text{O}_{15}$ and $\text{Bi}_5\text{Ti}_3\text{FeO}_{15}$, structural behavior, **164**, 280; *erratum*, **166**, 449
- Aviram–Ratner proposal**
 monolayer rectifiers, **168**, 696
- B**
- Ball milling**
 Ag_2O reaction with V_2O_5 to form crystalline silver vanadate, **169**, 139
 $\text{Ag}_2\text{O}-\text{V}_2\text{O}_5$ system: reactivity and structure in relation to AgVO_3 polymorphs, **164**, 144
 high-energy, in alumina–yttria system, modeling, **164**, 88
- Band formation**
 charge transfer salts, **168**, 675
- Band structure**
 $\text{Bi}_{2-x}\text{M}_x\text{Ru}_2\text{O}_{7-y}$ ($M = \text{Cu, Co}$; $x = 0.0, 0.4$) pyrochlores: static disorder from lone pair electrons, **169**, 24
 conducting cation radical salts with tetraiodotellurate(II) and hexaiodotellurate(II), **168**, 396
 conducting molecular solids based on $[\text{Ni}(\text{dmf})_6]^{2+}$ and $[\text{Ni}(\text{dsit})_2]^{2-}$, **168**, 653
 $\text{Cu}_{2.33-x}\text{V}_4\text{O}_{11}$, **166**, 382
 EuAgMg and EuAuMg , **164**, 201
 mixed valence radical cation salts of BEDT-TTF with $[\text{RuNOX}_5]^{2-}$ ($X = \text{Br, Cl}$), **168**, 514
 molecular conductors based on TMEO-ST-TTP, **168**, 608
- Barium**
 $\text{Ba}_{11}\text{Bi}_{10}$, synthesis and crystal structure, **164**, 169
 $\text{Ba}_n\text{Bi}_{n+m}\text{O}_y$ system, HREM study, **163**, 44
 $\text{Ba}_7\text{Ca}_2\text{Mn}_5\text{O}_{20}$, synthesis and structure, **168**, 11
 $\text{BaR}(\text{Cu}_{0.5}\text{Fe}_{0.5})_2\text{O}_{5+\delta}$ double perovskites ($R = \text{Lu, Yb, Eu, Sm, Nd, Pr}$), interplay of Cu and Fe valences, **166**, 118; *erratum* **168**, 354
 $\text{Ba}_8\text{Cu}_3\text{In}_4\text{N}_5$ with nitridocuprate groups and one-dimensional infinite In clusters, synthesis and structure, **163**, 449
 $R_2\text{Ba}_2\text{CuPtO}_8$ ($R = \text{Ho, Er, Tm, Yb, Lu, Y}$), magnetic behavior, **165**, 297
 $\text{Ba}_2\text{ErRuO}_6$ ordered perovskite, magnetic and calorimetric studies, **169**, 125
 $\text{Ba}_{1-x}\text{Eu}_x\text{AlF}_5$, single-crystal growth and structural classification, **164**, 150
 $\text{RBAFe}_2\text{O}_{5+w}$ ($R = \text{Nd, Sm}$), Verwey transition under oxygen loading, **167**, 480
 $\text{BaFe}_{12}\text{O}_{19}$, Co-substituted, sol–gel synthesis and HRTEM study, **167**, 254
 $\text{Ba}_2\text{In}_{2-x}\text{Co}_x\text{O}_5$ ($0.5 \leq x \leq 1.70$) perovskites, spin glass behavior, **165**, 254
 $\text{Ba}_2\text{In}_2\text{O}_5$, crystal structure, microstructure, and ionic conductivity, **164**, 119
 $\text{Ba}(\text{In}_x\text{Zr}_{1-x})\text{O}_{3-x/2}$, crystal structure, microstructure, and ionic conductivity, **164**, 119
 $\text{Ba}_{1-x}\text{La}_x\text{Ti}_{1-x}\text{Cr}_x\text{O}_3$ complex perovskites, structural characterization, **164**, 98
 $\text{LnBa}_2\text{Mn}_2\text{Cu}_2\text{O}_{12\pm y}$ ($\text{Ln} = \text{Sm, Eu}$), structure determination by powder neutron diffraction, **167**, 237
 $\text{Ba}_4\text{Mn}_3\text{O}_{10}$, crystal and magnetic structures, **167**, 453
 $\text{BaLn}_2\text{MnS}_5$ ($\text{Ln} = \text{La, Ce, Pr}$), antiferromagnetic ordering in, spin dimer analysis, **169**, 143
 BaO , exchange reaction with CuCl , mechanism, time-resolved X-ray absorption spectroscopic study, **163**, 158
 $\text{Ba}_3\text{MRu}_2\text{O}_9$ ($M = \text{Y, In, La, Sm, Eu, Lu}$) 6H-perovskites, crystal structure and magnetic properties, **165**, 317
 BaTbO_3 , crystal structure, **165**, 393
 $\text{Ba}_4\text{Ti}_5\text{Fe}_{20}\text{O}_{174}$ multilayered magnetic dielectric ceramic in $\text{BaO}-\text{TiO}_2-\text{Fe}_2\text{O}_3$ system, X-ray structural determination, **166**, 400
 $\text{Ba}[(\text{UO}_2)(\text{SeO}_3)_2]$, variable dimensionality and topology, **168**, 358
 BaVS_3 , electron localization, anisotropy of electrical conductivity, orbital ordering, and spin-exchange interactions, **165**, 345
 $\text{Cu}(\text{Ba}_{0.8}\text{Sr}_{0.2})_2(\text{Yb}_{1-x}\text{Ca}_x)\text{Cu}_2\text{O}_{6+z}$, XANES study: hole generation and distribution via Ca substitution and O doping, **166**, 229
 $\text{La}_{9.33}(\text{GeO}_4)_6\text{O}_2$ doped with, structural study, **168**, 294
 $\text{LuBaCuFeO}_{5+\delta}$, low-temperature magnetic properties, **166**, 251
 $\text{NaBa}_2\text{M}_2^{2+}\text{M}^{3+}\text{O}_6$ ($M = \text{Ni, Cu}$), polysynthetic twinning characterization and crystallographic refinement, **165**, 214
 $(\text{Sr}_5\text{Ba}_6)\text{Sb}_{10}$, synthesis and crystal structure, **164**, 169
 $\text{TmBaCuFeO}_{5+\delta}$, low-temperature magnetic properties, **166**, 251
- Batteries**
 lithium-ion, negative electrode, $\text{Ni}_x\text{Mg}_{6-x}\text{MnO}_8$ as active materials for, **166**, 330
 rechargeable, high lithium capacity of $\text{M}_x\text{V}_2\text{O}_5\text{A}_y \cdot n\text{H}_2\text{O}$ for, **163**, 93
- Beryllium**
 $\text{Be}_{1.09}\text{B}_3$, synthesis, structure, and superconductivity, **163**, 385
- Binding energy**
 correlation with ion electronic polarizability, in classification of simple oxides, **163**, 100

- Bipyridine
[Ni(bpy)₃][Pd(dmit)₂]·CH₃CN, preparation and crystal structure, **168**, 390
- 2,5-Bis(1,3-dithian-2-ylidene)-1,3,4,6-tetrathiapentalene tetrachloroferrate(III) salts, crystal structure and physical properties, **168**, 503
- 2,5-Bis(1,3-dithiolan-2-ylidene)-1,3,4,6-tetrathiapentalene tetrachloroferrate(III) salts, crystal structure and physical properties, **168**, 503
- 2,5-Bis(1,3-dithiol-2-ylidene)-1,3,4,6-tetrathiapentalene metallic molecular crystals with rare-earth complex anions, magnetism, **168**, 444
- Bis(ethylenedioxy)tetrathiafulvalene
charge transfer salts with isothiocyanato complex anions, preparation, structure, and magnetic properties, **168**, 450
- Bis(ethylenediseleno)tetrathiafulvalene
conducting salts with hexacyanoferrate(III) and nitroprusside, synthesis, structure, and characterization, **168**, 616
- Bis(ethylenedithio)diselenadithia-fulvalene
symmetric and unsymmetric salts, positional order and disorder of, **168**, 626
- Bis(ethylenedithio)tetraselenathiafulvalene
conducting cation radical salts with tetraiodotellurate(II) and hexaiodotellurate(II), structural and physical properties, **168**, 396
- Bis(ethylenedithio)tetrathiafulvalene
conducting cation radical salts with tetraiodotellurate(II) and hexaiodotellurate(II), structural and physical properties, **168**, 396
- insulating salts, magnetic interactions in, **168**, 433
- mixed valence radical cation salts with photochromic [RuNOX₅]²⁻ (X = Br, Cl), synthesis, crystal and electronic structures, and transport properties, **168**, 514
- molecular conductors with rare-earth elements, crystal and electronic structures, **168**, 457
- stacking layer, and [Mn₂Cl₅(EtOH)] 1-D chain, magnetic/conducting hybrid compound composed of, **168**, 418
- trifluoromethylsulfonyl-based BEDT-TTF salts, crystal and electronic structures and physical properties, **168**, 524
- Bis-maleonitrile dithiolate
charge transfer solids based on [M(mnt)₂]ⁿ⁻ and BMDT-TTF and EDT-TTF, conducting and magnetic properties, **168**, 563
- Bis(methylenedithio)-tetrathiafulvalene
and [M(mnt)₂]ⁿ⁻, charge transfer solids based on, conducting and magnetic properties, **168**, 563
- (2-[4,5-Bis(methylthio)-1,3-diseleno-2-ylidene]-5-(4,5-ethylenedioxy-1,3-dithiol-2-ylidene)-1,3,4,6-tetrathiapentalene molecular conductors based on, structures and transport properties, **168**, 608
- Bismuth
alkali metal–In–Bi systems, Zintl phases in, synthesis and structure, **163**, 436
- Ba₁₁Bi₁₀, synthesis and crystal structure, **164**, 169
- Ba_nBi_{n+m}O_y system, HREM study, **163**, 44
- Bi(III), complexes with polyaminocarboxylate ligands, synthesis and spectroscopic characterization, **167**, 494
- LnT*Bi (*T* = Rh, Ni, Pd, Pt), preparation and structure, **168**, 18
- Bi₃^(III)Bi^(V)O₇, crystal structure, high-resolution X-ray and neutron powder diffraction studies, **163**, 332
- BICOVOX and BICUVOX, conductivity, time-dependent degradation due to phase changes below 500°C, **163**, 224
- Bi₆Cr₂O₁₅ containing (Bi₁₂O₁₄)_n⁸ⁿ⁺ columns and CrO₄²⁻ tetrahedra, structure and ionic conductivity, **163**, 144
- Bi–La complexes with polyaminocarboxylate ligands, synthesis and spectroscopic characterization, **167**, 494
- BiMg_{2.5}V_{18.5}O₃₈, preparation and characterization, **164**, 138
- BiMnAsO₅, synthesis and structure, **168**, 224
- BiMn₂MO₆ (*M* = P, As, V), synthesis and structure, **167**, 245
- BiMnVO₅, synthesis and structure, **168**, 224
- Bi₂₆Mo_{10–x}Cr_xO₆₉ solid solution, synthesis, structure, and electrical properties, **166**, 7
- Bi_{2.5}Na_{0.5}Ta₂O₉ and Bi_{2.5}Na_{m–1.5}Nb_mO_{3m+3} (*m* = 2–4), neutron powder diffraction and electron microscopy structural studies, **167**, 86
- Bi_{0.775}Ln_{0.225}O_{1.5} (*Ln* = La, Pr, Nd, Sm, Tb, Dy) of rhombohedral Bi–Sr–O type, structural relationship to monoclinic *ε*-Bi_{4.86}La_{1.14}O₉, **168**, 91
- Bi₄MO₈X (*X* = Cl, *M* = Ta; *X* = Br, *M* = Ta, Nb) layered intergrowth phases, structure and electrophysical properties, **166**, 148
- Bi_{1.5}Pb_{0.5}Ca_{2–x}M_xCo₂O_{8–δ} (*M* = Sc³⁺, Y³⁺, La³⁺), thermoelectric properties, **167**, 472
- Bi₂PbMnO₄(PO₄)₂, crystal structure, **165**, 324
- Bi_{~1.2}M_{~1.2}PO_{5.5} (*M* = Mn, Co, Zn) disordered compounds, crystal structure, role of oxygen-centered tetrahedra linkage, **167**, 168
- Bi–Pr complexes with polyaminocarboxylate ligands, synthesis and spectroscopic characterization, **167**, 494
- Bi_{2–x}M_xRu₂O_{7–y} (*M* = Cu, Co; *x* = 0, 0.4) pyrochlores, static disorder from lone pair electrons in, **169**, 24
- Bi₃SbO₇, high-resolution X-ray and neutron powder diffraction studies, **163**, 332
- Bi_{2–x}Sb_xSe₃ crystals, free current carrier concentration and point defects, **165**, 35
- Bi_{0.4}Sr_{2.5}Cr_{1.1}O_{4.9} and Bi_{0.4}Sr_{2.5}Fe_{1.1}O₅, synthesis, structure, and properties, **167**, 48
- Bi₅Ti₃FeO₁₅, four-layer Aurivillius-phase ferroelectrics, structural behavior, **164**, 280; *erratum*, **166**, 449
- Bi₇Ti₄NbO₂₁ Aurivillius-type compounds, crystal chemistry, **164**, 261
- Bi_{0.85}Ln_{0.15}(1–*n*)V_{0.15n}O_{1.5+0.15n}, stability, conductivity, and powder crystal structure studies, **163**, 300
- Bi–W–Nb–O phases, microstructures, **163**, 479
- Bi_{3.24}Ln₂W_{0.76}O_{10.14} monoclinic compounds with pseudo-orthogonal cell based on pseudo-fcc subcell in Bi₂O₃–Ln₂O₃–WO₃ (*Ln* = La, Pr, Nd), **169**, 60
- Bi_{1.5}Zn_{0.92}Nb_{1.5}O_{6.92} cubic pyrochlore, structural study, **168**, 69
- Pb_{1–x}Bi_xPt₂O₄ (0 ≤ *x* ≤ 0.3), synthesis, electrical properties, and powder neutron crystal structure refinement, **166**, 58
- A_{1–x}Sn_{9–x}Bi_{11+x}Se₂₆ (*A* = K, Rb, Cs), composition and structure prediction based on phase homologues, **167**, 299
- Sr₁₁Bi₁₀, synthesis and crystal structure, **164**, 169
- SrBi₄Ti₄O₁₅ four-layer Aurivillius-phase ferroelectrics, structural behavior, **164**, 280; *erratum*, **166**, 449
- [(Sr_{0.43}Ca_{0.55}Bi_{0.03})₂Cu₂O₃]_{7+δ}[CuO₂]₁₀ with disorder phenomena in CuO₂ sublattice, 4D structural study, **163**, 17
- Bis(thiazolylidene)hydrazine
redox properties, effects of sequential nitrogen substitution, **168**, 590
- Bitetrathiafulvalenes
radical salts derived from, synthesis and electroconductive properties, **168**, 597
- Boehmite
sol–gel, crystallization via hydrothermal annealing, **166**, 182
- Bonding
REAgMg (*RE* = La, Ce, Eu, Yb), **164**, 201
- EuAuMg, **164**, 201
- in *M*₁₁X₁₀ (*M* = Sr, Ba; *X* = Bi, Sb): synthesis and crystal structure, **164**, 169
- M_xTa_{11–x}Ge₈* (*M* = Ti, Zr, Hf), **167**, 517
- Bond length
atomic, rutile synthesized at low temperature, **169**, 176
- Bond valence
local uranium environment in cesium uranates, **166**, 320
- REOCl* (*RE* = La–Nd, Sm–Ho, Y), **165**, 48
- Boron
4234-type intermetallic borocarbides, synthesis, structures, and magnetic properties, **164**, 246

- MeB_2 ($Me = Mg, Al, Zr, Nb, Ta$), electronic structure and normal-state conductivity, **169**, 168
- $Be_{1.09}B_3$, synthesis, structure, and superconductivity, **163**, 385
- borate glasses high in lead, chromium ion-containing, interactions with γ rays, **163**, 351
- B_2S_3 , high-pressure synthesis and crystal structure, **166**, 164
- χ -DyBO₃, multianvil high-pressure synthesis and crystal structure, **166**, 203
- χ -ErBO₃, multianvil high-pressure synthesis and crystal structure, **166**, 203
- $Li_3AlB_2O_6$, synthesis, structure, and thermal stability, **163**, 369
- $Li_2O-Al_2O_3-B_2O_3$, compounds and phase relations, **165**, 187
- low stress cubic BN film, preparation by physical vapor deposition, **167**, 420
- β - $Na_2B_8O_{13}$, crystal structure, **168**, 316
- Nd^{3+} :YAB, spectroscopic and crystal field investigation, **167**, 386
- $Sc_{4.5-x}B_{57-y+z}C_{3.5-z}$ ($x = 0.27, y = 1.1, z = 0.2$), phase and crystal structure studies, **168**, 192
- $Sc_{0.83-x}B_{10.0-y}C_{0.17+y}Si_{0.083-z}$ ($x = 0.030, y = 0.36, z = 0.026$), floating zone crystal growth and structure analysis, **165**, 148
- $Sr_2B_5O_9X$:Yb ($X = Cl, Br$), valence states and luminescence properties of Yb^{2+} and Yb^{3+} ions in, **166**, 271
- β -SrGaBO₄, *ab initio* structure determination from powder X-ray diffraction data, **165**, 119
- YB_{17.6}Si_{4.6}, synthesis and crystal structure, **164**, 361
- Brannerite phases**
- $U_{1-x}M_xTi_2O_6$ ($M = Ca^{2+}, La^{3+}, Gd^{3+}$), synthesis and crystal structure, **165**, 261
- Bromine**
- Bi_4MO_8Br ($M = Ta, Nb$) layered intergrowth phases, structure and electrophysical properties, **166**, 148
- Br^- , MDSe-TSF-based conductive radical cation salts with, synthesis, structures, and conductive properties, **168**, 582
- $Cs_2Nb_6Br_3F_{12}$, synthesis and crystal structure, **163**, 319
- (ethylenedithiotetrathiafulvalenoquinone-1,3-dithiolethimide)· MBr_4 plate crystals, structure and electrical conducting and magnetic properties, **168**, 408
- I_2Br^- , MDSe-TSF-based conductive radical cation salts with, synthesis, structures, and conductive properties, **168**, 582
- κ -(methylenediselenotetraselenafulvalene)₂Br, superconductivity below 4 K, **168**, 582
- β -MnBr ($M = Zr, Hf$), high-pressure synthesis and crystal structures, **163**, 77
- $[(NH_4(18-Crown-6))_4MnBr_4][TlBr_4]_2$, cubic $F23$ crystals, defects and luminescence behavior, **163**, 286
- RbBr incorporated in cadmium oxalate host lattices, synthesis and crystal structure, **167**, 274
- $[RuNOBr_3]^{2-}$ ($X = Br, Cl$), BEDT-TTF mixed valence radical cation salts with, synthesis, crystal and electronic structures, and transport properties, **168**, 514
- $Sr_2B_5O_9Br$:Yb, valence states and luminescence properties of Yb^{2+} and Yb^{3+} ions in, **166**, 271
- $Sr_2CoO_2Br_2$, synthesis and structure, **168**, 1
- Bronsted acids**
- strong, formation by conversion of highly porous zirconium aryldiphosphonates, **167**, 376
- Bronze**
- blue, $K_{0.28}MoO_3$, hydrothermal synthesis, **164**, 81
- $La_{0.10}WO_{3+y}$, hexagonal tungsten bronze-related phase formed at high pressure, structure and thermal stability, **163**, 84
- $A_x(Mo, V)_8O_{21}$ ($A = K^+, Rb^+, Cs^+$) with tunnel structure, synthesis and crystal structure, **163**, 210
- Pb_xWO_3 tetragonal bronze, superstructure, **168**, 306
- rare earth tungsten bronzes, synthesis and application as inert matrices for transmutation of long-life actinides, **169**, 182
- RE_xWO_3 , X-ray and electron microscopy studies, **167**, 412
- RE_xWO_{3+y} ($RE = La, Nd$) tungsten bronze-related phases, formation of, effects of pressure and temperature, **168**, 284
- Brownmillerite**
- $SrCaMnGaO_{5+\delta}$, crystal structure and magnetic properties, **167**, 188
- C**
- Cadmium**
- cadmium oxalates
- host lattices with incorporated rubidium halides, synthesis and crystal structure, **167**, 274
- inorganic coordination polymers based on, **166**, 128
- $Cd_{1+x}In_{2-2x}Sn_xO_4$, transparent conducting solid solution, cation distribution in, **163**, 259
- $Cd_2(O_3PCH_2C_6H_4CH_2PO_3) \cdot 2H_2O$, hydrothermal synthesis and characterization, **167**, 330
- $CdPS_3$, exfoliated single layers and restacked films, **166**, 421
- CdS wurtzite nanorods, synthesis from coordination polymer, **166**, 49
- N, N' -dialkylimidazolium cadmium–thiocyanate complexes, cation-controlled formation and structure, **169**, 199
- N, N' -dialkylimidazolium salts $[(C_2Im)_2][Cd_2(SCN)_6] \cdot C_3H_6O$ and $[(Me_2Im)_2][Cd_2(SCN)_6]$, synthesis and X-ray structure, **167**, 119
- $Na_2FeMnCd(PO_4)_3$ and $Na_2GaCd_2(PO_4)_3$ with alluaudite structure, electrical behavior, **168**, 208
- $(Na_{1-x}Li_x)CdIn_2(PO_4)_3$ solid solution ($x = 0-1$), crystal chemistry of Li in alluaudite structure, **163**, 194
- Calcination**
- after mechanical milling, effect on formation of lithium ferrites, **164**, 230
- Calcium**
- $Ba_7Ca_2Mn_5O_{20}$, synthesis and structure, **168**, 11
- $Bi_{1.5}Pb_{0.5}Ca_{2-x}M_xCo_2O_{8-\delta}$ ($M = Sc^{3+}, Y^{3+}, La^{3+}$), thermoelectric properties, **167**, 472
- $Ca_3CoAl_4O_{10}$, crystal structure, **166**, 191
- $Ca_2Co_{0.8}Ga_{1.2}O_{4.8}$, synthesis and high-temperature electron transport properties, **167**, 196
- $Ca_{0.83}CuO_2$ composite crystal, modulated structure, **163**, 540
- $CaCu_3Ru_4O_{12}$, structure: comparison of XRD-Rietveld and EXAFS results, **167**, 126
- $Ca_{1-x}Eu_xAlF_5$, single-crystal growth and structural classification, **164**, 150
- CaM_2Ge_2 ($M = Mn-Zn$), electronic structure, **167**, 107
- $Ca_9In(PO_4)_7$ whitlockite-type phosphate, high-temperature phase transition, **165**, 278
- calcium uranyl carbonates with multiple anionic species, structural arrangements in, **166**, 219
- $Ca_{14}MnSb_{11}$ zintl compound, neutron diffraction study, **168**, 162
- $CaO-Al_2O_3-CoO$ system, subsolidus phase equilibrium in, **166**, 191
- $Ca_2M^{3+}(OH)_6Cl \cdot 2H_2O$ ($M^{3+} = Al^{3+}, Ga^{3+}, Fe^{3+}, Sc^{3+}$), X-ray powder diffraction structural study, **167**, 137
- $Ca_{1-x}Sr_xAl_2O_4$, synthesis and evolution of crystalline phases, **168**, 229
- $CaTiO_3$ perovskites doped with Fe, displacive phase transitions and strain analysis, high-temperature neutron diffraction study, **167**, 459
- $Ca[(UO_2)(SeO_3)_2]$, variable dimensionality and topology, **168**, 358
- $CaZn_2Si_2$, synthesis and characterization, **167**, 107
- $Cu(Ba_{0.8}Sr_{0.2})_2(Yb_{1-x}Ca_x)Cu_2O_{6+z}$, XANES study: hole generation and distribution via Ca substitution and O doping, **166**, 229
- doped calcium tartrate tetrahydrate, structural characterization, **163**, 491
- $La_{1-x}Ca_xMnO_{3-y}$ ($x = 0.30, 0.50$), magnetic state of, evolution depending on oxygen content, **169**, 85
- $La_{1-x}Ca_xMnO_{3\pm\delta}$, enthalpy of formation, measurement by high-temperature solution calorimetry, **163**, 186

- La_{0.33}(GeO₄)₆O₂ doped with, structural study, **168**, 294
- Na_{6.45}Ca_{3.55}(SO₄)₆(F_xCl_{1-x})_{1.55}, crystal structure, **163**, 398
- Pb₆Ca₂Li₂(PO₄)₆ apatite, conductivity and structure, **166**, 237
- Pb_xCa_{10-x}(PO₄)₆(OH)₂ ($X=0-1$) solid solutions, preparation by wet method using acetamide, **163**, 27
- [(Sr_{0.43}Ca_{0.55}Bi_{0.03})₂Cu₂O₃]_{7+δ}[CuO₂]₁₀ with disorder phenomena in CuO₂ sublattice, 4D structural study, **163**, 17
- SrCaMnGaO_{5+δ}, crystal structure and magnetic properties, **167**, 188
- U_{1-x}Ca_xTi₂O₆, synthesis and crystal structure, **165**, 261
- ZrSiO₄-MgCa(CO₃)₂ reactions, monitoring by neutron thermofractometry, **166**, 426
- Calorimetry, *see also* Differential scanning calorimetry
- Ba₂ErRuO₆ ordered perovskite, **169**, 125
- high-temperature, measurement of La_{1-x}A_xMnO_{3±δ} ($A=Ca,Sr$) enthalpy of formation, **163**, 186
- NdFeO₃, **164**, 34
- Ln₃RuO₇ ($Ln=Pr,Gd$), **164**, 163
- Calvet calorimetry
- NdFeO₃, **164**, 34
- S-Camphor
- low-temperature crystal structure, solution from powder synchrotron X-ray diffraction by simulated annealing, **163**, 253
- Capacitance–frequency measurements
- rectifying junctions formed by pyronine-B on p-type silicon, **168**, 169
- Carbon
- 4234-type intermetallic borocarbides, synthesis, structures, and magnetic properties, **164**, 246
- [Al₃P₄O₁₆][(CH₃)₂NHCH₂CH₂NH(CH₃)₂][H₃O], synthesis and characterization, **167**, 282
- (anilinium)(18-crown-6)[Ni(dimit)₂] polymorphs, structure and magnetic properties, **168**, 661
- bis(ethylenediseleno)tetrathiafulvalene conducting salts with hexacyanoferrate(III) and nitroprusside, synthesis, structure, and characterization, **168**, 616
- bis(ethylenedithio)diselenadithiafulvalene symmetric and unsymmetric salts, positional order and disorder of, **168**, 626
- cadmium oxalate host lattices, rubidium halides incorporated in, synthesis and crystal structure, **167**, 274
- calcium uranyl carbonates with multiple anionic species, structural arrangements in, **166**, 219
- charge transfer salts based on [M(mnt)₂]ⁿ⁻ and BMDT-TTF and EDT-TTF, conducting and magnetic properties, **168**, 563
- charge transfer salts of bis(ethylenedioxo)tetrathiafulvalene with isothiocyanato complex anions, preparation, structure, and magnetic properties, **168**, 450
- C₅H₁₂NPO₄H₂, synthesis and crystal structure, **161**, 307; *erratum*, **168**, 714
- [C₂N₂H₁₀][Co_{4.2}Zn_{1.8}(PO₄)₄(HPO₄)]·H₂O, template synthesis and structure, **166**, 369
- [C₆N₂H₁₄][Fe^{III}₂(HPO₄)₂(H₂PO₄)₂]·2H₂O open framework with one- and three-dimensional structures, synthesis, **165**, 334
- [C₆N₂H₁₄]₂[Fe^{III}(OH)F₃(HPO₄)₂]·H₂O open framework with one- and three-dimensional structures, synthesis, **165**, 334
- (CN₃H₆)₂·Zn₃(HPO₃)₄·H₂O, synthesis and structure, **167**, 337
- [C₆N₄H₂₂][ZnPO₄]₄ with open framework, synthesis and structure, **165**, 182
- conducting cation radical salts with tetraiodotellurate(II) and hexaiodotellurate(II), structural and physical properties, **168**, 396
- conducting molecular magnets based on TTF derivatives, **168**, 547
- conductive radical cation salts based on MDSe-TSF, synthesis, structures, and conductive properties, **168**, 582
- [Co₄(OH)₂(H₂O)₂](C₄H₁₁N₂)₂[C₆H₂(COO)₄]₂·3H₂O with tetranuclear clusters, **166**, 158
- copper salts of rigid *N,N'*-dicyanoquinone diimine derivatives, **168**, 690
- Cu(I)halide 2-ethylpyrazine coordination polymers, synthesis, crystal structure, and thermal properties, **169**, 103
- N,N'*-dialkylimidazolium cadmium–thiocyanate complexes, cation-controlled formation and structure, **169**, 199
- dication salts of phenyl-substituted TTF vinyllogues, preparation and structures, **168**, 427
- N,N'*-dicyclohexylimidazolium salts [(Cy₂Im)₂][Cd₂(SCN)₆]·C₃H₆O, synthesis and X-ray structure, **167**, 119
- 2,6-di[dibutylamino-phenylvinyl]-1-butylpyridinium iodide monolayer rectifier, **168**, 696
- (2,5-diiododicyanoquinondiimine)₂*M* ($M=Ag,Li,Cu$), phase transition: temperature-dependent vibronic and vibrational IR absorptions, **168**, 632
- dimethylanilinoaza[C₆₀]fullerene monolayer rectifier, **168**, 696
- doped calcium tartrate tetrahydrate, structural characterization, **163**, 491
- (ethylenedithiotetrathiafulvalenoquinone-1,3-dithiolethide)₂·GaX₄ plate crystals, structure and electrical conducting and magnetic properties, **168**, 408
- [Fe(H₂O)(O₃P-CH₂-CO₂)], hydrothermal synthesis, structure, and magnetic properties, **164**, 354
- fullerenes C₆₀ and C₇₀ in molecular complexes with saturated amines, preparation, crystal structures, and characterization, **168**, 474
- γ-hexadecylquinolinium tricyanoquinodimethanide, molecular properties, film properties, and unimolecular rectification by, **168**, 696
- hexamethylenetetrafullerathiafulvalene charge transfer complexes of donor–acceptor type, preparation, electronic spectra, and conductivity, **168**, 486
- (H₃N(CH₂)₄NH₃)[V₆O₁₄], hydrothermal synthesis and characterization, **167**, 407
- H₃N(CH₂)₃NH₃·Zn₃(HPO₃)₄·H₂O, synthesis and structure, **167**, 337
- 1-hydroxy-1-phosphono-pentyl-phosphonic acid dimethyl ammonium salt, crystal structure, neutron diffraction study, **167**, 441
- insulating BEDT-TTF salts, magnetic interactions in, **168**, 433
- iron diphosphonates, structures and magnetic properties, **164**, 367
- K₂Na[Ag(CN)₂]₃, reversible luminescence thermochromism and role of structural phase transitions, **168**, 267
- magnetic/conducting hybrid compound composed of [Mn^{II}Cl₅(EtOH)] 1-D chain and BEDT-TTF stacking layer, **168**, 418
- metallic molecular crystals with rare-earth complex ions, magnetism, **168**, 444
- Mn₂(H₂O)[O₂C(CH₂)₆CO₂]₂, hydrothermal synthesis, crystal structure, and magnetic properties, **166**, 279
- molecular conductors
- based on *M*(ddd)₂ bithiolenecation complexes, synthesis, structure, and properties, **168**, 464
- with rare-earth elements, crystal and electronic structures, **168**, 457
- TMEO-ST-TTP-based, structure and transport properties, **168**, 608
- [NH₃(CH₂)_xNH₃][Ga₄(PO₄)_y(HPO₄)] ($x=4,5; y=1,4$), synthesis and properties, **167**, 17
- [NH₃(CH₂)_nNH₃][Sb{CH₃C(O)(PO₃)₂}] ($n=4,5$) one-dimensional diphosphonates, synthesis and characterization, **168**, 263
- [Ni(bpy)₃][Pd(dmit)₂]·CH₃CN, preparation and crystal structure, **168**, 390
- [Ni(dmf)₆]²⁺ and [Ni(dsit)₂]₂²⁻, conducting molecular solid based on, anion packing in, **168**, 653
- Ni(dmit)₂ simple salts, charge carrier doping by hydrogen-bonding pyridinium cations, **168**, 535
- N*-4-nitrophenyl-*L*-prolinol nanocrystals, preparation and characterization in sol–gel matrices, **165**, 25
- M*₂(O₃PCH₂C₆H₄CH₂PO₃)₂·2H₂O ($M=Mn,Ni,Cd$), hydrothermal synthesis and characterization, **167**, 330

- organic synthetic metals, dimensionality and electrical properties, **168**, 367
- oxalato titanates with $Ti_4O_4(C_2O_4)_8$ tetramers as building blocks, hydrothermal synthesis and characterization, **163**, 427
- perfluoro-1,3,5-tris(*p*-oligophenyl)benzenes, amorphous electron-transport materials with high-glass-transition temperature and high electron mobility, **168**, 470
- radical salts derived from tetrathiafulvalene dimers, synthesis and electroconductive properties, **168**, 597
- $Sc_{4.5-x}B_{57-y+z}C_{3.5-z}$ ($x=0.27, y=1.1, z=0.2$), phase and crystal structure studies, **168**, 192
- $Sc_{0.83-x}B_{10.0-y}C_{0.17+y}Si_{0.083-z}$ ($x=0.030, y=0.36, z=0.026$), floating zone crystal growth and structure analysis, **165**, 148
- TCNQF₄ complexes of EDO-TTF-CONH₂ and EDT-TTF-CONH₂, charge transfer, dimensionality, and amide hydrogen bond network adaptability, **168**, 668
- tetrachloroferrate(III) salts of BDH-TTP and BDA-TTP, crystal structure and physical properties, **168**, 503
- tetrathiafulvalene-based charge transfer salts with anions containing selenocyanate ligands, synthesis, crystal structures, and physical properties, **168**, 573
- TPP[M(Pc)(CN)₂]₂ ($M=Fe, Co, Fe_{0.30}Co_{0.70}$) salts, magnetoresistance study, **168**, 509
- TTF[Ni(dmit)₂]₂, thin films and nanowires, formation and characterization, **168**, 438
- two-dimensional organic metal (EO-TTP)₂AsF₆, optical study, **168**, 497
- zirconium aryldiphosphonates with high porosity, preparation and conversion to strong Brønsted acids, **167**, 376
- Zn₆(PO₄)₅(HPO₄)·C₈N₅H₂₈·5H₂O intercalated with quintuply protonated tetraethylenepentamine, synthesis and structure, **166**, 265
- Zn₄P₃O₁₁(OH)·3C₃N₂H₄, synthesis and structure, **163**, 364
- ZrSiO₄-MgCa(CO₃)₂ reactions, monitoring by neutron thermodiffraction, **166**, 426
- Carbonate precipitation
- $Ce_{1-x}Y_xO_{2-x/2}$ ($0 \leq x \leq 0.35$) nanocrystals, **168**, 52
- Carlinite
- crystal structure and stereochemistry, **168**, 322
- Cathodes
- $Li_{1-x}CoO_2$ and $Li_{1-x}Ni_{0.85}Co_{0.15}O_2$, chemical stability, comparison, **163**, 5
- Cation distribution
- in $Cd_{1+x}In_{2-2x}Sn_xO_4$ transparent conducting spinel oxide solid solution, **163**, 259
- in V^{4+} -ZrO₂ tetragonal solid solutions obtained from gels, **163**, 33
- Cation ordering
- $Li_2M(II)Sn_3O_8$ ($M(II)=Mn, Zn$), **169**, 44
- in natural tapiolite, **163**, 218
- Cation size
- A cation in $(La_{1-x}Nd_x)_{0.7}Sr_{0.3}MnO_3$ perovskites, effects on structural, magnetic, and electrical properties, **163**, 466
- Cation vacancies
- LaMnO_{3+δ} perovskite doped with Sn: low-temperature phase formation, **168**, 100
- γ -MnO₂ synthesized from three-dimensional framework and layered structures, **166**, 375
- Ceramics
- Ba₄₂Ti₅₁Fe₂₀O₁₇₄, in BaO-TiO₂-Fe₂O₃ system, X-ray structural determination, **166**, 400
- porous, production by zircon-dolomite reactions, monitoring by neutron thermodiffraction, **166**, 426
- Cerium
- BaCe₂MnS₅, antiferromagnetic ordering in, spin dimer analysis, **169**, 143
- CeAgMg, magnetic and electrical properties, ¹⁵¹Eu Mössbauer spectroscopy, and chemical bonding, **164**, 201
- CeTbI ($T=Rh, Pd, Pt$), preparation and structure, **168**, 18
- CeNiGa, polymorphism and hydrogen adsorption, **168**, 28
- CeO_{2-x} epitaxial domains, laser ablation deposition on glass, **166**, 197
- CeO₂ nanocrystals supported on SiO₂, structure evolution, effect of temperature and atmosphere, **168**, 110
- CeO_{2-γ}-Al₂O₃ mixed oxides, ²⁷Al NMR: origin of 40 ppm peak, **169**, 113
- CeOCl, stability of, bond valence study, **165**, 48
- ceria-lanthana-based TWC promoters prepared by sol-gel routes, phase analysis and oxygen storage capacity, **163**, 527
- CeTSb (Rh, Ir), preparation and structure, **168**, 18
- CeSn_xSb₂ ($x=0.5, 0.7$), magnetic and transport properties, **164**, 292
- Ce_xWO₃ bronzes, X-ray and electron microscopy studies, **167**, 412
- $Ce_{1-x}Y_xO_{2-x/2}$ ($0 \leq x \leq 0.35$) nanocrystals, synthesis via carbonate precipitation and characterization, **168**, 52
- KCeFe(II)(CN)₆·xH₂O, characterization and thermal evolution, **167**, 34
- α -sialon materials doped with, luminescence properties, **165**, 19
- Sr₃(PO₄)₂:Ce, VUV-UV photoluminescence spectra, **167**, 435
- Cesium
- cesium uranates, local uranium environment in, combined XPS, XAS, XRD, and neutron diffraction analysis, **166**, 320
- CsClO₄, order-disorder phase transitions, **163**, 294
- Cs_x(Mo, V)₈O₂₁ bronze with tunnel structure, synthesis and crystal structure, **163**, 210
- Cs₂Nb₆Br₅F₁₂, synthesis and crystal structure, **163**, 319
- Cs₂MP₃O₁₀ ($M=Ga, Al, Cr$), synthesis and layer structure, **167**, 258
- Cs_{1-x}Sn_{9-x}Bi_{11+x}Se₂₆, composition and structure prediction based on phase homologies, **167**, 299
- Cs₂(UO₂)[(UO₂)(PO₄)₄(H₂O)₂], crystal structure, **167**, 226
- Cs_xVOPO₄·yH₂O, ion-exchange properties, **163**, 281
- Na-RUB-29 ion-exchanged microporous lithosilicate, synchrotron X-ray single-crystal diffraction and ⁶Li MAS NMR, **167**, 310
- Charge carrier doping
- Ni(dmit)₂ simple salts by hydrogen-bonding pyridinium cations, **168**, 535
- Charge transfer
- across boundary of indomethacin-SiO₂ composite under mechanical stress, **164**, 27
- Bi_{1.5}Pb_{0.5}Ca_{2-x}M_xCo₂O_{8-δ} ($M=Sc^{3+}, Y^{3+}, La^{3+}$), **167**, 472
- fullerenes C₆₀ and C₇₀ in molecular complexes with saturated amines, **168**, 474
- tetracyanoquinodimethane complexes, effects of sequential nitrogen substitution, **168**, 590
- in thermochromic organomodified silica containing phosphomolybdic acid, **166**, 259
- Yb ions in strontium haloborates, **166**, 271
- Charge transfer complexes
- hexamethylenetetraethylurathiafulvalene, of donor-acceptor type, preparation, electronic spectra, and conductivity, **168**, 486
- Charge transfer salts
- based on [M(mnt)₂]ⁿ⁻ and BMDT-TTF and EDT-TTF, conducting and magnetic properties, **168**, 563
- bis(ethylenedioxy)tetrathiafulvalene with paramagnetic isothiocyanato complex anions, preparation, structure, and magnetic properties, **168**, 450
- insulating BEDT-TTF salts, magnetic interactions in, **168**, 433
- physics, **168**, 675
- TCNQF₄ complexes of EDO-TTF-CONH₂ and EDT-TTF-CONH₂, **168**, 668
- tetrathiafulvalene-based, with anions containing selenocyanate ligands, synthesis, crystal structures, and physical properties, **168**, 573
- TPP[M(Pc)(CN)₂]₂ ($M=Fe, Co, Fe_{0.30}Co_{0.70}$) salts, magnetoresistance study, **168**, 509

- trifluoromethylsulfonyl-based BEDT-TTF salts, crystal and electronic structures and physical properties, **168**, 524
 TTF-TCNQ thin films, characterization, **168**, 384
 Chimney-ladder phases
 Ru₃Ge_{3+x} (0 < x < 1), structure, stoichiometry, and properties, **166**, 389
 Chlorine
 Bi₄TaO₈Cl layered intergrowth phases, structure and electrophysical properties, **166**, 148
 calcium uranyl carbonates with multiple anionic species, structural arrangements in, **166**, 219
 Ca₂M³⁺(OH)₆Cl·2H₂O (M³⁺ = Al³⁺, Ga³⁺, Fe³⁺, Sc³⁺), X-ray powder diffraction structural study, **167**, 137
 Cl⁻, MDSe-TSF-based conductive radical cation salts with, synthesis, structures, and conductive properties, **168**, 582
 MClO₄ (M = Na, K, Rb, Cs), order–disorder phase transitions, **163**, 294
 Co₂Fe_yAl_{1-y}(OH)₆Cl·nH₂O, trivalent cation substitution effect, **167**, 508
 CuCl, exchange reaction with BaO, mechanism, time-resolved X-ray absorption spectroscopic study, **163**, 158
 [(CuCl)₂(*o*-phen)]_∞ chainlike hybrid complex, hydrothermal synthesis and structure, **167**, 402
 Cu(I)halide 2-ethylpyrazine coordination polymers, synthesis, crystal structure, and thermal properties, **169**, 103
 (ethylenedithiotetrathiafulvalenoquinone-1,3-dithiolethide)₂·MCl₄ plate crystals, structure and electrical conducting and magnetic properties, **168**, 408
 Li_{2-x}Cu_xMgCl₄, Li₂MgCl₄, Li_{2-x}Na_xMgCl₄, and Li₂ZnCl₄ fast ionic conducting spinel-type chloride, ⁶Li and ⁷Li MAS NMR studies, **165**, 303
 Li_{0.2(1)}ZrNCl superconducting phase derived by intercalation, single-crystal X-ray structural refinement, **169**, 149
 [Mn^{II}Cl₃(EtOH)] 1-D chain, and BEDT-TTF stacking layer, magnetic/conducting hybrid compound composed of, **168**, 418
 molecular conductors with rare-earth elements, crystal and electronic structures, **168**, 457
 Na_{6.45}Ca_{3.55}(SO₄)₆(F_xCl_{1-x})_{1.55}, crystal structure, **163**, 398
 Na_{0.21}Nb₆Cl_{10.5}O₃, synthesis and crystal structure, **163**, 325
 [(NH₄(18-Crown-6))₄MnCl₄][TiCl₄]₂, cubic *F*23 crystals, defects and luminescence behavior, **163**, 286
 REOCl (RE = La–Nd, Sm–Ho, Y), stability of, bond valence study, **165**, 48
 RbCl incorporated in cadmium oxalate host lattices, synthesis and crystal structure, **167**, 274
 (RbCl)₂₅₆ and (RbCl)₅₀₀ molten clusters, crystal nucleation from, molecular dynamics studies, **165**, 289
 [RuNOCl₃]²⁻ (X = Br, Cl), BEDT-TTF mixed valence radical cation salts with, synthesis, crystal and electronic structures, and transport properties, **168**, 514
 Sr₂B₅O₉Cl:Yb, valence states and luminescence properties of Yb²⁺ and Yb³⁺ ions in, **166**, 271
 Sr₂CoO₂Cl₂, synthesis and structure, **168**, 1
 tetrachloroferrate(III) salts of BDH-TTP and BDA-TTP, crystal structure and physical properties, **168**, 503
 ZrCl₄, reactions with alkali metal nitrates, properties of ZrO₂ formed by, **163**, 202
 ZrOCl₂·8H₂O, reactions with alkali metal nitrates, properties of ZrO₂ formed by, **163**, 202
 Chromium
 Ba_{1-x}La_xTi_{1-x}Cr_xO₃ complex perovskites, structural characterization, **164**, 98
 Bi₆Cr₂O₁₅ containing (Bi₁₂O₁₄)_n⁸ⁿ⁺ columns and CrO₄²⁻ tetrahedra, structure and ionic conductivity, **163**, 144
 Bi₂₆Mo_{10-x}Cr_xO₆₉ solid solution, synthesis, structure, and electrical properties, **166**, 7
 bis(ethylenedioxo)tetrathiafulvalene[Cr^{III}(isoquinoline)₂(NCS)₄], preparation, structure, and magnetic properties, **168**, 450
 Bi_{0.4}Sr_{2.5}Cr_{1.1}O_{4.9}, synthesis, structure, and properties, **167**, 48
 RCrO₄ (R = Pr, Gd, Tb, Tm, Yb), field-induced magnetic properties, **164**, 313
 Cs₂CrP₃O₁₀, synthesis and layer structure, **167**, 258
 β-FeSi₂ semiconductors doped with, geometrical and electronic structure, first-principle calculation, **163**, 248
 ions, high-lead glasses containing, interactions with γ rays, **163**, 351
 Sr₉Cr(PO₄)₇ Whitlockite-type phosphates, synthesis and characterization, **168**, 237
 Sr_{1-x}La_xTi_{1-x}Cr_xO₃ perovskites, structure and conductivity, **165**, 381
 ZnCr₂O₄ spinel, high-pressure Raman spectroscopy, **165**, 165
 Clay
 surface modification by α,ω-diamines in formation of thermoset epoxy-clay nanocomposites, **167**, 354
 Cluster compounds
 Cs₂Nb₆Br₅F₁₂, synthesis and crystal structure, **163**, 319
 Na_{0.21}Nb₆Cl_{10.5}O₃, synthesis and crystal structure, **163**, 325
 Cluster spin glass
 La_{1-x}Ca_xMnO_{3-y} (x = 0.30, 0.50), evolution of magnetic state depending on oxygen content, **169**, 85
 Coating pyrolysis
 preparation of (111)-oriented epitaxial Fe_{3-x}O₄ films on α-Al₂O₃ (0001) substrates, **163**, 239
 Cobalt
 4234-type intermetallic borocarbides, synthesis, structures, and magnetic properties, **164**, 246
 BaFe₁₂O₁₉ doped with, sol–gel synthesis and HRTEM study, **167**, 254
 Ba₂In_{2-x}Co_xO₅ (0.5 ≤ x ≤ 1.70) perovskites, spin glass behavior, **165**, 254
 Bi_{-1.2}Co_{-1.2}PO_{5.5} disordered compounds, crystal structure, role of oxygen-centered tetrahedra linkage, **167**, 168
 Bi_{2-x}Co_xRu₂O_{7-y} (x = 0, 0.4) pyrochlores, static disorder from lone pair electrons in, **169**, 24
 BICOVOX, conductivity, time-dependent degradation due to phase changes below 500°C, **163**, 224
 Bi_{1.5}Pb_{0.5}Ca_{2-x}M_xCo₂O_{8-δ} (M = Sc³⁺, Y³⁺, La³⁺), thermoelectric properties, **167**, 472
 Ca₃CoAl₄O₁₀, crystal structure, **166**, 191
 Ca₂Co_{0.8}Ga_{1.2}O_{4.8}, synthesis and high-temperature electron transport properties, **167**, 196
 CaCo₂Ge₂, electronic structure, **167**, 107
 CaO–Al₂O₃–CoO system, subsolidus phase equilibrium in, **166**, 191
 [C₂N₂H₁₀][Co_{4.2}Zn_{1.8}(PO₄)₄(HPO₄)]·H₂O, template synthesis and structure, **166**, 369
 Co₂Fe_yAl_{1-y}(OH)₆Cl·nH₂O, trivalent cation substitution effect, **167**, 508
 CoGa_{3-x}Zn_x and CoIn_{3-x}Zn_x systems, FeGa₃ structure type variations in, **165**, 100
 Co ion disordering and electronic state in mechanochemically synthesized LiCoO₂, **165**, 56
 [Co₄(OH)₂(H₂O)₂](C₄H₁₁N₂)₂[C₆H₂(COO)₄]₂·3H₂O with tetranuclear clusters, **166**, 158
 δ-Co₂Zn₁₅, preparation and double-helix icosahedra structure, **166**, 53
 β-FeSi₂ semiconductors doped with, geometrical and electronic structure, first-principle calculation, **163**, 248
 LaCoIn₅, crystal growth and structure, **166**, 245
 LiCo_{0.5}Mn_{0.5}O₂ as highly ordered nanowire arrays, sol–gel template synthesis and structural properties, **165**, 247
 Li_{1-x}CoO₂ cathodes, chemical stability, comparison with Li_{1-x}Ni_{0.85}Co_{0.15}O₂ cathodes, **163**, 5
 Li_{1-x}Co₂O_{4-δ} spinel, chemical synthesis and properties, **164**, 332

- LiCoO₂
 mechanochemically synthesized, disordering and electronic state of Co ions in, **165**, 56
 single crystal, anisotropic electrical conductivity, **164**, 1
 structural stability at 400°C, **168**, 60
 thin films, IR study, **165**, 42
- LiFe_{1-x}Co_xO₂ (0 ≤ x ≤ 1), magnetic structure, high-resolution neutron diffraction study, **163**, 406
- Li_{1-x}Ni_{0.85}Co_{0.15}O₂ cathodes, chemical stability, comparison with Li_{1-x}CoO₂ cathodes, **163**, 5
- β-Na_xCoO₂, crystal structure and electric and magnetic properties, **166**, 177
- open-framework Co(II) phosphates with sodalite-related architectures, **167**, 344
- Sr₂CoO₂X₂ (X = Cl, Br), synthesis and structure, **168**, 1
- Sr₃Fe_{2-x}Co_xO_{7-δ} (0.25 ≤ x ≤ 1.75) n = 2 Ruddlesden–Popper phases, electronic, magnetic, and magnetoresistance properties, **166**, 292
- Sr₅Pb₃CoO₁₂, synthesis, crystal structure, and magnetic properties, **164**, 12
- substitutional effects on magnetic and structural properties of quasi-two-dimensional La₅Mo₄O₁₆, **164**, 60
- TPP[Co(Pc)(CN)₂]₂ and TPP[Fe_{0.30}Co_{0.70}(Pc)(CN)₂]₂ salts, magnetoresistance study, **168**, 509
- YCo_xMn_{1-x}O₃ perovskites, structural characterization, **163**, 377
- Color measurements
 CaO–Al₂O₃–CoO system, **166**, 191
- Colossal magnetoresistance
 Ca₁₄MnSb₁₁ zintl compound, **168**, 162
- Composite crystals
 Ca_{0.83}CuO₂, modulated structure, **163**, 540
 Ca-rich [A₂Cu₂O₃]_{7+δ}[CuO₂]₁₀ with disorder phenomena in CuO₂ sublattice, 4D structural study, **163**, 17
 InFe_{1-x}Ti_xO_{3+x/2} (x = 2/3), crystal structure, **163**, 455
- Conductance–frequency measurements
 rectifying junctions formed by pyronine-B on p-type silicon, **168**, 169
- Coordination chemistry
 molybdenum oxides with di-2-picolyamine, **167**, 370
- Coordination polymer
 constructed from paddle-wheel building units, synthesis, crystal structure, and thermal and magnetic properties, **166**, 213
 Cu(I)halide 2-ethylpyrazine, synthesis, crystal structure, and thermal properties, **169**, 103
 N,N'-dialkylimidazolium solid [(Cy₂Im)₂][Cd₂(SCN)₆]·C₃H₆O, synthesis and X-ray structure, **167**, 119
 inorganic, based on cadmium oxalates, **166**, 128
 Mn₂(H₂O)[O₂C(CH₂)₆CO₂]₂, hydrothermal synthesis, crystal structure, and magnetic properties, **166**, 279
 wurtzite ZnS and CdS nanorod synthesis from, **166**, 49
- Copper
 Ag₃Pb_{2-x}Cu_xO₆ (0.0 ≤ x < 0.5), synthesis, characterization, and electrical properties, **163**, 151
 BaR(Cu_{0.5}Fe_{0.5})₂O_{5+δ} double perovskites (R = Lu, Yb, Eu, Sm, Nd, Pr), interplay of Cu and Fe valences, **166**, 118; *erratum*, **168**, 354
 Ba₈Cu₃In₄N₅ with nitridocuprate groups and one-dimensional infinite In clusters, synthesis and structure, **163**, 449
 R₂Ba₂CuPtO₈ (R = Ho, Er, Tm, Yb, Lu, Y), magnetic behavior, **165**, 297
 LnBa₂Mn₂Cu₂O_{12±y} (Ln = Sm, Eu), structure determination by powder neutron diffraction, **167**, 237
 Bi_{2-x}Cu_xRu₂O_{7-y} (x = 0, 0.4) pyrochlores, static disorder from lone pair electrons in, **169**, 24
 BICUVOX, conductivity, time-dependent degradation due to phase changes below 500°C, **163**, 224
 CaCu₂Ge₂, electronic structure, **167**, 107
 Ca_{0.83}CuO₂ composite crystal, modulated structure, **163**, 540
 Ca-rich composite-type crystal [A₂Cu₂O₃]_{7+δ}[CuO₂]₁₀ with disorder phenomena in CuO₂ sublattice, 4D structural study, **163**, 17
 Cu(Ba_{0.8}Sr_{0.2})₂(Yb_{1-x}Ca_x)Cu₂O_{6+z}, XANES study: hole generation and distribution via Ca substitution and O doping, **166**, 229
 CuCl, exchange reaction with BaO, mechanism, time-resolved X-ray absorption spectroscopic study, **163**, 158
 [(CuCl)₂(o-phen)]_∞ chainlike hybrid complex, hydrothermal synthesis and structure, **167**, 402
 [Cu(en)₂]₄[SiMo₈V₄O₄₀(V^{IV}O)₂][MoO₄]₂·5H₂O, hydrothermal synthesis and crystal structure, **165**, 1
 Cu(I)halide 2-ethylpyrazine coordination polymers, synthesis, crystal structure, and thermal properties, **169**, 103
 Cu(NCS)₂, MDSe-TSF-based conductive radical cation salts with, structures, and conductive properties, **168**, 582
 [{Cu(pca)}₂Mo₈O₂₆] two-dimensional network, hydrothermal synthesis and structure, **167**, 370
 [{Cu₃(pca)₃MoO₄}]Mo₈O₂₆ one-dimensional material, hydrothermal synthesis and structure, **167**, 370
 ACu₃Ru₄O₁₂ (A = Na, Ca, Sr, La, Nd), structure: comparison of XRD-Rietveld and EXAFS results, **167**, 126
 Cu₇S₄ and Cu₉S₈ nanocrystals, synthesis via microwave-assisted elemental-direct-reaction route, **167**, 249
 Cu_{2-x}Se, synthesis in mixed solvents at room temperature, **167**, 28
 Cu₂Te, synthesis in mixed solvents at room temperature, **167**, 28
 Cu₂UO₂(PO₄)₂ built up from [CuO₂]_∞ chains, synthesis, structure, and magnetic properties, **165**, 89
 Cu_{2.33-x}V₄O₁₁, electrical resistivity, magnetic susceptibility, XPS studies, and electronic band structure, **166**, 382
 dication salts of phenyl-substituted TTF vinylogues, preparation and structures, **168**, 427
 (2,5-diiododicyanoquinondiimine)₂Cu, phase transition: temperature-dependent vibronic and vibrational IR absorptions, **168**, 632
 ionically compensated quadruple and quintuple perovskite layered cuprates with Ti blocking layers, defect analysis, **164**, 188
 KCu₄I₅ superionic phases, crystal structure and ionic conductivity, **165**, 363
 Li_{2-x}Cu_xMgCl₄ fast ionic conducting spinel-type chloride, ⁶Li and ⁷Li MAS NMR studies, **165**, 303
 Li₂CuZrO₄ polymorphs, synthesis and crystal structure, **166**, 311
 Li_xMg_{0.857-x}Cu_{2.143}O_{3-y}, synthesis, crystal structure, and physical properties, **168**, 85
 LuBaCuFeO_{5+δ}, low-temperature magnetic properties, **166**, 251
 NaBa₂Cu₂²⁺Cu³⁺O₆, polysynthetic twinning characterization and crystallographic refinement, **165**, 214
 salts of rigid N,N'-dicyanoquinone diimine derivatives, **168**, 690
 SeCu_{1-x}Zn_xO₃ (0 ≤ x ≤ 1) perovskites, crystal chemistry and magnetic properties, **168**, 149
 Sr_{1.9}Cu_{4.1}(PO₄)₄, Sr₂Cu(PO₄)₂, Sr₃Cu₃(PO₄)₄, and Sr_{9.1}Cu_{1.4}(PO₄)₇, synthesis and powder XRD, **163**, 121
 Sr₃CuRhO₆ one-dimensional oxides, magnetic properties as function of structure, **164**, 220
 TiO₂dye/CuI cell, charge generation under different modes of illumination, **166**, 142
 TmBaCuFeO_{5+δ}, low-temperature magnetic properties, **166**, 251
 YCu_xMn_{1-x}O₃ perovskites, structural characterization, **163**, 377
 ZrCuSiP, structure and electrical transport properties, **165**, 372
- Coprecipitation
 synthesis of Mg/M(III) (M = Al, Ga, In) layered double hydroxides, **168**, 156
 synthesis of Mn–Al layered double hydroxides, **167**, 152
- Covalent oxide network
 structural transformation, room temperature solid state reaction involving, **164**, 157
- Crosslinking
 polymers, resulting mechanical resistance and stability, theoretical modeling, **164**, 237

- 18-Crown-6
(anilinium)(18-crown-6)[Ni(dimit)₂] polymorphs, **168**, 661
[(NH₄(18-Crown-6))₄MnX₄][TlX₄]₂ (X = Cl, Br), cubic *F*23 crystals, defects and luminescence behavior, **163**, 286
- Crystal chemistry
Aurivillius-type compounds
Bi₇Ti₄NbO₂₁, **164**, 261
structural model, **164**, 252
Ca_{1-x}Sr_xAl₂O₄, **168**, 229
lithium in alluaudite structure, **163**, 194
oxygen/fluorine ordering in NbO₂F, **166**, 73
rubidium uranyl molybdates, **168**, 245
SeCu_{1-x}Zn_xO₃ (0 ≤ x ≤ 1) perovskites, **168**, 149
Si–Yb system, **163**, 178
Sr[(UO₂)(SeO₃)₂] · 2H₂O, **168**, 358
AE[(UO₂)(SeO₃)₂] (AE = Ca, Ba), **168**, 358
- Crystal defects
[(NH₄(18-Crown-6))₄MnX₄][TlX₄]₂ (X = Cl, Br) cubic *F*23 crystals, **163**, 286
- Crystal field calculations
Nd₂Ti₃S₂O₅, **165**, 228
- Crystal field structure
⁴I_{9/2} ground state of Nd³⁺:YAB, **167**, 386
- Crystal growth
EuAlF₅ and M(II)_{1-x}Eu_xAlF₅ (M = Ca, Sr, Ba), **164**, 150
floating zone, Sc_{0.83-x}B_{10.0-y}C_{3.5-z}Si_{0.083-z} (x = 0.030, y = 0.36, z = 0.026), **165**, 148
LaMn₅ (M = Co, Rh, Ir), **166**, 245
LiCoO₂ single crystal, **164**, 1
α-LiO₃, conditions for, relationship to low-frequency relaxation phenomena, **168**, 76
mechanochemical, silver vanadate, **169**, 139
Pb₃(MoO₃)(PO₄)₅, **163**, 308
Sc_{4.5-x}B_{57-y+z}C_{3.5-z} (x = 0.27, y = 1.1, z = 0.2), **168**, 192
SnS₂ nanoflakes formed by solvothermal reaction, **164**, 106
Sr₂TiSi₂O₈, **166**, 15
Zn(Fe,Ga)₂O₄ spinel-type solid solutions, effect of iron valence of starting salt, **168**, 5
- Crystallite coarsening
Ce_{1-x}Y_xO_{2-x/2} (0 ≤ x ≤ 0.35) nanocrystals synthesized via carbonate precipitation, **168**, 52
- Crystallization
aluminophosphate open framework materials from fluoride media, cyclam as structure-directed agent in, **167**, 267
MTN-type zeolite with tetragonal symmetry, **164**, 19
sol-gel boehmite via hydrothermal annealing, **166**, 182
- Crystal nucleation
from molten (RbCl)₂₅₆ and (RbCl)₅₀₀ clusters, molecular dynamics studies, **165**, 289
- Crystal structure
4234-type intermetallic borocarbides, **164**, 246
Ag₅Pb_{2-x}Cu_xO₆ (0.0 ≤ x < 0.5), **163**, 151
alkali metal uranyl phosphate hydrates, **167**, 226
[Al₃P₄O₁₆][(CH₃)₂NHCH₂CH₂NH(CH₃)₂][H₃O], **167**, 282
aluminophosphate open framework materials crystallized from fluoride media, **167**, 267
(anilinium)(18-crown-6)[Ni(dimit)₂] polymorphs, **168**, 661
[As₂V₈^{IV}V₂O₂₆(H₂O)] · 8H₂O: large cavities with nanosized channels in 3-D neutral framework, **169**, 160
Au₂HgP₂ with Hg in oxidation state zero, **165**, 238
Au₂PbP₂ with Pb in oxidation state zero, **165**, 238
Aurivillius-type compounds, **164**, 252
Au₂TlP₂ with Tl in oxidation state zero, **165**, 238
Ba₁₁Bi₁₀, **164**, 169
Ba₇Ca₂Mn₅O₂₀, **168**, 11
Ba₈Cu₃In₄N₅ with nitridocuprate groups and one-dimensional infinite In clusters, **163**, 449
Ba₂In₂O₅, **164**, 119
Ba(In_xZr_{1-x})O_{3-x/2}, **164**, 119
Ba_{1-x}La_xTi_{1-x}Cr_xO₃ complex perovskites, **164**, 98
Ba₄Mn₃O₁₀, **167**, 453
Ba₃MRu₂O₉ (M = Y, In, La, Sm, Eu, Lu) 6H-perovskites, **165**, 317
BaTbO₃, **165**, 393
Ba₄₂Ti₅₁Fe₂₀O₁₇₄ multilayered magnetic dielectric ceramic in BaO–TiO₂–Fe₂O₃ system, **166**, 400
Be_{1.09}B₃, **163**, 385
Bi₃^(III)Bi^(V)O₇, high-resolution X-ray and neutron powder diffraction studies, **163**, 332
Bi₆Cr₂O₁₅ containing (Bi₁₂O₁₄)_n⁸ⁿ⁺ columns and CrO₄²⁻ tetrahedra, **163**, 144
BiMg_{2.5}V_{18.5}O₃₈, **164**, 138
BiMnAsO₅, **168**, 224
BiMn₂MO₆ (M = P, As, V), **167**, 245
BiMnVO₅, **168**, 224
Bi_{2.5}Na_{0.5}Ta₂O₉ and Bi_{2.5}Na_{m-1.5}Nb_mO_{3m+3} (m = 2–4), neutron powder diffraction and electron microscopy studies, **167**, 86
Bi_{0.775}Ln_{0.225}O_{1.5} (Ln = La, Pr, Nd, Sm, Tb, Dy) of rhombohedral Bi–Sr–O type, relationship to monoclinic ε-Bi_{4.86}La_{1.14}O₉, **168**, 91
Bi₄MO₈X (X = Cl, M = Ta; X = Br, M = Ta, Nb) layered intergrowth phases, **166**, 148
Bi₂PbMnO₄(PO₄)₂, **165**, 324
Bi_{-1.2}M_{-1.2}PO_{5.5} (M = Mn, Co, Zn) disordered compounds, role of oxygen-centered tetrahedra linkage, **167**, 168
Bi_{2-x}M_xRu_{2-y} (M = Cu, Co; x = 0, 0.4) pyrochlores: static disorder from lone pair electrons, **169**, 24
Bi₃SbO₇, high-resolution X-ray and neutron powder diffraction studies, **163**, 332
bis(ethylenediseleno)tetrathiafulvalene conducting salts with hexacyanoferrate(III) and nitroprusside, **168**, 616
bis(ethylenedithio)diselenadithia-fulvalene symmetric and unsymmetric salts: positional order and disorder, **168**, 626
bis(thiazolylidene)hydrazine complexes with tetracyanoquinodimethane, **168**, 590
Bi_{0.85}Ln_{0.15}(1-n)V_{0.15n}O_{1.5+0.15n}, **163**, 300
Bi_{1.5}Zn_{0.92}Nb_{1.5}O_{6.92} cubic pyrochlore, **168**, 69
B₂S₃ at high pressure, **166**, 164
Ca₃CoAl₄O₁₀, **166**, 191
Ca_{0.83}CuO₂ composite crystal, modulated structure, **163**, 540
Ca₉In(PO₄)₇ whitlockite-type phosphate, **165**, 278
calcium uranyl carbonates with multiple anionic species, **166**, 219
S-camphor at low temperature, solution from powder synchrotron X-ray diffraction by simulated annealing, **163**, 253
Ca-rich composite-type crystal [A₂Cu₂O₃]_{7+δ}[CuO₂]₁₀ with disorder phenomena in CuO₂ sublattice, 4D study, **163**, 17
Ca_{1-x}Sr_xAl₂O₄, **168**, 229
CeNiGa, **168**, 28
CeO₂ nanocrystals supported on SiO₂, effect of temperature and atmosphere, **168**, 110
charge transfer salts based on [M(mnt)₂]ⁿ⁻ and BMDT-TTF and EDT-TTF, **168**, 563
charge transfer salts of bis(ethylenedioxo)tetrathiafulvalene with isothiocyanato complex anions, **168**, 450
C₅H₁₂NPO₄H₂, **161**, 307; *erratum*, **168**, 714
[C₂N₂H₁₀][Co_{4.2}Zn_{1.8}(PO₄)₄(HPO₄)₄] · H₂O, **166**, 369
[C₆N₂H₁₄][Fe₂^{III}F₂(HPO₄)₂(H₂PO₄)₂] · 2H₂O open framework with one- and three-dimensional structures, **165**, 334
[C₆N₂H₁₄][Fe₃^{III}(OH)F₃(HPO₄)₂] · 2H₂O open framework with one- and three-dimensional structures, **165**, 334
(CN₃H₆)₂ · Zn₃(HPO₃)₄ · H₂O, **167**, 337
[C₆N₄H₂₂][ZnPO₄]₄ with open framework, **165**, 182
CoGa_{3-x}Zn_x and CoIn_{3-x}Zn_x systems, FeGa₃ structure type variations in, **165**, 100
conducting cation radical salts with tetraiodotellurate(II) and hexaiodotellurate(II), **168**, 396

- conducting molecular solids based on $[\text{Ni}(\text{dmf})_6]^{2+}$ and $[\text{Ni}(\text{dsit})_2]^{2-}$, **168**, 653
- $[\text{Co}_4(\text{OH})_2(\text{H}_2\text{O})_2](\text{C}_4\text{H}_{11}\text{N}_2)_2[\text{C}_6\text{H}_2(\text{COO})_4]_2 \cdot 3\text{H}_2\text{O}$ with tetranuclear clusters, **166**, 158
- coordination polymer constructed from paddle-wheel building units, **166**, 213
- copper salts of rigid *N,N'*-dicyanoquinone diimine derivatives, **168**, 690
- $\text{Cs}_2\text{Nb}_6\text{Br}_5\text{F}_{12}$, **163**, 319
- $\text{Cs}_2\text{MP}_3\text{O}_{10}$ ($M = \text{Ga}, \text{Al}, \text{Cr}$), **167**, 258
- $\text{Cs}_2(\text{UO}_2)[(\text{UO}_2)(\text{PO}_4)]_4(\text{H}_2\text{O})_2$, **167**, 226
- $[\text{Cu}(\text{Cl})_2(o\text{-phen})]_\infty$ chainlike hybrid complex, **167**, 402
- $[\text{Cu}(\text{en})_2]_4[\text{SiMo}_8\text{V}_4\text{O}_{40}(\text{V}^{1\text{V}}\text{O}_2)]_4[\text{MoO}_4]_2 \cdot 5\text{H}_2\text{O}$, **165**, 1
- $\text{Cu}(\text{I})$ halide 2-ethylpyrazine coordination polymers, **169**, 103
- $[\{\text{Cu}(\text{pca})\}_2\text{Mo}_8\text{O}_{26}]$ two-dimensional network, **167**, 370
- $[\{\text{Cu}_3(\text{pca})_3\text{MoO}_4\}_n\text{Mo}_8\text{O}_{26}]$ one-dimensional material, **167**, 370
- $A\text{Cu}_3\text{Ru}_4\text{O}_{12}$ ($A = \text{Na}, \text{Ca}, \text{Sr}, \text{La}, \text{Nd}$), comparison of XRD-Rietveld and EXAFS results, **167**, 126
- $\text{Cu}_2\text{UO}_2(\text{PO}_4)_2$ built up from $[\text{CuO}_2]_\infty$ chains, **165**, 89
- N,N'*-dialkylimidazolium cadmium–thiocyanate complexes, **169**, 199
- N,N'*-dialkylimidazolium salts $[(\text{C}_2\text{Im})_2][\text{Cd}_2(\text{SCN})_6] \cdot \text{C}_3\text{H}_6\text{O}$ and $[(\text{Me}_2\text{Im})_2][\text{Cd}_2(\text{SCN})_6]$, **167**, 119
- dication salts of phenyl-substituted TTF vinylogues, **168**, 427
- doped calcium tartrate tetrahydrate, **163**, 491
- χ - DyBO_3 , **166**, 203
- $\text{Dy}_2\text{Pt}_7\text{In}_{16}$: complex 3-D Pt–In networks, **169**, 118
- $\text{Dy}_3(\text{SeO}_3)_4\text{F}$, **167**, 113
- χ - ErBO_3 , **166**, 203
- $\text{Er}_2(\text{SeO}_3)_3$, **167**, 113
- (ethylenedithiotetrathiafulvalenequinone-1,3-dithiolethide) $_2 \cdot M\text{X}_4$ plate crystals, **168**, 408
- EuAlF_5 and $M(\text{II})_{1-x}\text{Eu}_x\text{AlF}_5$ ($M = \text{Ca}, \text{Sr}, \text{Ba}$), **164**, 150
- $\text{Eu}_{1.3}\text{Nb}_{1.9}\text{S}_5$, **164**, 345
- $\text{EuPd}_{0.72}\text{In}_{1.28}$ hexagonal Laves phase, **169**, 155
- $\text{EuPt}_{0.56}\text{In}_{1.44}$ hexagonal Laves phase, **169**, 155
- EuZn_2Ge_2 grown from Zn or Ga(In)/Zn flux, **163**, 37
- EuZn_2Si_2 grown from Zn or Ga(In)/Zn flux, **163**, 37
- FeGa_3 semiconducting intermetallic compounds, **165**, 94
- $[\text{Fe}(\text{H}_2\text{O})(\text{O}_3\text{P}-\text{CH}_2-\text{CO}_2)]_n$, **164**, 354
- $\text{Fe}_4(\text{P}_2\text{O}_7)_3$, **163**, 412
- $\text{Fe}_3\text{P}_5\text{SiO}_{19}$, neutron diffraction and Mössbauer studies, **164**, 71
- fullerenes C_{60} and C_{70} in molecular complexes with saturated amines, **168**, 474
- GdTMg ($T = \text{Pd}, \text{Ag}, \text{Pt}$), **168**, 331
- $\text{Gd}_3[\text{SiON}_3]\text{O}$ with non-condensed SiON_3 tetrahedra, **167**, 393
- GeO_2 , α -quartz-type structure, **166**, 434
- HfRhGa , **166**, 305
- $(\text{H}_3\text{N}(\text{CH}_2)_4\text{NH}_3)[\text{V}_6\text{O}_{14}]$, **167**, 407
- $\text{H}_3\text{N}(\text{CH}_2)_3\text{NH}_3 \cdot \text{Zn}_3(\text{HPO}_3)_4 \cdot \text{H}_2\text{O}$, **167**, 337
- $\text{Ho}_{0.5}\text{Sr}_{0.5}\text{MnO}_3$, strained structure, **165**, 65
- 1-hydroxy-1-phosphono-pentyl-phosphonic acid dimethyl ammonium salt, neutron diffraction study, **167**, 441
- $\text{InFe}_{1-x}\text{Ti}_x\text{O}_{3+x/2}$ ($x = 2/3$), **163**, 455
- iron diphosphonates, **164**, 367
- LnIrSb ($\text{Ln} = \text{La}-\text{Nd}, \text{Sm}, \text{Gd}-\text{Tm}$), **168**, 18
- IrSn_4 , **168**, 34
- KAg_4I_5 superionic phases, **165**, 363
- KCu_4I_5 superionic phases, **165**, 363
- $\text{KLnFe}(\text{II})(\text{CN})_6 \cdot x\text{H}_2\text{O}$ ($\text{Ln} = \text{La}-\text{Lu}$), **167**, 34
- $\text{K}_2\text{MoO}_2(\text{IO}_3)_4$ and $\beta\text{-KMnO}_3(\text{IO}_3)$, **166**, 442
- $\text{K}_2\text{Na}[\text{Ag}(\text{CN})_2]_3$, **168**, 267
- $\text{K}_2(\text{UO}_2)[(\text{UO}_2)(\text{PO}_4)]_4(\text{H}_2\text{O})_2$, **167**, 226
- $\text{K}_3(\text{VO}_2)_2\text{PO}_4\text{PO}_3\text{OH} \cdot \text{H}_2\text{O}$, tape-like structure, **163**, 534
- $\text{La}_{1-x}\text{Ca}_x\text{MnO}_{3-y}$ ($x = 0.30, 0.50$), **169**, 85
- $\text{LaGa}_x\text{Sn}_y\text{Sb}_z$, **167**, 41
- $\text{La}_2(\text{GeO}_4)\text{O}$ and alkaline-earth-doped $\text{La}_{9.33}(\text{GeO}_4)_6\text{O}_2$, **168**, 294
- LaMIn_5 ($M = \text{Co}, \text{Rh}, \text{Ir}$), **166**, 245
- $\text{La}_{2/3-x}\text{Li}_{3x}\text{TiO}_3$ ($x = 0.05$) perovskite conducting Li ions, **166**, 67
- $\text{La}_{0.8}\text{MnO}_{3-\delta}$ magnetoresistive thin film, transformations of, **164**, 177
- $\text{La}_5\text{Mo}_4\text{O}_{16}$ quasi-two-dimensional compound, substitutional effects of 3d transition metals, **164**, 60
- $(\text{La}_{1-x}\text{Nd}_x)_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ perovskites, effects of A cation size, **163**, 466
- LaNi_5 homogeneity domain, **166**, 1
- β - La_3RuO_7 , isolated RuO_6 octahedra in, **165**, 359
- $\text{La}_2\text{Sr}_2\text{BMnO}_8$ ($B = \text{Mg}, \text{Zn}$), **168**, 202
- $\text{La}_{0.63}(\text{Ti}_{0.92}\text{Nb}_{0.08})\text{O}_3$, **164**, 51
- $\text{La}_{2/3}\text{TiO}_3$ derivatives, **163**, 472
- $\text{La}_{0.10}\text{WO}_{3+y}$, **163**, 84
- $\text{Li}_3\text{AlB}_2\text{O}_6$, **163**, 369
- LiCoO_2 , stability at 400°C, **168**, 60
- $\text{Li}_2\text{CuZrO}_4$ polymorphs, **166**, 311
- $\text{Li}_x\text{Mg}_{0.857-x}\text{Cu}_{2.143}\text{O}_{3-y}$, **168**, 85
- $\text{Li}_{1+x-y}\text{Nb}_{1-x-3y}\text{Ti}_{x+4y}\text{O}_3$ solid solutions, **166**, 81
- Li_xNiO_2 , **163**, 340
- lithium nickel manganese oxides and their delithiated phases, **169**, 35
- α - $\text{Li}_4\text{Zn}(\text{PO}_4)_2$ and high-temperature polymorph β - $\text{Li}_4\text{Zn}(\text{PO}_4)_2$, **166**, 341
- $\text{Li}_{0.2(1)}\text{ZrNCl}$ superconducting phase derived by intercalation, single-crystal X-ray refinement, **169**, 149
- $\text{LuBaCuFeO}_{5+\delta}$ at low temperature, **166**, 251
- magnetic/conducting hybrid compound composed of $[\text{Mn}_2^{\text{II}}\text{Cl}_5(\text{EtOH})]$ 1-D chain and BEDT-TTF stacking layer, **168**, 418
- methylenediselenotetraselenafulvalene-based conductive radical cation salts, **168**, 582
- mixed valence radical cation salts of BEDT-TTF with $[\text{RuNOX}_5]^{2-}$ ($X = \text{Br}, \text{Cl}$), **168**, 514
- $\text{Mn}_7(\text{HOAsO}_3)_4(\text{XO}_4)_2$, **165**, 171
- $\text{Mn}_2(\text{H}_2\text{O})[\text{O}_2\text{C}(\text{CH}_2)_6\text{CO}_2]_2$, **166**, 279
- LnMnO_3 ($\text{Ln} = \text{Ho}, \text{Er}, \text{Tm}, \text{Yb}, \text{Lu}$), **165**, 131
- molecular conductors
- based on $M(\text{dddtd})_2$ bithiolenecation complexes, **168**, 464
 - with rare earth elements, **168**, 457
 - TMEO-ST-TTP-based, **168**, 608
- $A_x(\text{Mo}, \text{V})_8\text{O}_{21}$ ($A = \text{K}^+, \text{Rb}^+, \text{Cs}^+$) bronze with tunnel structure, **163**, 210
- β - MNX ($M = \text{Zr}, \text{Hf}$; $X = \text{Br}, \text{I}$) at high pressure, **163**, 77
- β - $\text{Na}_2\text{B}_8\text{O}_{13}$, **168**, 316
- $\text{Na}_{6.45}\text{Ca}_{3.55}(\text{SO}_4)_6(\text{F}_x\text{Cl}_{1-x})_{1.55}$, **163**, 398
- β - Na_xCoO_2 , **166**, 177
- Na_4FeO_4 , **165**, 266
- $\text{Na}_{0.21}\text{Nb}_6\text{Cl}_{10.5}\text{O}_3$ built from interconnected $\text{Nb}_6\text{Cl}_{12}\text{O}_6$ units, **163**, 325
- $\text{Na}_2\text{M}_3(\text{PO}_4)_3$ ($M_3 = \text{GaMn}_2, \text{GaCd}_2, \text{InMn}_2, \text{FeMnCd}$) with alluaudite structure, **168**, 208
- Na-RUB-29 ion-exchanged microporous lithosilicate, **167**, 310
- $\text{Na}_{1-x}\text{Sr}_x\text{NbO}_3$ ($0.1 \leq x \leq 0.9$) perovskite-type compounds, **167**, 7
- $\text{Na}_6(\text{UO}_2)(\text{SO}_4)_4(\text{H}_2\text{O})_2$, **163**, 313
- $\text{Na}_2\text{W}_2\text{O}_7 \cdot 1/2\text{H}_2\text{O}$ synthesized under high pressure and temperature, **167**, 525
- $\text{ANb}_2\text{PS}_{10}$ ($A = \text{Na}, \text{Ag}$) one-dimensional metal thiophosphates, **168**, 119
- $[\text{NH}_3(\text{CH}_2)_x\text{NH}_3][\text{Ga}_4(\text{PO}_4)_y(\text{HPO}_4)]$ ($x = 4, 5$; $y = 1, 4$), **167**, 17
- $[\text{NH}_3(\text{CH}_2)_n\text{NH}_3][\text{Sb}\{\text{CH}_3\text{C}(\text{O})(\text{PO}_3)_2\}]$ ($n = 4, 5$) one-dimensional diphosphonates, **168**, 263
- $(\text{NH}_4)_{21}[\text{H}_3\text{Mo}_{57}\text{V}_6(\text{NO})_6\text{O}_{183}(\text{H}_2\text{O})_{18}] \cdot 53\text{H}_2\text{O}$, single-crystal neutron diffraction study, **165**, 199
- $(\text{NH}_4)_3\text{H}(\text{SO}_4)_2$, disordered high-temperature structure, relationship to room-temperature phase, **165**, 136
- $(\text{NH}_4)\text{In}(\text{OH})\text{PO}_4$
- hydrothermally prepared, **166**, 362
 - with spiral chains of $\text{InO}_4(\text{OH})_2$, **165**, 209
- LnNiBi , **168**, 18

- [Ni(bpy)₃][Pd(dmit)₂]·CH₃CN, **168**, 390
 Ni(dmit)₂ simple salts doped with hydrogen-bonding pyridinium cations, **168**, 535
 {[Ni(pca)(H₂O)]₂Mo₈O₂₆} molecular cluster, **167**, 370
 Ni₁₀Sn₅P₃, **166**, 352
 REOCl (*RE* = La–Nd, Sm–Ho, Y), **165**, 48
 open-framework Co(II) phosphates with sodalite-related architectures, **167**, 344
 Ln₃OsO₇ (*Ln* = Pr, Nd, Sm), **169**, 189
 Pb_{1–x}Bi_xPt₂O₄ (0 ≤ *x* ≤ 0.3), **166**, 58
 Pb₆Ca₂Li₂(PO₄)₆ apatite, **166**, 237
 Pb_xCa_{10–x}(PO₄)₆(OH)₂ (*X* = 0–1) solid solutions, **163**, 27
 Pb₃(MoO)₃(PO₄)₅ with tunnel structure, **163**, 308
 Pb₂V^{III}O(VO₄)(V₂O₇)_{0.5} with trivalent vanadium rutile-like chains, **163**, 519
 LnPdBi, **168**, 18
 PdIn_{1.26}Sb_{0.74} and Pd₁₃In_{5.25}Sb_{3.75}, **164**, 110
 poly(hydroxymethyl) grouping-containing crystals: temperature-dependent structure–energy changes, **164**, 301
 LnPtBi, **168**, 18
 4-(4′-pyridylthio)-1-methylpyridinium salts, **164**, 320
 radical salts derived from tetrathiafulvalene dimers, **168**, 597
 RbAg₄I₅ superionic phases, **165**, 363
 Rb₂(UO₂)[(UO₂)(PO₄)₄(H₂O)₂], **167**, 226
 LnRhBi, **168**, 18
 LnRhSb (*Ln* = Sm, Gd–Tm), **168**, 18
 rubidium halides incorporated in cadmium oxalate host lattices, **167**, 274
 rubidium uranyl molybdates, **168**, 245
 RuGa₃ semiconducting intermetallic compounds, **165**, 94
 Ru₃Ge_{3+x} (0 < *x* < 1) chimney-ladder phases, **166**, 389
 rutile synthesized at low temperature: crystallography and crystallite morphology, **169**, 176
 Sc_{4.5–x}B_{57–y+z}C_{3.5–z} (*x* = 0.27, *y* = 1.1, *z* = 0.2), **168**, 192
 Sc_{0.83–x}B_{10.0–y}C_{0.17+y}Si_{0.083–z} (*x* = 0.030, *y* = 0.36, *z* = 0.026), **165**, 148
 SeO₂, pressure-induced deformations, **168**, 184
 A_{1–x}Sn_{9–x}Bi_{11+x}Se₂₆ (*A* = K, Rb, Cs), prediction based on phase homologies, **167**, 299
 SnP₂O₇, **166**, 42
 Sr₃Al₁₀SiO₂₀, **169**, 53
 (Sr₃Ba₆)Sb₁₀, **164**, 169
 Sr₁₁Bi₁₀, **164**, 169
 SrBi₄Ti₄O₁₅ four-layer Aurivillius-phase ferroelectrics, **164**, 280; *erratum*, **166**, 449
 SrCaMnGaO_{5+δ}, **167**, 188
 Sr₂CoO₂X₂ (*X* = Cl, Br), **168**, 1
 Sr₃CuRhO₆ one-dimensional oxides, relationship to magnetic properties, **164**, 220
 [Sr(Fe,Nb)_{0.5}S_{1.5}]_{1.13}NbS₂, **168**, 41
 β-SrGaBO₄, *ab initio* determination from powder X-ray diffraction data, **165**, 119
 [SrGd_{0.5}S_{1.5}]_{1.16}NbS₂, **168**, 41
 Sr_{1–x}La_xTi_{1–x}Cr_xO₃, **165**, 381
 Sr₂NF single crystals, **169**, 13
 Sr₃NiRhO₆ one-dimensional oxides, relationship to magnetic properties, **164**, 220
 Sr₅Pb₃CoO₁₂, **164**, 12
 Sr₉A(PO₄)₇ (*A* = Sc, Cr, Fe, Ga, In) Whitlockite-type phosphates, **168**, 237
 Sr₂SnO₄, high-resolution neutron powder diffraction study, **169**, 208
 Sr₂TiSi₂O₈, **166**, 15
 Sr[(UO₂)(SeO₃)₂]·2H₂O, **168**, 358
 M_xTa_{11–x}Ge₈ (*M* = Ti, Zr, Hf), **167**, 517
 Tb₆Pt₁₂In₂₃: complex 3-D Pt–In networks, **169**, 118
 tetrachloroferrate(III) salts of BDH-TTP and BDA-TTP, **168**, 503
 tetrathiafulvalene-based conducting charge transfer salts with anions containing selenocyanate ligands, **168**, 573
 Tl_{1–x}Na_xNb₂PO₈ and related compounds, comparison with Ca_{0.5+x}Cs₂Nb₆P₃O₂₄ and physical properties, **164**, 272
 Tl₂S, **168**, 322
 TmBaCuFeO_{5+δ} at low temperature, **166**, 251
 trifluoromethylsulfonyl-based BEDT-TTF salts, **168**, 524
 (UO₂)₃(PO₄)₂(H₂O)₄, **163**, 275
 AE[(UO₂)(SeO₃)₂] (*AE* = Ca, Ba), **168**, 358
 U₃Te₅Z_x (*Z* = Ge, Sn), **168**, 217
 U_{1–x}M_xTi₂O₆ (*M* = Ca²⁺, La³⁺, Gd³⁺), **165**, 261
 V₂GeO₄F₂ with chains of VO₄F₂ octahedra, **165**, 74
 [V₄O₁₀(phen)₂] one-dimensional ladder-like chain complex, **163**, 10
 V⁴⁺–ZrO₂ tetragonal solid solutions obtained from gels, Rietveld refinement, **163**, 33
 WO₃, transitions in, crystallite nanosize effect on, Raman spectroscopic study, **167**, 425
 WO₃-into-zirconia solid solutions in WO₃–ZrO₂ catalysts, **164**, 339
 Yb₃Ge₅, **165**, 178
 Yb₃Si₅, **163**, 178
 YB_{17.6}Si_{4.6}, **164**, 361
 YMe_xMn_{1–x}O₃ (*Me* = Cu, Ni, Co) perovskites, **163**, 377
 Zintl phases in alkali metal–In–Bi systems, **163**, 436
 Zn₂(OH)_{0.14(3)}F_{0.86(3)}(PO₄) single crystals, **164**, 42
 Zn₆(PO₄)₅(HPO₄)·C₈N₅H₂₈·5H₂O intercalated with quintuply protonated tetraethylenepentamine, **166**, 265
 Zn₄P₃O₁₁(OH)·3C₃N₂H₄, **163**, 364
 ZrCuSiP, **165**, 372
 ZrRhGa, **166**, 305
 ZrRh_{0.710(4)}In, **166**, 305
 Zr_{1–δ}V_{1+δ}As, **169**, 96
 Crystal violet lactone
 fullerenes C₆₀ and C₇₀ in molecular complexes with, preparation, crystal structures, and characterization, **168**, 474
 Cyanide
 KLnFe(II)(CN)₆·xH₂O (*Ln* = La–Lu), characterization and thermal evolution, **167**, 34
 Cyclam
 as structure-directed agent in crystallization of aluminophosphate open framework materials from fluoride media, **167**, 267
 D
 Decomposition
 EuPdIn and EuPtIn at high temperature and pressure: formation of hexagonal Laves phases, **169**, 155
 photodecomposition, methyl orange by TiO₂/SnO₂ nanocrystals, **165**, 193
 thermal, Mn–Al layered double hydroxides, **167**, 152
 Defect analysis
 ionically compensated quadruple and quintuple perovskite layered cuprates with Ti blocking layers, **164**, 188
 Defect chemistry
 LaMnO_{3+δ}: excess oxygen, **163**, 65
 Defect equilibria
 Mg_{1–x}Mn_xMn₂O_{4±δ} spinels, **166**, 171
 Defect structure
 Bi_{2–x}Sb_xSe₃ crystals, point defects, **165**, 35
 [(NH₄(18-Crown-6))₄MnX₄][TlX₄]₂ (*X* = Cl, Br) cubic *F*23 crystals, **163**, 286
 Sr₂MnO_{3.5+x} reduced single-layer compound, **167**, 145
 Delithiation
 LiMnO₂ by acid treatment, **169**, 66
 LiNiO₂ by acid treatment, **163**, 340
 lithium nickel manganese oxides, **169**, 35
 Density functional theory
 hybrid DF/HF calculations for nitrogen isotropic hyperfine coupling constants in nitroxide radicals, **169**, 75

- de Wolff disorder
 γ -MnO₂ synthesized from three-dimensional framework and layered structures, **166**, 375
- N,N'*-Dialkylimidazolium cadmium–thiocyanate complexes
 cation-controlled formation and structure, **169**, 199
- α,ω -Diamines
 role as clay surface modifiers and polymer curing agents in formation of thermoset epoxy-clay nanocomposites, **167**, 354
- 1,4-Diaminobutane
 gallium phosphate frameworks containing, synthesis and structure, **167**, 17
- 1,5-Diaminopentane
 gallium phosphate frameworks containing, synthesis and structure, **167**, 17
- N,N'*-Dicyanoquinone diimines
 rigid derivatives of, copper salts, **168**, 690
- N,N'*-Dicyclohexylimidazolium salts
 [(C₆H₁₁N)₂][Cd₂(SCN)₆]·C₃H₆O, synthesis and X-ray structure, **167**, 119
- 2,6-Di[dibutylamino-phenylvinyl]-1-butylpyridinium iodide
 monolayer rectifier, **168**, 696
- Dielectric properties
 Bi₄MO₈X (X = Cl, M = Ta; X = Br, M = Ta, Nb) layered intergrowth phases, **166**, 148
 Ca₉In(PO₄)₇ whitlockite-type phosphate, **165**, 278
 doped calcium tartrate tetrahydrate, **163**, 491
 Pb(Fe_{2/3}W_{1/3})O₃–PbTiO₃ relaxor ferroelectric system, **163**, 484
 PbO–As₂O₃ glasses containing Mo ions, **166**, 104
 Sr(Sr_{1/3}Nb_{2/3})O₃, **166**, 24
- Differential fractional site occupation
 M_xTa_{11–x}Ge₈ (M = Ti, Zr, Hf), **167**, 517
- Differential scanning calorimetry
N-4-nitrophenyl-L-prolinol nanocrystals, **165**, 25
- Diffuse reflectance spectra
 B₂S₃, **166**, 164
 Ln₂Ti₂S₂O₅ (Ln = Nd, Sm, Gd, Tb, Dy, Ho, Er, Y), **165**, 228
- 5,6-Dihydro-1,4-dithiin-2,3-dithiolate
 molecular conductors based on M(dddt)₂ bithiolenecation complexes, synthesis, structure, and properties, **168**, 464
- 2,5-Diiododicyanoquinondiimine
 (DI-DCNQI)₂M (M = Ag, Li, Cu): temperature-dependent vibronic and vibrational IR absorptions, **168**, 632
- Dimensionality
 organic synthetic metals, **168**, 367
 Sr[(UO₂)(SeO₃)₂]·2H₂O, **168**, 358
 TCNQF₄ complexes of EDO-TTF-CONH₂ and EDT-TTF-CONH₂, **168**, 668
 AE[(UO₂)(SeO₃)₂] (AE = Ca, Ba), **168**, 358
- Dimethylanilinoaza[C₆₀]fullerene
 monolayer rectifier, **168**, 696
- Dimethylformamide
 [Ni(dmf)₆]²⁺, conducting molecular solid based on, anion packing in, **168**, 653
- N,N'*-Dimethylimidazolium salts
 [(Me₂Im)₂][Cd₂(SCN)₆], synthesis and X-ray structure, **167**, 119
- Di-2-picolyamine
 coordination chemistry with molybdenum oxides, **167**, 370
- Disorder
 bis(ethylenedithio)diselenadithia-fulvalene symmetric and unsymmetric salts, **168**, 626
 Co ions in mechanochemically synthesized LiCoO₂, **165**, 56
 in CuO₂ sublattice of Ca-rich composite-type crystal [A₂Cu₂O₃]_{7+δ} [CuO₂]₁₀, 4D structural study, **163**, 17
 (NH₄)₃H(SO₄)₂ high-temperature structure, relationship to room-temperature phase, **165**, 136
 static, from lone pair electrons in Bi_{2–x}M_xRu₂O_{7–y} (M = Cu, Co; x = 0, 0.4) pyrochlores, **169**, 24
 M_xTa_{11–x}Ge₈ (M = Ti, Zr, Hf), **167**, 517
- Dispersive X-ray absorption fine structure
 exchange reaction of CuCl and BaO, **163**, 158
- Disulfide bridges
 in AgNb₂PS₁₀ one-dimensional metal thiophosphates, **168**, 119
- cis*-Dithiocyanate-bis(2,2'-bipyridyl-4,4'-dicarboxylate) ruthenium(II)
 sandwiched between TiO₂ and CuI, charge generation under different modes of illumination, **166**, 142
- 1,3-Dithiole-2thione-4,5-diselenolate
 [Ni(dsit)₂]^{2–}, conducting molecular solid based on, anion packing in, **168**, 653
- 1,3-Dithiole-2thione-4,5-dithiolate
 [Ni(bpy)₃][Pd(dmit)₂]·CH₃CN, preparation and crystal structure, **168**, 390
- Ni(dmit)₂ simple salts, charge carrier doping by hydrogen-bonding pyridinium cations, **168**, 535
 TTF[Ni(dimit)₂]₂, thin films and nanowires, formation and characterization, **168**, 438
- Dolomite
 reaction with zircon, monitoring by neutron thermodiffraction, **166**, 426
- Donor–acceptor-type molecules
 hexamethylenetetraethiathiafulvalene charge transfer complexes, preparation, electronic spectra, and conductivity, **168**, 486
 sulfide bridge-containing, assembly, **164**, 320
- Doping
 β -FeSi₂ semiconductors with impurities, geometrical and electronic structure after, first-principle calculation, **163**, 248
- Dye-sensitized solid-state cell
 charge generation under different modes of illumination, **166**, 142
- Dysprosium
 Bi_{0.775}Dy_{0.225}O_{1.5} of rhombohedral Bi–Sr–O type, structural relationship to monoclinic ϵ -Bi_{4.86}La_{1.14}O₉, **168**, 91
 (bis(ethylenedithio)tetrathiafulvalene)₅[Dy(NCS)₆NO₃]·C₂H₅OH, crystal and electronic structures, **168**, 457
 Dy₄T₂B₃C₄ intermetallic borocarbides, synthesis, structures, and magnetic properties, **164**, 246
 DyTbI (T = Rh, Ni, Pd, Pt), preparation and structure, **168**, 18
 χ -DyBO₃, multianvil high-pressure synthesis and crystal structure, **166**, 203
 DyOCl, stability of, bond valence study, **165**, 48
 Dy₂Pt₇In₁₆, complex 3-D Pt–In networks in, **169**, 118
 DyTSb (Rh, Ir), preparation and structure, **168**, 18
 Dy₃(SeO₃)₄F, synthesis and crystal structure, **167**, 113
 Dy₂Ti₂S₂O₅, optical properties, **165**, 228
 Dy_xWO₃ bronzes, X-ray and electron microscopy studies, **167**, 412
 K₂DyFe(II)(CN)₆·xH₂O, characterization and thermal evolution, **167**, 34
 tetra-*n*-butylammonium dysprosium(III) complex, crystal and electronic structures, **168**, 457
- E
- Editorials
 2001 Sir Geoffrey Wilkinson Prize awarded to Professor Achim Müller, **165**, 207
 introduction to special issue on molecular metals, **168**, 355
 Galen D. Stucky, **167**, 265
 summary of special issue on molecular metals, **168**, 712
- EELS, *see* Electron energy loss spectroscopy
- Elastic properties
 PbO–As₂O₃ glasses containing Mo ions, **166**, 104
- Electrical conductivity
 Ag₅Pb_{2–x}Cu_xO₆ (0.0 ≤ x < 0.5), **163**, 151
 anisotropic, in LiCoO₂ single crystal, **164**, 1
 MeB₂ (Me = Mg, Al, Zr, Nb, Ta), **169**, 168
 BaVS₃, anisotropy of, analysis based on first principles and semi-empirical electronic structure calculations, **165**, 345

- BICOVOX and BICUVOX, time-dependent degradation due to phase changes below 500°C, **163**, 224
- Bi_{2-x}Sb_xSe₃ crystals, **165**, 35
- Bi_{0.85}Ln_{0.15(1-n)}V_{0.15n}O_{1.5+0.15n}, **163**, 300
- Ca₂Co_{0.8}Ga_{1.2}O_{4.8} at high temperature, **167**, 196
- Ca₉In(PO₄)₇ whitlockite-type phosphate, **165**, 278
- charge transfer salts based on [M(mnt)₂]ⁿ⁻ and BMDT-TTF and EDT-TTF, **168**, 563
- copper salts of rigid *N,N'*-dicyanoquinone diimine derivatives, **168**, 690
- (ethylenedithiotetrathiafulvalenoquinone-1,3-dithiolethide)₂ · *MX*₄ plate crystals, **168**, 408
- hexamethylenetetratellurathiafulvalene charge transfer complexes of donor-acceptor type, **168**, 486
- ionically compensated quadruple and quintuple perovskite layered cuprates with Ti blocking layers, **164**, 188
- La_{0.3}Sr_{0.7}Fe_{1-x}Ga_xO_{2.65+δ} perovskites, **167**, 203
- La_{2/3}TiO₃ derivatives, **163**, 472
- magnetic/conducting hybrid compound composed of [Mn^{II}Cl₅(EtOH)] 1-D chain and BEDT-TTF stacking layer, **168**, 418
- methylenediselenotetraselenafulvalene-based conductive radical cation salts, **168**, 582
- Mg_{1-x}Mn_xMn₂O_{4±δ} spinels, **166**, 171
- molecular conductors
based on *M*(dddt)₂ bithiolenic cation complexes, **168**, 464
TMEQ-ST-TTP-based, **168**, 608
- Na₂M₃(PO₄)₃ (*M*₃ = GaMn₂, GaCd₂, InMn₂, FeMnCd) with alluaudite structure, **168**, 208
- Ni(dmit)₂ simple salts doped with hydrogen-bonding pyridinium cations, **168**, 535
- order-disorder-enhanced, in Ruddlesden-Popper Sr₃Fe_{2-x}Ti_xO_{6+δ}, **168**, 275
- Pb₆Ca₂Li₂(PO₄)₆ apatite, **166**, 237
- poly-*o*-methoxyaniline intercalated into V₂O₅ xerogel, **168**, 134
- radical salts derived from tetrathiafulvalene dimers, **168**, 597
- Sc₂O₃-Y₂O₃-ZrO₂-TiO₂ solid solutions, optimization for use as SOFC anode material, **165**, 12
- Sr_{1-x}La_xTi_{1-x}Cr_xO₃, **165**, 381
- tetrachloroferrate(III) salts of BDH-TTP and BDA-TTP, **168**, 503
- tetrathiafulvalene-based charge transfer salts with anions containing selenocyanate ligands, **168**, 573
- trifluoromethylsulfonyl-based BEDT-TTF salts, **168**, 524
- TTF[Ni(dimit)₂] thin films and nanowires, **168**, 438
- Yb₃Ge₅, **165**, 178
- Y₂O₃-ZrO₂-TiO₂ solid solutions, optimization for use as SOFC anode material, **165**, 12
- Electrical properties
REAgMg (*RE* = La, Ce, Eu, Yb), **164**, 201
Bi₂₆Mo_{10-x}Cr_xO₆₉ solid solution, **166**, 7
Bi_{1.5}Pb_{0.5}Ca_{2-x}M_xCo₂O_{8-δ} (*M* = Sc³⁺, Y³⁺, La³⁺), **167**, 472
EuAuMg, **164**, 201
EuZn₂Ge₂ grown from Zn or Ga(In)/Zn flux, **163**, 37
EuZn₂Si₂ grown from Zn or Ga(In)/Zn flux, **163**, 37
La_{1-x}Ca_xMnO_{3-y} (*x* = 0.30, 0.50), **169**, 85
(La_{1-x}Nd_x)_{0.7}Sr_{0.3}MnO₃ perovskites, effects of *A* cation size, **163**, 466
monolayer rectifiers: monolayers and multilayers, **168**, 696
β-Na_xCoO₂, **166**, 177
Na_{1-x}Sr_xNbO₃ (0.1 ≤ *x* ≤ 0.9) perovskite-type compounds, **167**, 7
organic synthetic metals, **168**, 367
Pb_{1-x}Bi_xPt₂O₄ (0 ≤ *x* ≤ 0.3), **166**, 58
YMe_xMn_{1-x}O₃ (*Me* = Cu, Ni, Co) perovskites, **163**, 377
[(ZrO₂)_{0.92}(Y₂O₃)_{0.08}]_{0.9}(TiO₂)_{0.1}, **165**, 79
- Electrical resistivity
Ba₈Cu₃In₄N₅ with nitridocuprate groups and one-dimensional infinite In clusters, **163**, 449
- Ba₃MRu₂O₉ (*M* = Y, In, La, Sm, Eu, Lu) 6H-perovskites, **165**, 317
- Be_{1.09}B₃, **163**, 385
- BiMg_{2.5}V_{18.5}O₃₈, **164**, 138
- Bi_{1.5}Pb_{0.5}Ca_{2-x}M_xCo₂O_{8-δ} (*M* = Sc³⁺, Y³⁺, La³⁺), **167**, 472
- bis(ethylenedithio)diselenadithia-fulvalene symmetric and unsymmetric salts, positional order and disorder of, **168**, 626
- Bi_{0.4}Sr_{2.5}Fe_{1.1}O₅, **167**, 48
- conducting cation radical salts with tetraiodotellurate(II) and hexaiodotellurate(II), **168**, 396
- Cu_{2.33-x}V₄O₁₁, **166**, 382
- EuZn₂Ge₂, **167**, 107
- FeGa₃ intermetallic compounds, **165**, 94
- Ho_{0.5}Sr_{0.5}MnO₃, **165**, 65
- LiCoO₂ single crystal, **164**, 1
- Li_xMg_{0.857-x}Cu_{2.143}O_{3-y}, **168**, 85
- magnetic field dependence, step-like transitions in Mn-site-doped manganites, **165**, 6
- mixed valence radical cation salts of BEDT-TTF with [RuNOX₅]²⁻ (*X* = Br, Cl), **168**, 514
- RuGa₃ intermetallic compounds, **165**, 94
- Ru₃Ge_{3+x} (0 < *x* < 1) chimney-ladder phases, **166**, 389
- RESn_xSb₂ (*RE* = La, Ce, Pr, Nd, Sm; *x* = 0.5, 0.7), **164**, 292
- Yb_{1-y}Al_{3-x}Ge_x and Yb_{1-y}Al_{3-x}Si_x, **163**, 113
- Yb₃Ge₅, **165**, 178
- Yb₃Si₅, **163**, 178
- ZrCuSiP, **165**, 372
- Electrochemistry
LiMn₂O₄ spinel synthesized with tartaric acid gel, effects of metal ion sources, **163**, 231
LiNi_{1-x}Mn_xVO₄ spinel, **165**, 312
γ-MnO₂ synthesized from three-dimensional framework and layered structures, **166**, 375
Ni_xMg_{6-x}MnO₈ as active materials for negative electrodes of lithium-ion cells, **166**, 330
M_xV₂O_{5A_y} · nH₂O: high lithium capacity for rechargeable batteries, **163**, 93
- Electron diffraction
K₃MoO₃F₃: superlattice ordering in elpasolite-related oxyfluoride, **163**, 267
La_{2/3}TiO₃ derivatives, **163**, 472
LiCoO₂: structural stability at 400°C, **168**, 60
oxygen/fluorine ordering in NbO₂F, **166**, 73
Pb_xWO₃ tetragonal bronze, **168**, 306
SnP₂O₇: structure and phase transitions, **166**, 42
- Electron energy loss spectroscopy
AlGaPON mixed nitrided galloaluminophosphates, structural study, **163**, 163
- Electronic polarizability
ions, in classification of simple oxides, **163**, 100
- Electronic properties
EuMn₂P₂ single crystals, **163**, 498
Ru₃Ge_{3+x} (0 < *x* < 1) chimney-ladder phases, **166**, 389
Sr₃Fe_{2-x}Co_xO_{7-δ} (0.25 ≤ *x* ≤ 1.75) *n* = 2 Ruddlesden-Popper phases, **166**, 292
- Electronic state
Co ions in mechanochemically synthesized LiCoO₂, **165**, 56
- Electronic structure
MeB₂ (*Me* = Mg, Al, Zr, Nb, Ta), **169**, 168
BaVS₃, semi-empirical calculations: electrical transport and magnetic properties, **165**, 345
CaM₂Ge₂ (*M* = Mn-Zn), **167**, 107
CoGa_{3-x}Zn_x and CoIn_{3-x}Zn_x systems, **165**, 100
EuAgMg and EuAuMg, **164**, 201
FeGa₃ semiconducting intermetallic compounds, **165**, 94
β-FeSi₂ semiconductors doped with impurities, first-principle calculation, **163**, 248
β-Fe(Si_{2-x}Ge_x), **169**, 19

- mixed valence radical cation salts of BEDT-TTF with $[\text{RuNOX}_3]^{2-}$ ($X = \text{Br}, \text{Cl}$), **168**, 514
- molecular conductors with rare earth elements, **168**, 457
- $\text{ANb}_2\text{PS}_{10}$ ($A = \text{Na}, \text{Ag}$) one-dimensional metal thiophosphates, **168**, 119
- $\text{PdIn}_{1.26}\text{Sb}_{0.74}$ and $\text{Pd}_{13}\text{In}_{5.25}\text{Sb}_{3.75}$, **164**, 110
- RuGa_3 semiconducting intermetallic compounds, **165**, 94
- trifluoromethylsulfonyl-based BEDT-TTF salts, **168**, 524
- two-dimensional organic metal $(\text{EO-TTP})_2\text{AsF}_6$, optical study, **168**, 497
- $\text{Zr}_{1-\delta}\text{V}_{1+\delta}\text{As}$, **169**, 96
- Electron localization
in BaVS_3 , analysis based on first principles and semi-empirical electronic structure calculations, **165**, 345
- Electron microscopy, *see also* High-resolution electron microscopy; Transmission electron microscopy
- $\text{Ba}_2\text{In}_2\text{O}_5$ and $\text{Ba}(\text{In}_x\text{Zr}_{1-x})\text{O}_{3-x/2}$, **164**, 119
- $\text{Bi}_{2.5}\text{Na}_{0.5}\text{Ta}_2\text{O}_9$ and $\text{Bi}_{2.5}\text{Na}_{m-1.5}\text{Nb}_m\text{O}_{3m+3}$ ($m = 2-4$), **167**, 86
- $\text{Ho}_{0.5}\text{Sr}_{0.5}\text{MnO}_3$: strained structure, **165**, 65
- $\text{Ni}_{10}\text{Sn}_5\text{P}_3$, **166**, 352
- $\text{RE}_x\text{WO}_{3+y}$ ($\text{RE} = \text{La}, \text{Nd}$) tungsten bronze-related phases, **168**, 284
- Electron paramagnetic resonance
charge transfer salts of bis(ethylenedioxy)tetrathiafulvalene with isothiocyanato complex anions, **168**, 450
- $\text{LaNb}_{2-2x}\text{Ta}_x\text{VO}_{9-\delta}$ ($x = 0-0.4$) and $\text{LaTa}_{2-2x}\text{Nb}_{2x}\text{VO}_{9-\delta}$ ($x = 0-0.1$), effects of oxygen nonstoichiometry, **167**, 73
- $\text{Li}_{1+x}\text{V}_3\text{O}_8$: electronic state of vanadium ions, **163**, 421
- Electron probe microanalysis
 LaNi_5 homogeneity domain: structural study, **166**, 1
- natural tapiolite: coexistence of trirutile and rutile phases, **163**, 218
- Electron transport
amorphous perfluoro-1,3,5-tris(*p*-oligophenyl)benzenes with high-glass-transition temperature, **168**, 470
- Elemental-direct-reaction
 Cu_7S_4 and Cu_9S_8 nanocrystal synthesis by, **167**, 249
- Elpasolite
related oxyfluoride $\text{K}_3\text{MoO}_3\text{F}_3$, superlattice ordering in, electron diffraction and XRPD study, **163**, 267
- Energy-dispersive X-ray absorption fine structure
exchange reaction of CuCl and BaO , **163**, 158
- Energy dispersive X-ray spectroscopy
 $\text{RE}_x\text{WO}_{3+y}$ ($\text{RE} = \text{La}, \text{Nd}$) tungsten bronze-related phases, **168**, 284
- Enthalpy of formation
 $\text{La}_{1-x}\text{A}_x\text{MnO}_{3\pm\delta}$ ($A = \text{Ca}, \text{Sr}$), measurement by high-temperature solution calorimetry, **163**, 186
- NdFeO_3 , **164**, 34
- Epitaxial domains
 CeO_{2-x} , laser ablation deposition on glass, **166**, 197
- Epitaxial films
 $\text{Fe}_{3-x}\text{O}_4$, (111)-oriented, preparation on $\alpha\text{-Al}_2\text{O}_3$ (0001) substrates, **163**, 239
- EPR, *see* Electron paramagnetic resonance
- Erbium
 $\text{Ba}_2\text{ErRuO}_6$ ordered perovskite, magnetic and calorimetric studies, **169**, 125
- $\text{Er}_2\text{Ba}_2\text{CuPtO}_8$, magnetic behavior, **165**, 297
- $\text{Er}_4\text{T}_2\text{B}_3\text{C}_4$ intermetallic borocarbides, synthesis, structures, and magnetic properties, **164**, 246
- ErTbI ($T = \text{Rh}, \text{Ni}, \text{Pd}, \text{Pt}$), preparation and structure, **168**, 18
- $\chi\text{-ErBO}_3$, multianvil high-pressure synthesis and crystal structure, **166**, 203
- ErMnO_3 , magnetic properties, **165**, 131
- ErTSb (Rh, Ir), preparation and structure, **168**, 18
- $\text{Er}_2(\text{SeO}_3)_3$, synthesis and crystal structure, **167**, 113
- $\text{Er}_2\text{Ti}_2\text{S}_2\text{O}_5$, optical properties, **165**, 228
- $\text{KErFe}(\text{II})(\text{CN})_6 \cdot x\text{H}_2\text{O}$, characterization and thermal evolution, **167**, 34
- Ethanol
 $[\text{Mn}_2^+\text{Cl}_3(\text{EtOH})]$ 1-D chain, and BEDT-TTF stacking layer, magnetic/conducting hybrid compound composed of, **168**, 418
- Ethylenediamine
mixed with hydrazine hydrate, room-temperature synthesis of copper and silver chalcogenides in, **167**, 28
- (Ethylenedioxy)-carbamoyltetrathiafulvalene
 TCNQF_4 complexes of, charge transfer, dimensionality, and amide hydrogen bond network adaptability, **168**, 668
- 2-(4,5-Ethylenedioxy-1,3-dithiol-2-ylidene)-5-(1,3-dithiol-2-ylidene)-1,3,4,6-tetrathiapentalene
two-dimensional organic metal $(\text{EO-TTP})_2\text{AsF}_6$, optical study, **168**, 497
- (Ethylenedithio)-carbamoyltetrathiafulvalene
 TCNQF_4 complexes of, charge transfer, dimensionality, and amide hydrogen bond network adaptability, **168**, 668
- Ethylenedithiotetrathiafulvalene
conducting cation radical salts with tetraiodotellurate(II) and hexaiodotellurate(II), structural and physical properties, **168**, 396
- and $[\text{M}(\text{mnt})_2]^{n-}$, charge transfer solids based on, conducting and magnetic properties, **168**, 563
- (Ethylenedithiotetrathiafulvalenoquinone-1,3-dithiolethide) $\cdot \text{MX}_4$ plate crystals, structure and electrical conducting and magnetic properties, **168**, 408
- Ethyleneurea
intercalation into oxovanadium phosphate to produce $\text{VOPO}_4 \cdot 2\text{H}_2\text{O}$ at room temperature, **166**, 277
- N*-Ethyl-hexamethylenetetraammonium bromide
as template in hydrothermal synthesis of MTN-type zeolite, **164**, 19
- Europium
 $\text{BaEu}(\text{Cu}_{0.5}\text{Fe}_{0.5})_2\text{O}_{5+\delta}$ double perovskites, interplay of Cu and Fe valences, **166**, 118; *erratum*, **168**, 354
- $\text{Ba}_3\text{EuRu}_2\text{O}_9$ 6H-perovskites, crystal structure and magnetic properties, **165**, 317
- EuAgMg , magnetic and electrical properties, ^{151}Eu Mössbauer spectroscopy, and chemical bonding, **164**, 201
- EuAlF_5 and $\text{M}(\text{II})_{1-x}\text{Eu}_x\text{AlF}_5$ ($M = \text{Ca}, \text{Sr}, \text{Ba}$), single-crystal growth and structural classification, **164**, 150
- EuAuMg , magnetic and electrical properties, ^{151}Eu Mössbauer spectroscopy, and chemical bonding, **164**, 201
- $\text{EuBa}_2\text{Mn}_2\text{Cu}_2\text{O}_{12\pm y}$, structure determination by powder neutron diffraction, **167**, 237
- EuMn_2P_2 single crystals, synthesis and magnetic and electronic properties, **163**, 498
- $\text{Eu}_{1.3}\text{Nb}_{1.9}\text{S}_5$, crystal structure, **164**, 345
- EuOCl , stability of, bond valence study, **165**, 48
- EuPdIn , decomposition at high temperature and pressure: formation of hexagonal Laves phase $\text{EuPd}_{0.72}\text{In}_{1.28}$, **169**, 155
- EuPtIn , decomposition at high temperature and pressure: formation of hexagonal Laves phase $\text{EuPt}_{0.56}\text{In}_{1.44}$, **169**, 155
- EuZn_2Ge_2
grown from Zn or Ga(In)/Zn flux, crystal structure and electrical and magnetic properties, **163**, 37
- synthesis and characterization, **167**, 107
- EuZn_2Si_2 grown from Zn or Ga(In)/Zn flux, crystal structure and electrical and magnetic properties, **163**, 37
- $\text{KEuFe}(\text{II})(\text{CN})_6 \cdot x\text{H}_2\text{O}$, characterization and thermal evolution, **167**, 34
- lanthanide nitrate complex anions, metallic molecular crystals with magnetism, **168**, 444
- α -sialon materials doped with, luminescence properties, **165**, 19
- $\text{Sr}_3(\text{PO}_4)_2\text{:Eu}$, VUV–UV photoluminescence spectra, **167**, 435
- tungsten bronzes with, synthesis and application as inert matrices for transmutation of long-life actinides, **169**, 182
- Exfoliation
 CdPS_3 , **166**, 421

Extended Hückel calculations

PdIn_{1.26}Sb_{0.74} and Pd₁₃In_{5.25}Sb_{3.75}, **164**, 110

Extended X-ray absorption fine structure

ACu₃Ru₄O₁₂ (*A* = Na, Ca, Sr, La, Nd), structural analysis by, comparison with XRD-Rietveld results, **167**, 126

local uranium environment in cesium uranates, **166**, 320

oxometalate-intercalated layered double hydroxides, **167**, 59

F

Fermion materials

heavy, LaMIn₅ (*M* = Co, Rh, Ir), **166**, 245

Fermi surfaces

charge transfer salts, **168**, 675

Ferrocene

trimorphism and overall metastability of triclinic phase, **164**, 131

Ferroelectrics

Bi₄MO₈X (*X* = Cl, *M* = Ta; *X* = Br, *M* = Ta, Nb) layered intergrowth phases, structure and electrophysical properties, **166**, 148

four-layer Aurivillius-phase, SrBi₄Ti₄O₁₅ and Bi₅Ti₃FeO₁₅, structural behavior, **164**, 280; *erratum*, **166**, 449

PbTiO₃, transition to paraelectric phase, pressure and temperature dependence, **167**, 446

Films, *see also* Thin films

epitaxial, Fe_{3-x}O₄, (111)-oriented, preparation on α-Al₂O₃ (0001) substrates, **163**, 239

low stress cubic BN, preparation by physical vapor deposition, **167**, 420

thermochromic organomodified silica composite, containing phosphomolybdic acid, preparation and characterization, **166**, 259

Fluorescence spectroscopy

Sr[(UO₂)(SeO₃)₂] · 2H₂O, **168**, 358

AE[(UO₂)(SeO₃)₂] (*AE* = Ca, Ba), **168**, 358

Fluoride media

aluminophosphate open framework material crystallization from, cyclam as structure-directed agent in, **167**, 267

Fluorine

[C₆N₂H₁₄][Fe^{III}F₂(HPO₄)₂(H₂PO₄)₂] · 2H₂O open framework with one- and three-dimensional structures, synthesis, **165**, 334

[C₆N₂H₁₄][Fe^{III}(OH)F₃(HPO₄)₂] · H₂O open framework with one- and three-dimensional structures, synthesis, **165**, 334

Cs₂Nb₆Br₅F₁₂, synthesis and crystal structure, **163**, 319

Dy₃(SeO₃)₄F, synthesis and crystal structure, **167**, 113

EuAlF₅ and *M*(II)_{1-x}Eu_xAlF₅ (*M* = Ca, Sr, Ba), single-crystal growth and structural classification, **164**, 150

K₃MoO₃F₃, superlattice ordering in, electron diffraction and XRPD study, **163**, 267

Na_{6.45}Ca_{3.55}(SO₄)₆(F_xCl_{1-x})_{1.55}, crystal structure, **163**, 398

Na_{1.5}Y_{1.5}F₆, hexagonal phase, high-pressure behavior, **165**, 159

NbO₂F, oxygen/fluorine ordering in, electron diffraction and crystal chemical studies, **166**, 73

and oxygen, ordering in NbO₂F, electron diffraction and crystal chemical studies, **166**, 73

perfluoro-1,3,5-tris(*p*-oligophenyl)benzenes, amorphous electron-transport materials with high-glass-transition temperature and high electron mobility, **168**, 470

PF₆⁻, MDSe-TSF-based conductive radical cation salts with, synthesis, structures, and conductive properties, **168**, 582

Sr₂NF, preparation and single-crystal structure, **169**, 13

TCNQF₄ complexes of EDO-TTF-CONH₂ and EDT-TTF-CONH₂, charge transfer, dimensionality, and amide hydrogen bond network adaptability, **168**, 668

V₂GeO₄F₂, with chains of VO₄F₂ octahedra, preparation, structure, and properties, **165**, 74

Zn₂(OH)_{0.14(3)}F_{0.86(3)}(PO₄), hydrothermal synthesis, single-crystal structure, and solid-state NMR, **164**, 42

Fluorite

related La₃MO₇ (*M* = Ru, Os) phases, magnetic properties, **167**, 182

14-electron rule

in RuGa₆Sn_w Nowotny chimney ladder phases, **164**, 210

Freezing

(RbCl)₂₅₆ and (RbCl)₅₀₀ molten clusters, kinetics of, molecular dynamics studies, **165**, 289

Fullerenes

C₆₀ and C₇₀, molecular complexes with saturated amines, preparation, crystal structures, and characterization, **168**, 474

superconductivity, **168**, 639

G

Gadolinium

Gd₄T₂B₃C₄ intermetallic borocarbides, synthesis, structures, and magnetic properties, **164**, 246

GdTbI (*T* = Rh, Ni, Pd, Pt), preparation and structure, **168**, 18

GdCrO₄, field-induced magnetic properties, **164**, 313

Gd^{III}Mg (*T* = Pd, Ag, Pt), structure and properties, **168**, 331

Gd–*M*–O system, phase equilibrium at 1100°C, **166**, 285

GdOCl, stability of, bond valence study, **165**, 48

Gd₃RuO₇, magnetic and calorimetric studies, **164**, 163

GdTbSb (Rh, Ir), preparation and structure, **168**, 18

Gd₃[SiON₃]O with non-condensed SiON₃ tetrahedra, synthesis, crystal structure, magnetism, and optical properties, **167**, 393

Gd₂Ti₂S₂O₅, optical properties, **165**, 228

lanthanide nitrate complex anions, metallic molecular crystals with, magnetism, **168**, 444

[SrGd_{0.5}Si_{1.5}]_{1.16}NbS₂, crystal structure and magnetic properties, **168**, 41

U_{1-x}Gd_xTi₂O₆, synthesis and crystal structure, **165**, 261

Gallium

AlGaPON mixed nitrided galloaluminophosphates, structural analysis by EELS, XAS, and XPS, **163**, 163

Ca₂Co_{0.8}Ga_{1.2}O_{4.8}, synthesis and high-temperature electron transport properties, **167**, 196

Ca₂Ga³⁺(OH)₆Cl · 2H₂O, X-ray powder diffraction structural study, **167**, 137

CeNiGa, polymorphism and hydrogen adsorption, **168**, 28

CoGa_{3-x}Zn_x systems, FeGa₃ structure type variations in, **165**, 100

Cs₂GaP₃O₁₀, synthesis and layer structure, **167**, 258

(ethylenedithiotetraphiafulvalenoquinone-1,3-dithiolethide)₂ · GaX₄ plate crystals, structure and electrical conducting and magnetic properties, **168**, 408

FeGa₃

semiconducting intermetallic compounds, synthesis and structure, **165**, 94

structure type, variations in CoIn_{3-x}Zn_x and CoGa_{3-x}Zn_x systems, **165**, 100

HfRhGa, X-ray single-crystal studies, **166**, 305

LaGa_xSn₇Sb₂, structure, **167**, 41

La_{0.3}Sr_{0.7}Fe_{1-x}Ga_xO_{2.65+δ} perovskites, oxygen nonstoichiometry, conductivity, and Seebeck coefficient, **167**, 203

Mg/Ga(III) layered double hydroxides obtained by coprecipitation and sol-gel method, **168**, 156

Na₂GaCd₂(PO₄)₃ and Na₂GaMn₂(PO₄)₃ with alluaudite structure, electrical behavior, **168**, 208

[NH₃(CH₂)_xNH₃][Ga₄(PO₄)_y(HPO₄)] (*x* = 4, 5; *y* = 1, 4), synthesis and properties, **167**, 17

RuGa₃ semiconducting intermetallic compounds, synthesis and structure, **165**, 94

RuGa₆Sn_w, Nowotny chimney ladder phases and 14-electron rule, **164**, 210

SrCaMnGaO_{5+δ}, crystal structure and magnetic properties, **167**, 188

β-SrGaBO₄, *ab initio* structure determination from powder X-ray diffraction data, **165**, 119

- $\text{Sr}_9\text{Ga}(\text{PO}_4)_7$ Whitlockite-type phosphates, synthesis and characterization, **168**, 237
 $\text{Zn}(\text{Fe},\text{Ga})_2\text{O}_4$ spinel-type solid solutions, precipitation from aqueous solutions at 90°C, **168**, 5
 ZrRhGa , X-ray single-crystal studies, **166**, 305
 Gamma radiation
 interaction with high-lead glasses containing chromium ions, **163**, 351
 Germanium
 CaM_2Ge_2 ($M = \text{Mn}–\text{Zn}$), electronic structure, **167**, 107
 EuZn_2Ge_2
 grown from Zn or Ga(In)/Zn flux, crystal structure and electrical and magnetic properties, **163**, 37
 synthesis and characterization, **167**, 107
 $\beta\text{-Fe}(\text{Si}_{2-x}\text{Ge}_x)$, electronic structure, **169**, 19
 GeO_2 , thermal stability of α -quartz-type structure, neutron diffraction study, **166**, 434
 $\text{La}_2(\text{GeO}_4)\text{O}$ and alkaline-earth-doped $\text{La}_{0.33}(\text{GeO}_4)_6\text{O}_2$, structural study, **168**, 294
 $\text{Ru}_3\text{Ge}_{3+x}$ ($0 < x < 1$) chimney-ladder phases, structure, stoichiometry, and properties, **166**, 389
 $M_x\text{Ta}_{11-x}\text{Ge}_8$ ($M = \text{Ti}, \text{Zr}, \text{Hf}$), structure and stabilization, **167**, 517
 $\text{U}_3\text{Te}_5\text{Ge}_x$, structures and magnetic properties, **168**, 217
 $\text{V}_2\text{GeO}_4\text{F}_2$, with chains of VO_4F_2 octahedra, preparation, structure, and properties, **165**, 74
 $\text{Yb}_{1-y}\text{Al}_{3-x}\text{Ge}_x$, homoatomic clustering in, **163**, 113
 Yb_3Ge_5 , structure and properties, **165**, 178
 Gibbs energy of reaction
 $\text{Gd}–\text{M}–\text{O}$ system, **166**, 285
 NdFeO_3 formation, **164**, 34
 $\text{Sm}–\text{Mn}–\text{O}$ system, **167**, 160
 Glass
 high-lead, containing chromium ions, interactions with γ rays, **163**, 351
 laser ablation deposition of CeO_{2-x} epitaxial domains on, **166**, 197
 $\text{PbO}–\text{As}_2\text{O}_3$, containing Mo ions, characterization and physical properties, **166**, 104
 $\text{TeO}_2–\text{WO}_3$, IR, XPS, and XANES structural studies, **168**, 175
 Gold
 Au_2HgP_2 with Hg in oxidation state zero, preparation and crystal structure, **165**, 238
 $[\text{Au}(\text{mnt})_2]^{n-}$, and BMDT-TTF and EDT-TTF, charge transfer solids based on, conducting and magnetic properties, **168**, 563
 Au_2PbP_2 with Pb in oxidation state zero, preparation and crystal structure, **165**, 238
 Au_2TlP_2 with Tl in oxidation state zero, preparation and crystal structure, **165**, 238
 EuAuMg , magnetic and electrical properties, ^{151}Eu Mössbauer spectroscopy, and chemical bonding, **164**, 201
 Gordon–Kim potential
 order–disorder phase transitions in alkali perchlorates, **163**, 294
 Grafting
 oxometalate-intercalated layered double hydroxides, **167**, 59
 Grain size
 effects on $\gamma\text{-Fe}_2\text{O}_3$ vacancies ordering and lattice parameters, **163**, 459
 Groundstates
 magnetic field-induced, charge transfer salts, **168**, 675

 H

 Hafnium
 $\beta\text{-HfNX}$ ($X = \text{Br}, \text{I}$), high-pressure synthesis and crystal structures, **163**, 77
 HfRhGa , X-ray single-crystal studies, **166**, 305
 $\text{Hf}_x\text{Ta}_{11-x}\text{Ge}_8$, structure and stabilization, **167**, 517
 Hall coefficient
 $\text{Bi}_{2-x}\text{Sb}_x\text{Se}_3$ crystals, **165**, 35

 Hartree–Fock calculations
 hybrid DF/HF calculations for nitrogen isotropic hyperfine coupling constants in nitroxide radicals, **169**, 75
 Heat capacity
 NdFeO_3 , **164**, 34
 Heavy fermions
 LaMIn_5 ($M = \text{Co}, \text{Rh}, \text{Ir}$), **166**, 245
 Hedvall reaction
 CuCl reaction with BaO , mechanism, time-resolved X-ray absorption spectroscopic study, **163**, 158
 Hematite
 (0001)-oriented, coating pyrolysis using postepitaxial toptaxy via, in preparation of $\text{Fe}_{3-x}\text{O}_4$ films, **163**, 239
 Heptane
 and $\text{C}_7\text{H}_{16}\text{–SO}_2$, photocatalytic oxidation systems, deactivation and regeneration of TiO_2 nanoparticles in, **166**, 395
 Hexacyanoferrate(III)
 conducting salts of bis(ethylenediseleno)tetrathiafulvalene with, synthesis, structure, and characterization, **168**, 616
 γ -Hexadecylquinolinium tricyanoquinodimethane
 molecular properties, film properties, and unimolecular rectification by, **168**, 696
 Hexaiodotellurate(II)
 conducting cation radical salts with, structural and physical properties, **168**, 396
 Hexamethylenetetraselenafulvalene
 conducting cation radical salts with tetraiodotellurate(II) and hexaiodotellurate(II), structural and physical properties, **168**, 396
 Hexamethylenetetratellurathiafulvalene
 charge transfer complexes of donor–acceptor type, preparation, electronic spectra, and conductivity, **168**, 486
 High-energy ball milling
 in alumina–yttria system, modeling, **164**, 88
 High-resolution electron microscopy
 $\text{Ba}_n\text{Bi}_{n+m}\text{O}_y$ system, **163**, 44
 $\text{Bi}_x\text{MO}_8\text{X}$ ($X = \text{Cl}, M = \text{Ta}$; $X = \text{Br}, M = \text{Ta}, \text{Nb}$) layered intergrowth phases, **166**, 148
 $\text{Bi}–\text{W}–\text{Nb}–\text{O}$ phases: microstructures, **163**, 479
 $\text{NaBa}_2\text{M}_2^+ \text{M}^{3+} \text{O}_6$ ($M = \text{Ni}, \text{Cu}$): polysynthetic twinning characterization and crystallographic refinement, **165**, 214
 $\text{Nb}_{22}\text{O}_{54}$: *in situ* oxidation in gas reaction cell, **163**, 137
 $\text{Ni}_{10}\text{Sn}_5\text{P}_3$, **166**, 352
 Pb_xWO_3 tetragonal bronze, **168**, 306
 rare-earth tungsten bronzes, **167**, 412
 RbIn_3S_5 , **167**, 214
 sol–gel-derived Co-substituted barium ferrite, **167**, 254
 $\text{Sr}_2\text{TiSi}_2\text{O}_8$, **166**, 15
 Hole distribution
 in $\text{Cu}(\text{Ba}_{0.8}\text{Sr}_{0.2})_2(\text{Yb}_{1-x}\text{Ca}_x)\text{Cu}_2\text{O}_{6+z}$, XANES study, **166**, 229
 Hole doping
 $\text{Li}_x\text{Mg}_{0.857-x}\text{Cu}_{2.143}\text{O}_{3-y}$, **168**, 85
 Holmium
 $\text{Bi}_{0.85}\text{Ho}_{0.15(1-n)}\text{V}_{0.15n}\text{O}_{1.5+0.15n}$, stability, conductivity, and powder crystal structure studies, **163**, 300
 (bis(ethylenedithio)tetrathiafulvalene) $_3$ [$\text{Ho}(\text{NCS})_6\text{NO}_3$]· $\text{C}_2\text{H}_5\text{OH}$, crystal and electronic structures, **168**, 457
 $\text{Ho}_2\text{Ba}_2\text{CuPtO}_8$, magnetic behavior, **165**, 297
 Ho_7Bi ($T = \text{Rh}, \text{Ni}, \text{Pd}, \text{Pt}$), preparation and structure, **168**, 18
 HoMnO_3 , magnetic properties, **165**, 131
 HoOCl , stability of, bond valence study, **165**, 48
 Ho_7Sb (Rh, Ir), preparation and structure, **168**, 18
 $\text{Ho}_{0.5}\text{Sr}_{0.5}\text{MnO}_3$, strained structure, **165**, 65
 $\text{Ho}_2\text{Ti}_2\text{S}_2\text{O}_5$, optical properties, **165**, 228
 $\text{KHoFe}(\text{II})(\text{CN})_6 \cdot x\text{H}_2\text{O}$, characterization and thermal evolution, **167**, 34
 Homoatomic clustering
 in $\text{Yb}_{1-y}\text{Al}_{3-x}\text{Si}_x$ and $\text{Yb}_{1-y}\text{Al}_{3-x}\text{Ge}_x$, **163**, 113

- Host-guest interactions
 in AlPO₄-5/laser dye composites, **167**, 302
 open framework rubidium halides incorporated in cadmium oxide lattices, **167**, 274
- Hydrazine hydrate
 mixed with ethylenediamine, room-temperature synthesis of copper and silver chalcogenides in, **167**, 28
- Hydrocalumite
 structural chemistry, **167**, 137
- Hydrogen
 adsorption by CeNiGa, **168**, 28
 H_{1.6}Mn_{1.6}O₄, formation by ion exchange with Li_{1.6}Mn_{1.6}O₄, **163**, 1
 H_xVOPO₄·yH₂O, ion-exchange properties, **163**, 281
 Mn₇(HOXO₃)₄(XO₄)₂ (X = As, P), hydrothermal synthesis, spectroscopy, and magnetic behavior, **165**, 171
 (NH₄)₂₁[H₃Mo₅₇V₆(NO)₆O₁₈₃(H₂O)₁₈]·53H₂O, single-crystal neutron structure analysis, **165**, 199
 (NH₄)₃H(SO₄)₂, disordered high-temperature structure, relationship to room-temperature phase, **165**, 136
- Hydrogen bonds
 amide, network adaptability in TCNQF₄ complexes of EDO-TTF-CONH₂ and EDT-TTF-CONH₂, **168**, 668
 (NH₄)₂₁[H₃Mo₅₇V₆(NO)₆O₁₈₃(H₂O)₁₈]·53H₂O, **165**, 199
 Ni(dmit)₂ simple salts doped with hydrogen-bonding pyridinium cations, preparation and characterization, **168**, 535
 structural role in 1-hydroxy-1-phosphono-pentyl-phosphonic acid dimethyl ammonium salt, **167**, 441
- Hydroxalcite
 structural chemistry, **167**, 137
- Hydrothermal synthesis
 Ag₂S nanocrystals in hyperbranched polyurethane at room temperature, **168**, 259
 alkali metal uranyl phosphate hydrates, **167**, 226
 aluminophosphate open framework materials by crystallization from fluoride media, cyclam as structure-directed agent in, **167**, 267
 [C₂N₂H₁₀][Co_{4.2}Zn_{1.8}(PO₄)₄(HPO₄)₁]·H₂O, **166**, 369
 [C₆N₂H₁₄][Fe^{III}₂F₂(HPO₄)₂(H₂PO₄)₂]·2H₂O open framework with one- and three-dimensional structures, **165**, 334
 [C₆N₂H₁₄][Fe^{III}₃(OH)F₃(HPO₄)₂]·H₂O open framework with one- and three-dimensional structures, **165**, 334
 [C₆N₄H₂₂][ZnPO₄]₄ with open framework, **165**, 182
 [Co₄(OH)₂(H₂O)₂](C₄H₁₁N₂)₂[C₆H₂(COO)₄]₂·3H₂O with tetranuclear clusters, **166**, 158
 coordination polymer constructed from paddle-wheel building units, **166**, 213
 [(CuCl)₂(*o*-phen)]_∞ chainlike hybrid complex, **167**, 402
 [Cu(en)₂]₄[SiMo₈V₄O₄₀(V^{IV}O)₂][MoO₄]₂·5H₂O, **165**, 1
 [{Cu(pca)}₂Mo₈O₂₆] two-dimensional network, **167**, 370
 [{Cu₃(pca)₃MoO₄}]Mo₈O₂₆ one-dimensional material, **167**, 370
 [Fe(H₂O)(O₃P-CH₂-CO₂)], **164**, 354
 (H₃N(CH₂)₄NH₃)[V₆O₁₄], **167**, 407
 inorganic coordination polymers based on cadmium oxalates, **166**, 128
 K_{0.28}MoO₃ blue bronze, **164**, 81
 K₂MoO₂(IO₃)₄ and β-KMoO₃(IO₃), **166**, 442
 α-Li₄Zn(PO₄)₂ and high-temperature polymorph β-Li₄Zn(PO₄)₂, **166**, 341
 Mn₂(H₂O)[O₂C(CH₂)₆CO₂]₂, **166**, 279
 Mn₇(HOXO₃)₄(XO₄)₂ (X = As, P), **165**, 171
 MTN-type zeolite with tetragonal symmetry, **164**, 19
 (NH₄)In(OH)PO₄
 at low temperature, **166**, 362
 with spiral chains of InO₄(OH)₂, **165**, 209
 [(Ni(pca)(H₂O))₂Mo₈O₂₆] molecular cluster, **167**, 370
 M₂(O₃PCH₂C₆H₄CH₂PO₃)·2H₂O (M = Mn, Ni, Cd), **167**, 330
 open-framework Co(II) phosphates with sodalite-related architectures, **167**, 344
 oxalato titanates with Ti₄O₄(C₂O₄)₈ tetramers as building blocks, **163**, 427
 rubidium halides incorporated in cadmium oxalate host lattices, **167**, 274
 sol-gel boehmite, **166**, 182
 Sr[(UO₂)(SeO₃)₂]·2H₂O, **168**, 358
 (UO₂)₃(PO₄)₂(H₂O)₄, **163**, 275
 AE[(UO₂)(SeO₃)₂] (AE = Ca, Ba), **168**, 358
 [V^VO₁₀(phen)₂] one-dimensional ladder-like chain complex, **163**, 10
 Zn₂(OH)_{0.14(3)}F_{0.86(3)}(PO₄), **164**, 42
 Zn₆(PO₄)₅(HPO₄)·C₈N₃H₂₈·5H₂O intercalated with quintuply protonated tetraethylenepentamine, **166**, 265
 Zn₄P₃O₁₁(OH)·3C₃N₂H₄, **163**, 364
- Hydroxide
 Ca₂M³⁺(OH)₆Cl·2H₂O (M³⁺ = Al³⁺, Ga³⁺, Fe³⁺, Sc³⁺), X-ray powder diffraction structural study, **167**, 137
 [C₆N₂H₁₄]₂[Fe^{III}₃(OH)F₃(HPO₄)₂]·H₂O open framework with one- and three-dimensional structures, synthesis, **165**, 334
 Co₂Fe_yAl_{1-y}(OH)₆Cl·nH₂O, trivalent cation substitution effect, **167**, 508
 [Co₄(OH)₂(H₂O)₂](C₄H₁₁N₂)₂[C₆H₂(COO)₄]₂·3H₂O with tetranuclear clusters, **166**, 158
 1-hydroxy-1-phosphono-pentyl-phosphonic acid dimethyl ammonium salt, crystal structure, neutron diffraction study, **167**, 441
 iron diphosphonates, structures and magnetic properties, **164**, 367
 K₃(VO₂)₂PO₄PO₃OH·H₂O, tape-like structure, **163**, 534
 Mg/M(III) (M = Al, Ga, In) layered double hydroxides obtained by coprecipitation and sol-gel method, **168**, 156
 Mn-Al layered double hydroxides, synthesis and thermal decomposition, **167**, 152
 [Mn^{II}Cl₃(EtOH)] 1-D chain, and BEDT-TTF stacking layer, magnetic/conducting hybrid compound composed of, **168**, 418
 molecular conductors with rare-earth elements, crystal and electronic structures, **168**, 457
 (NH₄)In(OH)PO₄
 with spiral chains of InO₄(OH)₂, hydrothermal synthesis and crystal structure, **165**, 209
 synthesis and crystal structure, **166**, 362
 oxometalate-intercalated layered double hydroxides, thermal behavior, **167**, 59
 Pb_xCa_{10-x}(PO₄)₆(OH)₂ (X = 0–1) solid solutions, preparation by wet method using acetamide, **163**, 27
 Zn₂(OH)_{0.14(3)}F_{0.86(3)}(PO₄), hydrothermal synthesis, single-crystal structure, and solid-state NMR, **164**, 42
 Zn₄P₃O₁₁(OH)·3C₃N₂H₄, synthesis and structure, **163**, 364
- Hydroxyapatite
 Pb_xCa_{10-x}(PO₄)₆(OH)₂ (X = 0–1) solid solutions, preparation by wet method using acetamide, **163**, 27
- Hydroxylation
 phenol, catalytic activity of [As₂V^{IV}V^VO₂₆(H₂O)]·8H₂O for, **169**, 160
 1-Hydroxy-1-phosphono-pentyl-phosphonic acid dimethyl ammonium salt
 crystal structure determination by neutron diffraction, **167**, 441
- Hyperfine coupling constants
 isotropic, for nitrogen in nitroxide radicals, DF/HF calculations, **169**, 75
- I
- Imidazole
 Zn₄P₃O₁₁(OH)·3C₃N₂H₄, synthesis and structure, **163**, 364
- Impedance spectroscopy
 Co₂Fe_yAl_{1-y}(OH)₆Cl·nH₂O: trivalent cation substitution effect, **167**, 508

- La_{2/3}TiO₃ derivatives, **163**, 472
 α -LiIO₃; temperature dependence of ionic conductivity, **168**, 76
- Incommensurate modulation
 Sr₂TiSi₂O₈, **166**, 15
- Incommensurate structure
 Ca-rich composite-type crystal [A₂Cu₂O₃]_{7+ δ} [CuO₂]₁₀ with disorder phenomena in CuO₂ sublattice, 4D study, **163**, 17
 Sr₃CuRhO₆ and Sr₃NiRhO₆ one-dimensional oxides, relationship to magnetic properties, **164**, 220
- Indium
 alkali metal–In–Bi systems, Zintl phases in, synthesis and structure, **163**, 436
 Ba₈Cu₃In₄N₅ with nitridocuprate groups and one-dimensional infinite In clusters, synthesis and structure, **163**, 449
 Ba₂In_{2– x} Co _{x} O₅ (0.5 $\leq x \leq$ 1.70) perovskites, spin glass behavior, **165**, 254
 Ba₂In₂O₅, crystal structure, microstructure, and ionic conductivity, **164**, 119
 Ba₃InRu₂O₉ 6H-perovskites, crystal structure and magnetic properties, **165**, 317
 Ba(In _{x} Zr_{1– x})O_{3– $x/2$} , crystal structure, microstructure, and ionic conductivity, **164**, 119
 Ca₉In(PO₄)₇ whitlockite-type phosphate, high-temperature phase transition, **165**, 278
 Cd_{1+ x} In_{2–2 x} Sn _{x} O₄, transparent conducting solid solution, cation distribution in, **163**, 259
 CoIn_{3– x} Zn _{x} systems, FeGa₃ structure type variations in, **165**, 100
 Dy₂Pt₇In₁₆, complex 3-D Pt–In networks in, **169**, 118
 EuPdIn, decomposition at high temperature and pressure: formation of hexagonal Laves phase EuPd_{0.72}In_{1.28}, **169**, 155
 EuPtIn, decomposition at high temperature and pressure: formation of hexagonal Laves phase EuPt_{0.56}In_{1.44}, **169**, 155
 FeIn₂S₂Se₂ layered compound, magnetic and Mössbauer study, **164**, 326
 InFe_{1– x} Ti _{x} O_{3+ $x/2$} ($x = 2/3$), crystal structure, **163**, 455
 β -In₂S₃ dendrites, synthesis in situ by oxidization–sulfidation route via self-purification process, **166**, 336
 LaMIn₅ ($M = \text{Co, Rh, Ir}$), crystal growth and structure, **166**, 245
 LiIn cubic Zintl phase, transition into tetragonal structure at low temperature, **167**, 1
 Mg/In(III) layered double hydroxides obtained by coprecipitation and sol–gel method, **168**, 156
 Na₂InMn₂(PO₄)₃ with alluaudite structure, electrical behavior, **168**, 208
 (Na_{1– x} Li _{x})CdIn₂(PO₄)₃ solid solution ($x = 0–1$), crystal chemistry of Li in alluaudite structure, **163**, 194
 (NH₄)In(OH)PO₄
 with spiral chains of InO₄(OH)₂, hydrothermal synthesis and crystal structure, **165**, 209
 synthesis and crystal structure, **166**, 362
 PdIn_{1.26}Sb_{0.74} and Pd₁₃In_{5.25}Sb_{3.75}, crystal structure and electronic structure, **164**, 110
 RbIn₃S₅, polysynthetic twinning in, **167**, 214
 Sr₉In(PO₄)₇ Whitlockite-type phosphates, structure refinement by synchrotron X-ray powder diffraction, **168**, 237
 Tb₆Pt₂In₂₃, complex 3-D Pt–In networks in, **169**, 118
 ZrRh_{0.710(4)}In, X-ray single-crystal studies, **166**, 305
- Indomethacin
 composite with SiO₂ under mechanical stress, solid state radical recombination and charge transfer across boundary between, **164**, 27
- Infrared spectroscopy
 Bi(III), La(III), Pr(III) and heteronuclear Bi–La and Bi–Pr complexes with polyaminocarboxylate ligands, **167**, 494
 CeO₂ nanocrystals supported on SiO₂, **168**, 110
 (2,5-diiododicyanoquinondiimine)₂M ($M = \text{Ag, Li, Cu}$), temperature-dependent vibronic and vibrational absorptions, **168**, 632
 γ -Fe₂O₃; vacancies ordering and lattice parameters, **163**, 459
 Gd₃[SiON₃]O with non-condensed SiON₃ tetrahedra, **167**, 393
 hexamethylenetetraethylurathiafulvalene charge transfer complexes of donor–acceptor type, **168**, 486
 LaNb_{2–2 x} Ta_{2 x} VO_{9– δ} ($x = 0–0.4$) and LaTa_{2–2 x} Nb_{2 x} VO_{9– δ} ($x = 0–0.1$), effects of oxygen nonstoichiometry, **167**, 73
 Li_{1– x} Co₂O_{4– δ} spinel, **164**, 332
 LiCoO₂ thin films, **165**, 42
 low stress cubic BN film prepared by physical vapor deposition, **167**, 420
 Mn₇(HOXO₃)₄(XO₄)₂ ($X = \text{As, P}$), **165**, 171
 (Na_{1– x} Li _{x})CdIn₂(PO₄)₃ solid solutions ($x = 0–1$), **163**, 194
 (NH₄)In(OH)PO₄, **166**, 362
 M₂(O₃PCH₂C₆H₄CH₂PO₃) \cdot 2H₂O ($M = \text{Mn, Ni, Cd}$), **167**, 330
 Pb₆Ca₂Li₂(PO₄)₆ apatite, **166**, 237
 poly(hydroxymethyl) grouping-containing crystals, **164**, 301
 TeO₂–WO₃ glass, **168**, 175
 Tl_{1– x} Na _{x} Nb₂PO₈ and related compounds, **164**, 272
- Insulator–metal transition
 Na_{1– x} Sr _{x} NbO₃ (0.1 $\leq x \leq$ 0.9) perovskite-type compounds, **167**, 7
- Interfacial free energy
 (RbCl)₂₅₆ and (RbCl)₅₀₀ molten clusters, **165**, 289
- Intergrowth phases
 Aurivillius-type compounds, crystal chemistry
 Bi₇Ti₄NbO₂₁, **164**, 261
 structural model, **164**, 252
 Sillén–Aurivillius, Bi₄MO₈X ($X = \text{Cl, M = Ta}$; $X = \text{Br, M = Ta, Nb}$), structure and electrophysical properties, **166**, 148
- Intermetallics
 4234-type borocarbides, synthesis, structures, and magnetic properties, **164**, 246
 δ -Co₂Zn₁₅, preparation and double-helix icosahedra structure, **166**, 53
 FeGa₃ semiconductors, synthesis and structure, **165**, 94
 LaMIn₅ ($M = \text{Co, Rh, Ir}$), crystal growth and structure, **166**, 245
 LaNi₅ homogeneity domain, structural study, **166**, 1
 RuGa₃ semiconductors, synthesis and structure, **165**, 94
 Yb_{1– y} Al_{3– x} Ge _{x} and Yb_{1– y} Al_{3– x} Si _{x} , homoatomic clustering in, **163**, 113
- Internal stress
 low stress cubic BN film low in, preparation by physical vapor deposition, **167**, 420
- Inversion equilibrium
 Mg_{1– x} Mn _{x} Mn₂O_{4 \pm δ} spinels, role in transport properties, **166**, 171
- Iodine
 AgI, ordered nanoclusters inside zeolite host, luminescence, **169**, 81
 conducting cation radical salts with tetraiodotellurate(II) and hexaiododitellurate(II), structural and physical properties, **168**, 396
 2,6-di[dibutylamino-phenylvinyl]-1-butylpyridinium iodide monolayer rectifier, **168**, 696
 (2,5-diiododicyanoquinondiimine)₂M ($M = \text{Ag, Li, Cu}$), phase transition: temperature-dependent vibronic and vibrational IR absorptions, **168**, 632
 I₃[–] and I₂Br[–], MDSe-TSF-based conductive radical cation salts with, synthesis, structures, and conductive properties, **168**, 582
 KAg₄I₅ superionic phases, crystal structure and ionic conductivity, **165**, 363
 KCu₄I₅ superionic phases, crystal structure and ionic conductivity, **165**, 363
 K₂MoO₂(IO₃)₄ and β -KM₂O₃(IO₃), hydrothermal preparation and structure, **166**, 442
 α -LiIO₃, low-frequency relaxation phenomena, **168**, 76
 β -MNI ($M = \text{Zr, Hf}$), high-pressure synthesis and crystal structures, **163**, 77
 RbAg₄I₅ superionic phases, crystal structure and ionic conductivity, **165**, 363

- TiO₂|dye|CuI cell, charge generation under different modes of illumination, **166**, 142
- Ion exchange
alkali-metal redox-intercalated vanadyl phosphate, **163**, 281
H_{1.6}Mn_{1.6}O₄ formation from Li_{1.6}Mn_{1.6}O₄, **163**, 1
Na-RUB-29 ion-exchanged microporous lithosilicate, **167**, 310
- Ionic compensation
ionically compensated quadruple and quintuple perovskite layered cuprates with Ti blocking layers, **164**, 188
- Ionic conductivity
Ba₂In₂O₅, **164**, 119
Ba(In_xZr_{1-x})O_{3-x/2}, **164**, 119
Bi₆Cr₂O₁₅ containing (Bi₁₂O₁₄)_n⁸ⁿ⁺ columns and CrO₄²⁻ tetrahedra, **163**, 144
Bi₂₆Mo_{10-x}Cr_xO₆₉ solid solution, **166**, 7
Co₂Fe_yAl_{1-y}(OH)₆Cl·nH₂O, trivalent cation substitution effect, **167**, 508
KAg₄I₅ superionic phases, **165**, 363
KCu₄I₅ superionic phases, **165**, 363
La₂(GeO₄)O and alkaline-earth-doped La_{0.33}(GeO₄)₆O₂, **168**, 294
La_{2/3}TiO₃ derivatives, **163**, 472
α-LiIO₃, temperature dependence, **168**, 76
RbAg₄I₅ superionic phases, **165**, 363
Se₂O₃-Y₂O₃-ZrO₂-TiO₂ solid solutions, optimization for use as SOFC anode material, **165**, 12
Ti_{1-x}Na_xNb₂PO₈ and related compounds, **164**, 272
Y₂O₃-ZrO₂-TiO₂ solid solutions, optimization for use as SOFC anode material, **165**, 12
[(ZrO₂)_{0.92}(Y₂O₃)_{0.08}]_{0.9}(TiO₂)_{0.1}, **165**, 79
- Iridium
4234-type intermetallic borocarbides, synthesis, structures, and magnetic properties, **164**, 246
LnIrSb (Ln = La–Nd, Sm, Gd–Tm), preparation and structure, **168**, 18
IrSn₄, polymorphism, **168**, 34
LaIrIn₅, crystal growth and structure, **166**, 245
- Iron
4234-type intermetallic borocarbides, synthesis, structures, and magnetic properties, **164**, 246
BaR(Cu_{0.5}Fe_{0.5})₂O_{5+δ} double perovskites (R = Lu, Yb, Eu, Sm, Nd, Pr), interplay of Cu and Fe valences, **166**, 118; *erratum*, **168**, 354
RBAFe₂O_{5+w} (R = Nd, Sm), Verwey transition under oxygen loading, **167**, 480
BaFe₁₂O₁₉, Co-substituted, sol-gel synthesis and HRTEM study, **167**, 254
Ba₄₂Ti₅₁Fe₂₀O₁₇₄ multilayered magnetic dielectric ceramic in BaO–TiO₂–Fe₂O₃ system, X-ray structural determination, **166**, 400
bis(ethylenedioxy)tetrathiafulvalene[Fe^{III}(isoquinoline)₂(NCS)₄], preparation, structure, and magnetic properties, **168**, 450
Bi_{0.4}Sr_{2.5}Fe_{1.1}O₅, synthesis, structure, and properties, **167**, 48
Bi₅Ti₃FeO₁₅, four-layer Aurivillius-phase ferroelectrics, structural behavior, **164**, 280; *erratum*, **166**, 449
Ca₂Fe³⁺(OH)₆Cl·2H₂O, X-ray powder diffraction structural study, **167**, 137
CaTiO₃ perovskites doped with, displacive phase transitions and strain analysis, high-temperature neutron diffraction study, **167**, 459
[C₆N₂H₁₄][Fe^{III}F₂(HPO₄)₂(H₂PO₄)₂]·2H₂O open framework with one- and three-dimensional structures, synthesis, **165**, 334
[C₆N₂H₁₄]₂[Fe^{III}(OH)F₃(HPO₄)₂]·H₂O open framework with one- and three-dimensional structures, synthesis, **165**, 334
Co₂Fe_yAl_{1-y}(OH)₆Cl·nH₂O, trivalent cation substitution effect, **167**, 508
(ethylenedithio)tetrathiafulvalenoquinone-1,3-dithiolethide)₂·FeX₄ plate crystals, structure and electrical conducting and magnetic properties, **168**, 408
- FeGa₃
semiconducting intermetallic compounds, synthesis and structure, **165**, 94
structure type, variations in CoIn_{3-x}Zn_x and CoGa_{3-x}Zn_x systems, **165**, 100
[Fe(H₂O)(O₃P–CH₂–CO₂)], hydrothermal synthesis, structure, and magnetic properties, **164**, 354
FeIn₂Se₂ layered compound, magnetic and Mössbauer study, **164**, 326
α-Fe₂O₃, (0001)-oriented, coating pyrolysis using postepitaxial topotaxy via, in preparation of Fe_{3-x}O₄ films, **163**, 239
γ-Fe₂O₃, vacancies ordering and lattice parameters, effects of grain size, oxygen stoichiometry, and synthesis conditions, **163**, 459
Fe_{3-x}O₄, (111)-oriented epitaxial films, preparation on α-Al₂O₃ (0001) substrates, **163**, 239
Fe₄(P₂O₇)₃, crystal structure structure refinement and magnetic properties, neutron diffraction and Mössbauer studies, **163**, 412
Fe₃P₅SiO₁₉, crystal structure and magnetic properties, neutron diffraction and Mössbauer studies, **164**, 71
β-FeSi₂ semiconductors doped with impurities, geometrical and electronic structure, first-principle calculation, **163**, 248
β-Fe(Si_{2-x}Ge_x), electronic structure, **169**, 19
InFe_{1-x}Ti_xO_{3+x/2} (x = 2/3), crystal structure, **163**, 455
iron diphosphonates, structures and magnetic properties, **164**, 367
KLnFe(II)(CN)₆·xH₂O (Ln = La–Lu), characterization and thermal evolution, **167**, 34
La_{0.3}Sr_{0.7}Fe_{1-x}Ga_xO_{2.65+δ} perovskites, oxygen nonstoichiometry, conductivity, and Seebeck coefficient, **167**, 203
LiFe_{1-x}Co_xO₂ (0 ≤ x ≤ 1), magnetic structure, high-resolution neutron diffraction study, **163**, 406
lithium ferrites, formation of, effects of mechanical milling and subsequent calcination, **164**, 230
LuBaCuFeO_{5+δ}, low-temperature magnetic properties, **166**, 251
Na₂FeMnCd(PO₄)₃ with alluaudite structure, electrical behavior, **168**, 208
Na₄FeO₄, synthesis and crystal and magnetic structures, neutron diffraction and Mössbauer studies, **165**, 266
NdFeO₃, thermodynamics, **164**, 34
ANi_{0.98}Fe_{0.02}O₃ (A = Pr, Nd, Sm, Y, Lu, Tl) perovskites doped with ⁵⁷Fe, Mössbauer spectroscopy at varying temperatures, **168**, 126
Pb(Fe_{2/3}W_{1/3})O₃–PbTiO₃ relaxor ferroelectric system, phase diagram and phase transitions, **163**, 484
Sr₃Fe_{2-x}Co_xO_{7-δ} (0.25 ≤ x ≤ 1.75) n = 2 Ruddlesden–Popper phases, electronic, magnetic, and magnetoresistance properties, **166**, 292
[Sr(Fe,Nb)_{0.5}S_{1.5}]_{1.13}NbS₂, crystal structure and magnetic properties, **168**, 41
Sr₃Fe(PO₄)₇ Whitlockite-type phosphates, synthesis and characterization, **168**, 237
Sr₃Fe_{2-x}Ti_xO_{6+δ} Ruddlesden–Popper phases, order–disorder-enhanced oxygen conductivity and electron transport, **168**, 275
substitutional effects on magnetic and structural properties of quasi-two-dimensional La₅Mo₄O₁₆, **164**, 60
tetrachloroferrate(III) salts of BDH-TTP and BDA-TTP, crystal structure and physical properties, **168**, 503
TmBaCuFeO_{5+δ}, low-temperature magnetic properties, **166**, 251
TPP[Fe(Pc)(CN)₂]₂ and TPP[Fe_{0.30}Co_{0.70}(Pc)(CN)₂]₂ salts, magnetoresistance study, **168**, 509
Zn(Fe,Ga)₂O₄ spinel-type solid solutions, precipitation from aqueous solutions at 90°C, **168**, 5
- Iron(III) carboxymethylphosphonate
hydrothermal synthesis, structure, and magnetic properties, **164**, 354
- Iron diphosphonates
structures and magnetic properties, **164**, 367
- Isomerization
m-xylene over MMM-1, **167**, 363

- Isothiocyanato complex anions
charge transfer salts of bis(ethylenedioxy)tetrathiafulvalene with, preparation, structure, and magnetic properties, **168**, 450
- K
- Kinetics
formation of layer-structured LiNiO₂, effect of Al addition, **167**, 97
phase changes in clusters, molecular dynamics studies, **165**, 289
solid-state, effects on formation of Cu(I)halide 2-ethylpyrazine products, **169**, 103
- Kramers-ions
Nd³⁺:YAB, spectroscopic and crystal field investigation, **167**, 386
- L
- Lanthanum
BaLa₂MnS₅, antiferromagnetic ordering in, spin dimer analysis, **169**, 143
Ba₃LaRu₂O₉ 6H-perovskites, crystal structure and magnetic properties, **165**, 317
Ba_{1-x}La_xTi_{1-x}Cr_xO₃ complex perovskites, structural characterization, **164**, 98
Bi–La complexes with polyaminocarboxylate ligands, synthesis and spectroscopic characterization, **167**, 494
Bi_{0.775}La_{0.225}O_{1.5} of rhombohedral Bi–Sr–O type, structural relationship to monolitic *ε*-Bi_{4.86}La_{1.14}O₉, **168**, 91
Bi_{0.85}La_{0.15(1-n)}V_{0.15n}O_{1.5+0.15n}, stability, conductivity, and powder crystal structure studies, **163**, 300
Bi_{3.24}La₂W_{0.76}O_{10.14} monoclinic compounds with pseudo-orthogonal cell based on pseudo-fcc subcell in Bi₂O₃–La₂O₃–WO₃, **169**, 60
Bi_{1.5}Pb_{0.5}Ca_{2-x}La_x³⁺Co₂O_{8-δ}, thermoelectric properties, **167**, 472
ceria-lanthana-based TWC promoters prepared by sol–gel routes, phase analysis and oxygen storage capacity, **163**, 527
KLaFe(II)(CN)₆·xH₂O, characterization and thermal evolution, **167**, 34
La(III), complexes with polyaminocarboxylate ligands, synthesis and spectroscopic characterization, **167**, 494
LaAgMg, magnetic and electrical properties, ¹⁵¹Eu Mössbauer spectroscopy, and chemical bonding, **164**, 201
LaTbI (*T* = Rh, Pd, Pt), preparation and structure, **168**, 18
La_{1-x}Ca_xMnO_{3-y} (*x* = 0.30, 0.50), magnetic state of, evolution depending on oxygen content, **169**, 85
LaCu₃Ru₄O₁₂, structure: comparison of XRD-Rietveld and EXAFS results, **167**, 126
LaGa_xSn_ySb₂, structure, **167**, 41
La₂(GeO₄)O and alkaline-earth-doped La_{0.933}(GeO₄)₆O₂, structural study, **168**, 294
LaMIn₅ (*M* = Co, Rh, Ir), crystal growth and structure, **166**, 245
La_{2/3-x}Li_{3x}TiO₃ (*x* = 0.05) perovskite conducting Li ions, crystal structure, **166**, 67
La_{0.8}MnO_{3-δ} magnetoresistive thin film, crystal structure transformations, **164**, 177
La_{1-x}A_xMnO_{3±δ} (*A* = Ca, Sr), enthalpy of formation, measurement by high-temperature solution calorimetry, **163**, 186
LaMnO_{3+δ}
excess oxygen in, **163**, 65
perovskite doped with Sn, low-temperature phase formation, **168**, 100
La₅Mo₄O₁₆ quasi-two-dimensional compound, magnetic and structural properties, substitutional effects of 3*d* transition metals, **164**, 60
LaNb_{2-2x}Ta_{2x}VO_{9-δ} (*x* = 0–0.4), spectral properties, effects of oxygen nonstoichiometry, **167**, 73
(La_{1-x}Nd_x)_{0.7}Sr_{0.3}MnO₃ perovskites, structural, magnetic, and electrical properties, effects of *A* cation size, **163**, 466
LaNi₅ homogeneity domain, structural study, **166**, 1
La₃MO₇ (*M* = Ru, Os) fluorite-related phases, magnetic properties, **167**, 182
LaOCl, stability of, bond valence study, **165**, 48
β-La₃RuO₇ with isolated RuO₆ octahedra, structure and properties, **165**, 359
LaTSb (Rh, Ir), preparation and structure, **168**, 18
LaSn_xSb₂ (*x* = 0.5, 0.7), magnetic and transport properties, **164**, 292
La_{0.3}Sr_{0.7}Fe_{1-x}Ga_xO_{2.65+δ} perovskites, oxygen nonstoichiometry, conductivity, and Seebeck coefficient, **167**, 203
La₂Sr₂BMnO₈ (*B* = Mg, Zn), structural and magnetic chemistry, **168**, 202
LaTa_{2-2x}Nb_{2x}VO_{9-δ} (*x* = 0–0.1), spectral properties, effects of oxygen nonstoichiometry, **167**, 73
La_{0.63}(Ti_{0.92}Nb_{0.08})O₃, orthorhombic–tetragonal phase transition, high-temperature synchrotron X-ray powder diffraction study, **164**, 51
La_{2/3}TiO₃ derivatives, structure and impedance spectroscopy, **163**, 472
La₂W_{2-x}Mo_xO₉ series, synthesis, structure, and thermal expansion, **167**, 80
La_{0.10}WO_{3+y} hexagonal tungsten bronze-related phase formed at high pressure, structure and thermal stability, **163**, 84
La_xWO₃ bronzes, X-ray and electron microscopy studies, **167**, 412
La_xWO_{3+y} tungsten bronze-related phases, formation of, effects of pressure and temperature, **168**, 284
Sr_{1-x}La_xTi_{1-x}Cr_xO₃ perovskites, structure and conductivity, **165**, 381
U_{1-x}La_xTi₂O₆, synthesis and crystal structure, **165**, 261
- Laser ablation
deposition of CeO_{2-x} epitaxial domains on glass, **166**, 197
- Laser dyes
composites with AlPO₄-5, host–guest interactions and laser activity in, **167**, 302
- Lattice pressure
role in creation and annihilation of superconducting subperoxides, **163**, 390
- Lead
Ag₅Pb_{2-x}Cu_xO₆ (0.0 ≤ *x* < 0.5), synthesis, characterization, and electrical properties, **163**, 151
Au₂PbP₂ with Pb in oxidation state zero, preparation and crystal structure, **165**, 238
Bi_{1.5}Pb_{0.5}Ca_{2-x}M_xCo₂O_{8-δ} (*M* = Sc³⁺, Y³⁺, La³⁺), thermoelectric properties, **167**, 472
Bi₂PbMnO₄(PO₄)₂, crystal structure, **165**, 324
chromium ion-containing glasses high in, interaction with γ rays, **163**, 351
Pb_{1-x}Bi_xPt₂O₄ (0 ≤ *x* ≤ 0.3), synthesis, electrical properties, and powder neutron crystal structure refinement, **166**, 58
Pb₆Ca₂Li₂(PO₄)₆ apatite, conductivity and structure, **166**, 237
Pb_xCa_{10-x}(PO₄)₆(OH)₂ (*X* = 0–1) solid solutions, preparation by wet method using acetamide, **163**, 27
Pb(Fe_{2/3}W_{1/3})O₃–PbTiO₃ relaxor ferroelectric system, phase diagram and phase transitions, **163**, 484
PbMnO_{3-x}, high-pressure phase with perovskite-derived crystallographic shear structure, **169**, 131
Pb₃(MoO₃)(PO₄)₅, synthesis and tunnel structure, **163**, 308
PbO–As₂O₃ glasses containing Mo ions, characterization and physical properties, **166**, 104
PbTiO₃, ferroelectric–paraelectric phase transition, pressure and temperature dependence, **167**, 446
Pb₂V^{III}O(VO₄)(V₂O₇)_{0.5} with trivalent vanadium rutile-like chains, crystal structure, **163**, 519
Pb_xWO₃ tetragonal bronze, superstructure, **168**, 306
Sr₅Pb₃CoO₁₂, synthesis, crystal structure, and magnetic properties, **164**, 12

- Letovicite
disordered high-temperature structure, relationship to room-temperature phase, **165**, 136
- Leucocrystal violet
fullerenes C₆₀ and C₇₀ in molecular complexes with, preparation, crystal structures, and characterization, **168**, 474
- Leucomalachite green
fullerenes C₆₀ and C₇₀ in molecular complexes with, preparation, crystal structures, and characterization, **168**, 474
- Lithium
(2,5-diiododicyanoquinondiimine)₂Li, phase transition: temperature-dependent vibronic and vibrational IR absorptions, **168**, 632
La_{2/3-x}Li_{3x}TiO₃ ($x=0.05$) perovskite conducting Li ions, crystal structure, **166**, 67
Li₃AlB₂O₆, synthesis, structure, and thermal stability, **163**, 369
LiCo_{0.5}Mn_{0.5}O₂ as highly ordered nanowire arrays, sol-gel template synthesis and structural properties, **165**, 247
Li_{1-x}CoO₂ cathodes, chemical stability, comparison with Li_{1-x}Ni_{0.85}Co_{0.15}O₂ cathodes, **163**, 5
Li_{1-x}Co₂O_{4-δ} spinel, chemical synthesis and properties, **164**, 332
LiCoO₂
mechanochemically synthesized, disordering and electronic state of Co ions in, **165**, 56
single crystal, anisotropic electrical conductivity, **164**, 1
structural stability at 400°C, **168**, 60
thin films, IR study, **165**, 42
Li_{2-x}Cu_xMgCl₄ fast ionic conducting spinel-type chloride, ⁶Li and ⁷Li MAS NMR studies, **165**, 303
Li₂CuZrO₄ polymorphs, synthesis and crystal structure, **166**, 311
LiFe_{1-x}Co_xO₂ ($0 \leq x \leq 1$), magnetic structure, high-resolution neutron diffraction study, **163**, 406
LiIn cubic Zintl phase, transition into tetragonal structure at low temperature, **167**, 1
 α -LiIO₃, low-frequency relaxation phenomena, **168**, 76
Li₂MgCl₄ fast ionic conducting spinel-type chloride, ⁶Li and ⁷Li MAS NMR studies, **165**, 303
Li_xMg_{0.857-x}Cu_{2.143}O_{3-y}, synthesis, crystal structure, and physical properties, **168**, 85
Li_{1-x}Mn₂O_{4-δ} superfine powders, solvothermal synthesis, **163**, 132
LiMnO₂, orthorhombic, synthesis by solid-phase reaction under steam atmosphere and study of heat- and acid-treated phases, **169**, 66
Li_xMnO₂, chemical properties, dependence on structure, **164**, 5
o-LiMnO₂, synthesis by microwave irradiation and heat treatment and Li exchange studies, **163**, 1
Li_{1.6}Mn_{1.6}O₄, production by heat treatment of *o*-LiMnO₂, **163**, 1
LiMn₂O₄
chemical properties, dependence on structure, **164**, 5
spinel synthesis with tartaric acid gel and electrochemical performance, effects of metal ion sources, **163**, 231
Li_{2-x}Na_xMgCl₄ fast ionic conducting spinel-type chloride, ⁶Li and ⁷Li MAS NMR studies, **165**, 303
Li_{1+x-y}Nb_{1-x-3y}Ti_{x+4y}O₃ solid solutions, structural study, **166**, 81
Li_{1-x}Ni_{0.85}Co_{0.15}O₂ cathodes, chemical stability, comparison with Li_{1-x}CoO₂ cathodes, **163**, 5
LiNi_{1-x}Mn_xVO₄ spinel, synthesis and electrochemical studies, **165**, 312
Li_xNiO₂, structural and thermal characteristics, **163**, 340
LiNiO₂, layer-structured, formation of, effect of Al addition, **167**, 97
LiNO₃, reactions with metal salts, properties of ZrO₂ formed by, **163**, 202
Li₂O–Al₂O₃–B₂O₃, compounds and phase relations, **165**, 187
Li₂M(II)Sn₃O₈ ($M(\text{II}) = \text{Mn}, \text{Zn}$), cation ordering in, **169**, 44
lithium ferrites, formation of, effects of mechanical milling and subsequent calcination, **164**, 230
lithium nickel manganese oxides and their delithiated phases, synthesis and characterization, **169**, 35
Li_{1+x}V₃O₈, electronic state of vanadium ions in, EPR study, **163**, 421
Li₂ZnCl₄ fast ionic conducting spinel-type chloride, ⁶Li and ⁷Li MAS NMR studies, **165**, 303
 α -Li₄Zn(PO₄)₂ and high-temperature polymorph β -Li₄Zn(PO₄)₂, hydrothermal synthesis and structure, **166**, 341
Li_{0.2(1)}ZrNCl superconducting phase derived by intercalation, single-crystal X-ray structural refinement, **169**, 149
(Na_{1-x}Li_x)CdIn₂(PO₄)₃ solid solution ($x=0-1$), crystal chemistry of Li in alluaudite structure, **163**, 194
Na–RUB-29 ion-exchanged microporous lithosilicate, synchrotron X-ray single-crystal diffraction and ⁶Li MAS NMR, **167**, 310
Pb₆Ca₂Li₂(PO₄)₆ apatite, conductivity and structure, **166**, 237
thio-LISICON, synthesis, **168**, 140
- Local moment magnetism
La₃MO₇ ($M = \text{Ru}, \text{Os}$) fluorite-related phases, **167**, 182
- Local order
Co₂Fe_yAl_{1-y}(OH)₆Cl · *n*H₂O, **167**, 508
- Lone pair electrons
in Bi_{0.775}Dy_{0.225}O_{1.5} of rhombohedral Bi–Sr–O type, **168**, 91
in Bi_{2-x}M_xRu₂O_{7-y} ($M = \text{Cu}, \text{Co}$; $x=0,0.4$) pyrochlores, static disorder from, **169**, 24
stereoactivity of Pb²⁺ lone pair
in Pb₆Ca₂Li₂(PO₄)₆ apatite, **166**, 237
in Pb₃(MoO₃)(PO₄)₅ with tunnel structure, **163**, 308
- Low-frequency relaxation phenomena
in α -LiIO₃, **168**, 76
- Luminescence
[(NH₄(18-Crown-6))₄MnX₄][TiX₄]₂ ($X = \text{Cl}, \text{Br}$) cubic *F*23 crystals, **163**, 286
ordered silver iodide nanoclusters inside zeolite host, **169**, 81
 α -sialon materials doped with Tb, Ce, or Eu, **165**, 19
Yb²⁺ and Yb³⁺ ions in strontium haloborates, **166**, 271
- Luminescence spectroscopy
Nd³⁺:YAB, **167**, 386
- Luminescence thermochromism
reversible, in dipotassiumsodium tris[dicyanoargentate(I)], **168**, 267
- Lutetium
BaLu(Cu_{0.5}Fe_{0.5})₂O_{5+δ} double perovskites, interplay of Cu and Fe valences, **166**, 118; *erratum*, **168**, 354
Ba₃LuRu₂O₉ 6H-perovskites, crystal structure and magnetic properties, **165**, 317
KLuFe(II)(CN)₆ · *x*H₂O, characterization and thermal evolution, **167**, 34
LuBaCuFeO_{5+δ}, low-temperature magnetic properties, **166**, 251
Lu₂Ba₂CuPtO₈, magnetic behavior, **165**, 297
Lu₄T₂B₃C₄ intermetallic borocarbides, synthesis, structures, and magnetic properties, **164**, 246
LuTbI ($T = \text{Ni}, \text{Pd}, \text{Pt}$), preparation and structure, **168**, 18
LuMnO₃, magnetic properties, **165**, 131
LuNi_{0.98}Fe_{0.02}O₃ perovskites doped with ⁵⁷Fe, Mössbauer spectroscopy at varying temperatures, **168**, 126
- M
- Maghemite
(111)-oriented epitaxial films, preparation on α -Al₂O₃ (0001) substrates, **163**, 239
vacancies ordering and lattice parameters, effects of grain size, oxygen stoichiometry, and synthesis conditions, **163**, 459
- Magnesium
REAgMg ($RE = \text{La}, \text{Ce}, \text{Eu}, \text{Yb}$), magnetic and electrical properties, ¹⁵¹Eu Mössbauer spectroscopy, and chemical bonding, **164**, 201
BiMg_{2.5}V_{18.5}O₃₈, preparation and characterization, **164**, 138

- EuAuMg, magnetic and electrical properties, ^{151}Eu Mössbauer spectroscopy, and chemical bonding, **164**, 201
- GdTMg ($T = \text{Pd, Ag, Pt}$), structure and properties, **168**, 331
- $\text{La}_2\text{Sr}_2\text{MgMnO}_8$, structural and magnetic chemistry, **168**, 202
- $\text{Li}_{2-x}\text{Cu}_x\text{MgCl}_4$ fast ionic conducting spinel-type chloride, ^6Li and ^7Li MAS NMR studies, **165**, 303
- Li_2MgCl_4 fast ionic conducting spinel-type chloride, ^6Li and ^7Li MAS NMR studies, **165**, 303
- $\text{Li}_x\text{Mg}_{0.857-x}\text{Cu}_{2.143}\text{O}_{3-y}$, synthesis, crystal structure, and physical properties, **168**, 85
- $\text{Li}_{2-x}\text{Na}_x\text{MgCl}_4$ fast ionic conducting spinel-type chloride, ^6Li and ^7Li MAS NMR studies, **165**, 303
- MgB_2 , electronic structure and normal-state conductivity, **169**, 168
- $\text{Mg}/M(\text{III})$ ($M = \text{Al, Ga, In}$) layered double hydroxides obtained by coprecipitation and sol-gel method, **168**, 156
- $\text{Mg}_{1-x}\text{Mn}_x\text{Mn}_2\text{O}_{4\pm\delta}$ spinels, structural and transport properties, **166**, 171
- $\text{Ni}_x\text{Mg}_{6-x}\text{MnO}_8$, as active materials for negative electrodes of lithium-ion cells, **166**, 330
- $\text{ZrSiO}_4\text{-MgCa}(\text{CO}_3)_2$ reactions, monitoring by neutron thermofractometry, **166**, 426
- Magnetic chemistry
 $\text{La}_2\text{Sr}_2\text{BMnO}_8$ ($B = \text{Mg, Zn}$), **168**, 202
- Magnetic entropy
 $\text{Ba}_3\text{MRu}_2\text{O}_9$ ($M = \text{Y, In, La, Sm, Eu, Lu}$) 6H-perovskites, **165**, 317
- Magnetic order
 long- and short-range, La_3MO_7 ($M = \text{Ru, Os}$) fluorite-related phases, **167**, 182
- Magnetic properties
 4234-type intermetallic borocarbides, **164**, 246
 REAgMg ($\text{RE} = \text{La, Ce, Eu, Yb}$), **164**, 201
 (anilinium)(18-crown-6)[Ni(dimet) $_2$] polymorphs, **168**, 661
 $\text{R}_2\text{Ba}_2\text{CuPtO}_8$ ($\text{R} = \text{Ho, Er, Tm, Yb, Lu, Y}$), **165**, 297
 $\text{Ba}_2\text{ErRuO}_6$ ordered perovskite, **169**, 125
 $\text{Ba}_2\text{In}_{2-x}\text{Co}_x\text{O}_5$ ($0.5 \leq x \leq 1.70$) perovskites, **165**, 254
 $\text{Ba}_3\text{MRu}_2\text{O}_9$ ($M = \text{Y, In, La, Sm, Eu, Lu}$) 6H-perovskites, **165**, 317
 $\text{Bi}_{1.5}\text{Pb}_{0.5}\text{Ca}_{2-x}\text{M}_x\text{Co}_2\text{O}_{8-\delta}$ ($M = \text{Sc}^{3+}, \text{Y}^{3+}, \text{La}^{3+}$), **167**, 472
 bis(ethylenediseleno)tetrathiafulvalene conducting salts with hexacyanoferrate(III) and nitroprusside, **168**, 616
 charge transfer salts based on $[\text{M}(\text{mnt})_2]^{n-}$ and BMDT-TTF and EDT-TTF, **168**, 563
 $\text{Co}_2\text{Fe}_y\text{Al}_{1-y}(\text{OH})_6\text{Cl} \cdot n\text{H}_2\text{O}$, trivalent cation substitution effect, **167**, 508
 conducting molecular solids based on $[\text{Ni}(\text{dmf})_6]^{2+}$ and $[\text{Ni}(\text{dsit})_2]^{2-}$, **168**, 653
 coordination polymer constructed from paddle-wheel building units, **166**, 213
 RCrO_4 ($\text{R} = \text{Pr, Gd, Tb, Tm, Yb}$), **164**, 313
 $\text{Cu}_2\text{UO}_2(\text{PO}_4)_2$ built up from $[\text{CuO}_2]_\infty$ chains, **165**, 89
 (ethylenedithiotetrathiafulvalenoquinone-1,3-dithiolemethide) $_2 \cdot \text{MX}_4$ plate crystals, **168**, 408
- EuAuMg, **164**, 201
- EuMn_2P_2 single crystals, **163**, 498
- EuZn_2Ge_2 grown from Zn or Ga(In)/Zn flux, **163**, 37
- EuZn_2Si_2 grown from Zn or Ga(In)/Zn flux, **163**, 37
- $[\text{Fe}(\text{H}_2\text{O})(\text{O}_3\text{P-CH}_2\text{-CO}_2)]_n$, **164**, 354
- $\text{FeIn}_2\text{S}_2\text{Se}_2$ layered compound, **164**, 326
- $\text{Fe}_4(\text{P}_2\text{O}_7)_3$, **163**, 412
- $\text{Fe}_3\text{P}_5\text{SiO}_{19}$, neutron diffraction and Mössbauer studies, **164**, 71
- $\text{Ho}_{0.5}\text{Sr}_{0.5}\text{MnO}_3$, **165**, 65
- iron diphosphonates, **164**, 367
- $\text{La}_{1-x}\text{Ca}_x\text{MnO}_{3-y}$ ($x = 0.30, 0.50$), **169**, 85
- $\text{La}_5\text{Mo}_4\text{O}_{16}$ quasi-two-dimensional compound, substitutional effects of 3d transition metals, **164**, 60
- $(\text{La}_{1-x}\text{Nd}_x)_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ perovskites, effects of A cation size, **163**, 466
- La_3MO_7 ($M = \text{Ru, Os}$) fluorite-related phases, **167**, 182
- $\beta\text{-La}_3\text{RuO}_7$ with isolated RuO_6 octahedra, **165**, 359
- $\text{Li}_{1-x}\text{Co}_2\text{O}_{4-\delta}$ spinel, **164**, 332
- $\text{LuBaCuFeO}_{5+\delta}$ at low temperature, **166**, 251
- $\text{Mn}_2(\text{H}_2\text{O})[\text{O}_2\text{C}(\text{CH}_2)_6\text{CO}_2]_2$, **166**, 279
- $\text{Mn}_7(\text{HOXO}_3)_4(\text{XO}_4)_2$ ($\text{X} = \text{As, P}$), **165**, 171
- LnMnO_3 ($\text{Ln} = \text{Ho, Er, Tm, Yb, Lu}$), **165**, 131
- $\beta\text{-Na}_x\text{CoO}_2$, **166**, 177
- $\text{Na}_{1-x}\text{Sr}_x\text{NbO}_3$ ($0.1 \leq x \leq 0.9$) perovskite-type compounds, **167**, 7
- $\text{Nd}_2\text{Ti}_2\text{S}_2\text{O}_5$, **165**, 228
- $\text{M}_2(\text{O}_3\text{PCH}_2\text{C}_6\text{H}_4\text{CH}_2\text{PO}_3) \cdot 2\text{H}_2\text{O}$ ($M = \text{Mn, Ni, Cd}$), **167**, 330
- Ln_3OsO_7 ($\text{Ln} = \text{Pr, Nd, Sm}$), **169**, 189
- $\text{PbO-As}_2\text{O}_3$ glasses containing Mo ions, **166**, 104
- Ln_3RuO_7 ($\text{Ln} = \text{Pr, Gd}$), **164**, 163
- $\text{SeCu}_{1-x}\text{Zn}_x\text{O}_3$ ($0 \leq x \leq 1$) perovskites, **168**, 149
- RESn_2Sb_2 ($\text{RE} = \text{La, Ce, Pr, Nd, Sm}$; $x = 0.5, 0.7$), **164**, 292
- $\text{SrCaMnGaO}_{5+\delta}$, **167**, 188
- $\text{Sr}_3\text{CuRhO}_6$ one-dimensional oxides, as function of structure, **164**, 220
- $\text{Sr}_3\text{Fe}_{2-x}\text{Co}_x\text{O}_{7-\delta}$ ($0.25 \leq x \leq 1.75$) $n = 2$ Ruddlesden-Popper phases, **166**, 292
- $[\text{Sr}(\text{Fe, Nb})_{0.5}\text{S}_{1.5}]_{1.13}\text{NbS}_2$, **168**, 41
- $[\text{SrGd}_{0.5}\text{S}_{1.5}]_{1.16}\text{NbS}_2$, **168**, 41
- $\text{Sr}_3\text{NiRhO}_6$ one-dimensional oxides, relationship to structure, **164**, 220
- $\text{Sr}_3\text{Pb}_3\text{CoO}_{12}$, **164**, 12
- $\text{TmBaCuFeO}_{5+\delta}$ at low temperature, **166**, 251
- $\text{U}_3\text{Te}_5\text{Z}_x$ ($\text{Z} = \text{Ge, Sn}$), **168**, 217
- $\text{V}_2\text{GeO}_4\text{F}_2$ with chains of VO_4F_2 octahedra, **165**, 74
- Magnetic state
 $\text{La}_{1-x}\text{Ca}_x\text{MnO}_{3-y}$ ($x = 0.30, 0.50$), evolution depending on oxygen content, **169**, 85
- Magnetic structure
 $\text{Ba}_4\text{Mn}_3\text{O}_{10}$, **167**, 453
 $\text{Ca}_{14}\text{MnSb}_{11}$ zintl compound, neutron diffraction study, **168**, 162
 EuMn_2P_2 single crystals, **163**, 498
 $\text{Fe}_4(\text{P}_2\text{O}_7)_3$, **163**, 412
 $\text{Fe}_3\text{P}_5\text{SiO}_{19}$, neutron diffraction and Mössbauer studies, **164**, 71
 insulating BEDT-TTF salts, **168**, 433
 $\text{LiFe}_{1-x}\text{Co}_x\text{O}_2$ ($0 \leq x \leq 1$), high-resolution neutron diffraction study, **163**, 406
 $\text{LuBaCuFeO}_{5+\delta}$ at low temperature, **166**, 251
 Na_4FeO_4 , **165**, 266
 $\text{Sr}_2\text{MnO}_{3.5+x}$ reduced single-layer compound, **167**, 145
 $\text{TmBaCuFeO}_{5+\delta}$ at low temperature, **166**, 251
- Magnetic susceptibility
 $\text{Ba}_2\text{In}_{2-x}\text{Co}_x\text{O}_5$ ($0.5 \leq x \leq 1.70$) perovskites, **165**, 254
 $\text{Ba}_4\text{Mn}_3\text{O}_{10}$, **167**, 453
 $\text{Ba}_3\text{MRu}_2\text{O}_9$ ($M = \text{Y, In, La, Sm, Eu, Lu}$) 6H-perovskites, **165**, 317
 $\text{Bi}_{0.4}\text{Sr}_{2.5}\text{Cr}_{1.1}\text{O}_{4.9}$ and $\text{Bi}_{0.4}\text{Sr}_{2.5}\text{Fe}_{1.1}\text{O}_5$, **167**, 48
 bis(thiazolylidene)hydrazine complexes with tetracyanoquinodimethane, **168**, 590
 charge transfer salts based on $[\text{M}(\text{mnt})_2]^{n-}$ and BMDT-TTF and EDT-TTF, **168**, 563
 $\text{Cu}_{2.33-x}\text{V}_4\text{O}_{11}$, **166**, 382
 EuZn_2Ge_2 , **167**, 107
 magnetic/conducting hybrid compound composed of $[\text{Mn}_2^{\text{II}}\text{Cl}_5(\text{EtOH})]$ 1-D chain and BEDT-TTF stacking layer, **168**, 418
 methylenediselenotetraselenafulvalene-based conductive radical cation salts, **168**, 582
 $\text{NaBa}_2\text{M}_2^+ \text{M}^{3+} \text{O}_6$ ($M = \text{Ni, Cu}$), **165**, 214
 $\text{Pb}_3(\text{MoO})_3(\text{PO}_4)_5$ with tunnel structure, **163**, 308
 Ln_3RuO_7 ($\text{Ln} = \text{Pr, Gd}$), **164**, 163
 $\text{Sr}_{4/3}(\text{Mn}_{2/3}\text{Ni}_{1/3})\text{O}_3$ hexagonal perovskite-type oxides, **163**, 513
 $\text{Sr}_2\text{MnO}_{3.5+x}$ reduced single-layer compound, **167**, 145
 tetrachloroferrate(III) salts of BDH-TTF and BDA-TTF, **168**, 503
 $\text{Yb}_{1-y}\text{Al}_{3-x}\text{Ge}_x$ and $\text{Yb}_{1-y}\text{Al}_{3-x}\text{Si}_x$, **163**, 113

- Yb₃Ge₅, **165**, 178
 Yb₃Si₅, **163**, 178
- Magnetism
 CeNiGa, **168**, 28
 charge transfer salts of bis(ethylenedioxy)tetrathiafulvalene with isothiocyanato complex anions, **168**, 450
 fullerenes, **168**, 639
 GdTMg (*T* = Pd, Ag, Pt), **168**, 331
 Gd₃[SiON₃]O with non-condensed SiON₃ tetrahedra, **167**, 393
 metallic molecular crystals with rare-earth complex anions, **168**, 444
 molecule-based, insulating BEDT-TTF salts, **168**, 433
 Ln₃OsO₇ (*Ln* = Pr, Nd, Sm), **169**, 189
 tetrathiafulvalene-based conducting charge transfer salts with anions containing selenocyanate ligands, **168**, 573
- Magnetite
 (111)-oriented epitaxial films, preparation on α-Al₂O₃ (0001) substrates, **163**, 239
- Magnetization
 magnetic field dependence, step-like transitions in Mn-site-doped manganites, **165**, 6
 reversal in RCrO₄ (*R* = Pr, Gd, Tb, Tm, Yb), **164**, 313
- Magnetocrystalline anisotropy
 Ca₁₄MnSb₁₁ zintl compound, **168**, 162
 U₃Te₅Z_x (*Z* = Ge, Sn), **168**, 217
- Magnetoresistance
 La_{1-x}Ca_xMnO_{3-y} (*x* = 0.30, 0.50), **169**, 85
 Pr_{0.5}Sr_{0.5}MnO₃ perovskite, effect of quenching, **165**, 375
 Sr₃Fe_{2-x}Co_xO_{7-δ} (0.25 ≤ *x* ≤ 1.75) *n* = 2 Ruddlesden–Popper phases, **166**, 292
 TPP[M(*Pc*)(CN)₂]₂ (*M* = Fe, Co, Fe_{0.30}Co_{0.70}) salts, **168**, 509
- Manganese
 Ba₇Ca₂Mn₅O₂₀, synthesis and structure, **168**, 11
 LnBa₂Mn₂Cu₂O_{12±y} (*Ln* = Sm, Eu), structure determination by powder neutron diffraction, **167**, 237
 Ba₄Mn₃O₁₀, crystal and magnetic structures, **167**, 453
 BaLn₂MnS₅ (*Ln* = La, Ce, Pr), antiferromagnetic ordering in, spin dimer analysis, **169**, 143
 BiMnAsO₅, synthesis and structure, **168**, 224
 BiMn₂MO₆ (*M* = P, As, V), synthesis and structure, **167**, 245
 Bi_{~1.2}Mn_{~1.2}PO_{5.5} disordered compounds, crystal structure, role of oxygen-centered tetrahedra linkage, **167**, 168
 BiMnVO₅, synthesis and structure, **168**, 224
 Bi₂PbMnO₄(PO₄)₂, crystal structure, **165**, 324
 CaMn₂Ge₂, electronic structure, **167**, 107
 Ca₁₄MnSb₁₁ zintl compound, neutron diffraction study, **168**, 162
 EuMn₂P₂ single crystals, synthesis and magnetic and electronic properties, **163**, 498
 β-FeSi₂ semiconductors doped with, geometrical and electronic structure, first-principle calculation, **163**, 248
 Gd–Mn–O system, phase equilibrium at 1100°C, **166**, 285
 H_{1.6}Mn_{1.6}O₄, formation by ion exchange with Li_{1.6}Mn_{1.6}O₄, **163**, 1
 Ho_{0.5}Sr_{0.5}MnO₃, strained structure, **165**, 65
 La_{1-x}Ca_xMnO_{3-y} (*x* = 0.30, 0.50), magnetic state of, evolution depending on oxygen content, **169**, 85
 La_{0.8}MnO_{3-δ} magnetoresistive thin film, crystal structure transformations, **164**, 177
 La_{1-x}A_xMnO_{3±δ} (*A* = Ca, Sr), enthalpy of formation, measurement by high-temperature solution calorimetry, **163**, 186
 LaMnO_{3+δ}
 excess oxygen in, **163**, 65
 perovskite doped with Sn, low-temperature phase formation, **168**, 100
 (La_{1-x}Nd_x)_{0.7}Sr_{0.3}MnO₃ perovskites, structural, magnetic, and electrical properties, effects of *A* cation size, **163**, 466
 La₂Sr₂BMnO₈ (*B* = Mg, Zn), structural and magnetic chemistry, **168**, 202
 LiCo_{0.5}Mn_{0.5}O₂ as highly ordered nanowire arrays, sol–gel template synthesis and structural properties, **165**, 247
 Li_{1-x}Mn₂O_{4-δ} superfine powders, solvothermal synthesis, **163**, 132
 LiMnO₂, orthorhombic, synthesis by solid-phase reaction under steam atmosphere and study of heat- and acid-treated phases, **169**, 66
 Li_xMnO₂, chemical properties, dependence on structure, **164**, 5
o-LiMnO₂, synthesis by microwave irradiation and heat treatment and Li exchange studies, **163**, 1
 Li_{1.6}Mn_{1.6}O₄, production by heat treatment of *o*-LiMnO₂, **163**, 1
 LiMn₂O₄
 chemical properties, dependence on structure, **164**, 5
 spinels, synthesis with tartaric acid gel and electrochemical performance, effects of metal ion sources, **163**, 231
 Li₂Mn(II)Sn₃O₈, cation ordering in, **169**, 44
 LiNi_{1-x}Mn_xVO₄ spinel, synthesis and electrochemical studies, **165**, 312
 lithium nickel manganese oxides and their delithiated phases, synthesis and characterization, **169**, 35
 Mg_{1-x}Mn_xMn₂O_{4±δ} spinels, structural and transport properties, **166**, 171
 Mn–Al layered double hydroxides, synthesis and thermal decomposition, **167**, 152
 [Mn^{II}Cl₅(EtOH)] 1-D chain, and BEDT-TTF stacking layer, magnetic/conducting hybrid compound composed of, **168**, 418
 Mn₂(H₂O)[O₂C(CH₂)₆CO₂]₂, hydrothermal synthesis, crystal structure, and magnetic properties, **166**, 279
 Mn₇(HOXO₃)₄(XO₄)₂ (*X* = As, P), hydrothermal synthesis, spectroscopy, and magnetic behavior, **165**, 171
 MnO₂, H-insertion in, first principles study, **166**, 91
 β-MnO₂, chemical properties, dependence on structure, **164**, 5
 γ-MnO₂
 chemical properties, dependence on structure, **164**, 5
 synthesized from three-dimensional framework and layered structures, structure and electrochemistry, **166**, 375
 LnMnO₃ (*Ln* = Ho, Er, Tm, Yb, Lu), magnetic properties, **165**, 131
 Mn₂(O₃PCH₂C₆H₄CH₂PO₃)·2H₂O, hydrothermal synthesis and characterization, **167**, 330
 Mn-site-doped manganites, magnetic field-induced step-like transitions in, **165**, 6
 Na₂FeMnCd(PO₄)₃, Na₂GaMn₂(PO₄)₃, and Na₂InMn₂(PO₄)₃ with alluaudite structures, electrical behavior, **168**, 208
 [(NH₄(18-Crown-6))₄MnX₄][TiX₄]₂ (*X* = Cl, Br), cubic *F*23 crystals, defects and luminescence behavior, **163**, 286
 Ni_xMg_{6-x}MnO₈, as active materials for negative electrodes of lithium-ion cells, **166**, 330
 PbMnO_{3-x}, high-pressure phase with perovskite-derived crystallographic shear structure, **169**, 131
 Pr_{0.5}Sr_{0.5}MnO₃ perovskite, magnetoresistance properties, effect of quenching, **165**, 375
 Sm–Mn–O system, phase equilibrium at 1100°C, **167**, 160
 SrCaMnGaO_{5+δ}, crystal structure and magnetic properties, **167**, 188
 Sr_{4/3}(Mn_{2/3}Ni_{1/3})O₃ hexagonal perovskite-type oxides, magnetic susceptibility and spin exchange interactions, **163**, 513
 Sr₂MnO_{3.5+x} reduced single-layer compound, synthesis and characterization, **167**, 145
 substitutional effects on magnetic and structural properties of quasi-two-dimensional La₅Mo₄O₁₆, **164**, 60
 YMe_xMn_{1-x}O₃ (*Me* = Cu, Ni, Co) perovskites, structural characterization, **163**, 377
- Mass spectrometry
 aluminosilicate wet gel transformation to solid state, **165**, 111
- MCM-41
 and MFI, MMM-1 composed of, synthesis, characterization, and catalytic properties, **167**, 363

- Mechanical milling
effect on formation of lithium ferrites, **164**, 230
- Mechanical resistance
polymeric systems with branching/crosslinking, theoretical modeling, **164**, 237
- Mechanical stability
polymeric systems with branching/crosslinking, theoretical modeling, **164**, 237
- Mechanical stress
associated radical recombination and charge transfer across boundary between indomethacin and silica, **164**, 27
- Mechanochemical synthesis
crystalline silver vanadates by reaction of Ag_2O and V_2O_5 , **169**, 139
 LiCoO_2 , **165**, 56
- Melting
 $(\text{RbCl})_{256}$ and $(\text{RbCl})_{500}$ molten clusters, kinetics of, molecular dynamics studies, **165**, 289
- Mercury
 Au_2HgP_2 with Hg in oxidation state zero, preparation and crystal structure, **165**, 238
- Mesoporous materials
MMM-1 microporous/mesoporous materials, synthesis, characterization, and catalytic properties, **167**, 363
syntheses directed by blends of nonionic amphiphiles under nonaqueous conditions, **167**, 324
- Metal contacts
need in monolayer rectifiers, **168**, 696
- Metal–insulator transition
fullerenes, **168**, 639
- Metal salts
reactions with alkali metal nitrates, properties of ZrO_2 formed by, role of metal precursors and alkali metal ions, **163**, 202
- Metal–semiconductor transition
 $\text{Pb}_{1-x}\text{Bi}_x\text{Pt}_2\text{O}_4$ ($0 \leq x \leq 0.3$), **166**, 58
- Metamagnetism
 $\text{R}_2\text{Ba}_2\text{CuPtO}_8$ ($R = \text{Ho, Er, Tm, Yb, Lu, Y}$), **165**, 297
 RCrO_4 ($R = \text{Pr, Gd, Tb, Tm, Yb}$), **164**, 313
- Methanol
solid, phase transitions in, **166**, 415
- Methylenediselenotetraselenafulvalene
conductive radical cation salts based on, synthesis, structures, and conductive properties, **168**, 582
- Methyl orange
photodecomposition by $\text{TiO}_2/\text{SnO}_2$ nanocrystals, **165**, 193
- MFI
and MCM-41, MMM-1 composed of, synthesis, characterization, and catalytic properties, **167**, 363
- Microporous materials
aluminophosphate open framework, crystallization from fluoride media, cyclam as structure-directed agent in, **167**, 267
MMM-1 microporous/mesoporous materials, synthesis, characterization, and catalytic properties, **167**, 363
Na–RUB-29 ion-exchanged lithosilicate, synchrotron X-ray single-crystal diffraction and ^6Li MAS NMR, **167**, 310
- Microtwinning
manganese dioxides, influence on chemical properties, **164**, 5
 $\gamma\text{-MnO}_2$ synthesized from three-dimensional framework and layered structures, **166**, 375
- Microwave-based synthesis
 Cu_7S_4 and Cu_9S_8 nanocrystals via elemental-direct-reaction route, **167**, 249
 $\text{La}_2\text{W}_{2-x}\text{Mo}_x\text{O}_9$ series, **167**, 80
o- LiMnO_2 , **163**, 1
Zintl compounds $\text{K}_4\text{Sn}_2\text{Se}_6$, $\text{K}_4\text{Sn}_3\text{Se}_8$, Na_4SnSe_4 , and molecular Sn–Se oligomers, **165**, 125
- MIL-49
hydrothermal synthesis, structure, and magnetic properties, **164**, 354
- MMM-1
synthesis, characterization, and catalytic properties, **167**, 363
- Moist chemical method
 $\text{LiNi}_{1-x}\text{Mn}_x\text{VO}_4$ synthesis, **165**, 312
- Molecular conductors
based on $M(\text{ddd})_2$ bithiolenes cation complexes, synthesis, structure, and properties, **168**, 464
bis(ethylenediseleno)tetrathiafulvalene salts with hexacyanoferrate(III) and nitroprusside, synthesis, structure, and characterization, **168**, 616
conducting cation radical salts with tetraiodotellurate(II) and hexaiodotellurate(II), structural and physical properties, **168**, 396
magnets based on TTF derivatives, **168**, 547
with rare earth elements, crystal and electronic structures, **168**, 457
TMEO-ST-TTP-based, structure and transport properties, **168**, 608
TPP[M(Pc)(CN) $_2$] $_2$ ($M = \text{Fe, Co, Fe}_{0.30}\text{Co}_{0.70}$) salts, magnetoresistance study, **168**, 509
TTF[Ni(dimit) $_2$] $_2$ thin films and nanowires, formation and characterization, **168**, 438
- Molecular dynamics
crystal nucleation from molten $(\text{RbCl})_{256}$ and $(\text{RbCl})_{500}$ clusters, **165**, 289
order–disorder phase transitions in alkali perchlorates, **163**, 294
- Molecular magnets
conducting, based on TTF derivatives, **168**, 547
- Molecular metals
(2,5-diiododicyanoquinondiimine) $_2M$ ($M = \text{Ag, Li, Cu}$), phase transition: temperature-dependent vibronic and vibrational IR absorptions, **168**, 632
thin films: TTF-TCNQ, **168**, 384
- Molybdenum
 $\text{Bi}_{26}\text{Mo}_{10-x}\text{Cr}_x\text{O}_{69}$ solid solution, synthesis, structure, and electrical properties, **166**, 7
 $[\text{Cu}(\text{en})_2]_4[\text{SiMo}_8\text{V}_4\text{O}_{40}(\text{V}^{\text{IV}}\text{O})_2][\text{MoO}_4]_2 \cdot 5\text{H}_2\text{O}$, hydrothermal synthesis and crystal structure, **165**, 1
 $[\{\text{Cu}(\text{pca})\}_2\text{Mo}_8\text{O}_{26}]$ two-dimensional network, hydrothermal synthesis and structure, **167**, 370
 $[\{\text{Cu}_3(\text{pca})_3\text{MoO}_4\}\text{Mo}_8\text{O}_{26}]$ one-dimensional material, hydrothermal synthesis and structure, **167**, 370
ionic, $\text{PbO-As}_2\text{O}_3$ glasses containing, characterization and physical properties, **166**, 104
 $\text{K}_{0.28}\text{MoO}_3$ blue bronze, hydrothermal synthesis, **164**, 81
 $\text{K}_3\text{MoO}_3\text{F}_3$, superlattice ordering in, electron diffraction and XRPD study, **163**, 267
 $\text{K}_2\text{MoO}_2(\text{IO}_3)_4$ and $\beta\text{-KMoO}_3(\text{IO}_3)$, hydrothermal preparation and structure, **166**, 442
 $\text{La}_5\text{Mo}_4\text{O}_{16}$ quasi-two-dimensional compound, magnetic and structural properties, substitutional effects of 3*d* transition metals, **164**, 60
 $\text{La}_2\text{W}_{2-x}\text{Mo}_x\text{O}_9$ series, synthesis, structure, and thermal expansion, **167**, 80
Mo–O covalent oxide network, structural transformation, room temperature solid state reaction involving, **164**, 157
 MoO_3 , coordination chemistry with di-2-picolyamine, **167**, 370
 $A_x(\text{Mo, V})_8\text{O}_{21}$ ($A = \text{K}^+, \text{Rb}^+, \text{Cs}^+$) bronze with tunnel structure, synthesis and crystal structure, **163**, 210
 $(\text{NH}_4)_{21}[\text{H}_3\text{Mo}_{57}\text{V}_6(\text{NO})_6\text{O}_{183}(\text{H}_2\text{O})_{18}] \cdot 53\text{H}_2\text{O}$, single-crystal neutron structure analysis, **165**, 199
 $[\{\text{Ni}(\text{pca})(\text{H}_2\text{O})\}_2\text{Mo}_8\text{O}_{26}]$ molecular cluster, **167**, 370
oxometalate-intercalated layered double hydroxides, thermal behavior, **167**, 59
 $\text{Pb}_3(\text{MoO})_3(\text{PO}_4)_5$, synthesis and tunnel structure, **163**, 308
rubidium uranyl molybdates, crystal chemistry, **168**, 245

- Monolayer rectifiers
review, **168**, 696
- Mössbauer spectroscopy
REAgMg (*RE* = La, Ce, Eu, Yb), **164**, 201
Bi_{0.4}Sr_{2.5}Fe_{1.1}O₅, **167**, 48
EuAuMg, **164**, 201
EuZn₂Ge₂, **167**, 107
FeIn₂S₂Se₂ layered compound, **164**, 326
Fe₄(P₂O₇)₃, **163**, 412
Fe₃P₅SiO₁₉, **164**, 71
Gd T Mg (*T* = Pd, Ag, Pt), **168**, 331
Na₄FeO₄, **165**, 266
natural tapiolite: coexistence of trirutile and rutile phases, **163**, 218
ANi_{0.98}Fe_{0.02}O₃ (*A* = Pr, Nd, Sm, Y, Lu, Tl) perovskites doped with ⁵⁷Fe, temperature effects, **168**, 126
RESn_xSb₂ (*RE* = La, Ce, Pr, Nd, Sm; *x* = 0.5, 0.7), **164**, 292
[Sr(Fe, Nb)_{0.5}S_{1.5}]_{1.13}NbS₂, **168**, 41
- Mott insulator regime
magnetic interactions of BEDT-TTF salts in, **168**, 433
- N
- Nanochannels
large cavities with, in three-dimensional neutral framework of [As₂V₈^{IV}V₂^VO₂₆(H₂O)] · 8H₂O, **169**, 160
- Nanoclusters
AgI, ordered inside zeolite host, luminescence, **169**, 81
- Nanocomposites
photochromic thin films based on polyoxometalates dispersed in polyacrylamide, sonochemical preparation, **169**, 1
thermoset epoxy–clay, formation, role of α,ω -diamines as clay surface modifiers and polymer curing agents, **167**, 354
- Nanocrystals
Ag₂S, synthesis and characterization in hyperbranched polyurethane at room temperature, **168**, 259
BaFe₁₂O₁₉, Co-substituted, sol–gel synthesis and HRTEM study, **167**, 254
CeO₂, supported on SiO₂, structure evolution, effect of temperature and atmosphere, **168**, 110
Ce_{1-x}Y_xO_{2-x/2} (0 ≤ *x* ≤ 0.35), synthesis via carbonate precipitation and characterization, **168**, 52
copper and silver chalcogenides, room-temperature synthesis in mixed solvents, **167**, 28
Cu₇S₄ and Cu₉S₈, synthesis via microwave-assisted elemental-direct-reaction route, **167**, 249
 γ -Fe₂O₃, vacancies ordering and lattice parameters, effects of grain size, oxygen stoichiometry, and synthesis conditions, **163**, 459
N-4-nitrophenyl-L-prolinol, preparation and characterization in sol–gel matrices, **165**, 25
rutile synthesized at low temperature, crystallography and crystallite morphology, **169**, 176
SnS₂ nanoflakes, synthesis from tetrabutyltin precursors, **164**, 106
TiO₂/SnO₂, rapid synthesis and photocatalytic activity for methyl orange decomposition, **165**, 193
M_xV₂O₅A_y · nH₂O, high lithium capacity for rechargeable batteries, **163**, 93
WO₃, size effects on structural transitions, Raman spectroscopic study, **167**, 425
- Nanoparticles
TiO₂, deactivation and regeneration in photocatalytic oxidation systems, **166**, 395
Zn(Fe, Ga)₂O₄ spinel-type solid solutions, precipitation from aqueous solutions at 90°C, **168**, 5
- Nanorods
wurtzite CdS and ZnS, synthesis from coordination polymer, **166**, 49
- Nanowires
highly ordered arrays, LiCo_{0.5}Mn_{0.5}O₂, sol–gel template synthesis and structural properties, **165**, 247
TTF[Ni(dimit)₂]₂, formation and characterization, **168**, 438
- Neodymium
BaNd(Cu_{0.5}Fe_{0.5})₂O_{5+ δ} double perovskites, interplay of Cu and Fe valences, **166**, 118; *erratum*, **168**, 354
Bi_{0.775}Nd_{0.225}O_{1.5} of rhombohedral Bi–Sr–O type, structural relationship to monolitic ϵ -Bi_{4.86}La_{1.14}O₉, **168**, 91
Bi_{0.85}Nd_{0.15(1-m)}V_{0.15n}O_{1.5+0.15n}, stability, conductivity, and powder crystal structure studies, **163**, 300
Bi_{3.24}Nd₂W_{0.76}O_{10.14} monoclinic compounds with pseudo-orthogonal cell based on pseudo-fcc subcell in Bi₂O₃–Nd₂O₃–WO₃, **169**, 60
KNdFe(II)(CN)₆ · *x*H₂O, characterization and thermal evolution, **167**, 34
(La_{1-x}Nd_x)_{0.7}Sr_{0.3}MnO₃ perovskites, structural, magnetic, and electrical properties, effects of *A* cation size, **163**, 466
lanthanide nitrate complex anions, metallic molecular crystals with magnetism, **168**, 444
Nd³⁺ · YAB, spectroscopic and crystal field investigation, **167**, 386
NdBaFe₂O_{5+n}, Verwey transition under oxygen loading, **167**, 480
Nd T Bi (*T* = Rh, Ni, Pd, Pt), preparation and structure, **168**, 18
NdCu₃Ru₄O₁₂, structure: comparison of XRD-Rietveld and EXAFS results, **167**, 126
NdFeO₃, thermodynamics, **164**, 34
NdNi_{0.98}Fe_{0.02}O₃ perovskites doped with ⁵⁷Fe, Mössbauer spectroscopy at varying temperatures, **168**, 126
NdOCl, stability of, bond valence study, **165**, 48
Nd₃OsO₇, structures and magnetic properties, **169**, 189
Nd T Sb (*T* = Rh, Ir), preparation and structure, **168**, 18
NdSn_xSb₂ (*x* = 0.5, 0.7), magnetic and transport properties, **164**, 292
Nd₂Ti₂S₂O₅, optical properties, **165**, 228
Nd_xWO₃ bronzes, X-ray and electron microscopy studies, **167**, 412
Nd_xWO_{3+y}, tungsten bronze-related phases, formation of, effects of pressure and temperature, **168**, 284
tungsten bronzes with, synthesis and application as inert matrices for transmutation of long-life actinides, **169**, 182
- Neutron diffraction, *see also* Powder neutron diffraction
Ca_{0.83}CuO₂ composite crystals: modulated structure, **163**, 540
Ho_{0.5}Sr_{0.5}MnO₃: strained structure, **165**, 65
1-hydroxy-1-phosphono-pentyl-phosphonic acid dimethyl ammonium salt, **167**, 441
Na₄FeO₄, **165**, 266
(NH₄)₂[H₃Mo₅₇V₆(NO)₆O₁₈₃(H₂O)₁₈] · 53H₂O, **165**, 199
- Neutron thermodiffraction
monitoring of ZrSiO₄–MgCa(CO₃)₂ reactions, **166**, 426
- Nickel
4234-type intermetallic borocarbides, synthesis, structures, and magnetic properties, **164**, 246
(anilinium)(18-crown-6)[Ni(dimit)₂] polymorphs, structure and magnetic properties, **168**, 661
CaNi₂Ge₂, electronic structure, **167**, 107
CeNiGa, polymorphism and hydrogen adsorption, **168**, 28
 β -FeSi₂ semiconductors doped with, geometrical and electronic structure, first-principle calculation, **163**, 248
LaNi₅ homogeneity domain, structural study, **166**, 1
Li_{1-x}Ni_{0.85}Co_{0.15}O₂ cathodes, chemical stability, comparison with Li_{1-x}Co₂ cathodes, **163**, 5
LiNi_{1-x}Mn_xVO₄ spinel, synthesis and electrochemical studies, **165**, 312
Li_xNiO₂, structural and thermal characteristics, **163**, 340
LiNiO₂, layer-structured, formation of, effect of Al addition, **167**, 97
lithium nickel manganese oxides and their delithiated phases, synthesis and characterization, **169**, 35
NaBa₂Ni₂²⁺Ni³⁺O₆, polysynthetic twinning characterization and crystallographic refinement, **165**, 214
*Ln*NiBi, preparation and structure, **168**, 18
[Ni(bpy)₃][Pd(dmit)₂] · CH₃CN, preparation and crystal structure, **168**, 390

- Ni(dddt)₂ bithiolenene cation complexes, synthesis, structure, and properties, **168**, 464
- [Ni(dmf)₆]²⁺ and [Ni(dsit)₂]²⁻, conducting molecular solid based on, anion packing in, **168**, 653
- Ni(dmit)₂ simple salts, charge carrier doping by hydrogen-bonding pyridinium cations, **168**, 535
- ANi_{0.98}Fe_{0.02}O₃ (*A* = Pr, Nd, Sm, Y, Lu, Tl) perovskites doped with ⁵⁷Fe, Mössbauer spectroscopy at varying temperatures, **168**, 126
- Ni_xMg_{6-x}MnO₈, as active materials for negative electrodes of lithium-ion cells, **166**, 330
- [Ni(mnt)₂]ⁿ⁻, and BMDT-TTF and EDT-TTF, charge transfer solids based on, conducting and magnetic properties, **168**, 563
- Ni₂(O₃PCH₂C₆H₄CH₂PO₃)₂·2H₂O, hydrothermal synthesis and characterization, **167**, 330
- [{Ni(pca)(H₂O)}₂Mo₈O₂₆] molecular cluster, **167**, 370
- Ni₁₀Sn₅P₃, crystal structure, **166**, 352
- Sr_{4/3}(Mn_{2/3}Ni_{1/3})O₃ hexagonal perovskite-type oxides, magnetic susceptibility and spin exchange interactions, **163**, 513
- Sr₃NiRhO₆ one-dimensional oxides, magnetic properties as function of structure, **164**, 220
- TTF[Ni(dimit)₂]₂, thin films and nanowires, formation and characterization, **168**, 438
- YNi_xMn_{1-x}O₃ perovskites, structural characterization, **163**, 377
- Niobium
- Bi_{2.5}Na_{m-1.5}Nb_mO_{3m+3} (*m* = 2–4), neutron powder diffraction and electron microscopy structural studies, **167**, 86
- Bi₄NbO₈Br layered intergrowth phases, structure and electrophysical properties, **166**, 148
- Bi₇Ti₄NbO₂₁ Aurivillius-type compounds, crystal chemistry, **164**, 261
- Bi–W–Nb–O phases, microstructures, **163**, 479
- Bi_{1.5}Zn_{0.92}Nb_{1.5}O_{6.92} cubic pyrochlore, structural study, **168**, 69
- Cs₂Nb₆Br₅F₁₂, synthesis and crystal structure, **163**, 319
- Eu_{1.3}Nb_{1.9}S₅, crystal structure, **164**, 345
- LaNb_{2-2x}Ta_{2x}VO_{9-δ} (*x* = 0–0.4), spectral properties, effects of oxygen nonstoichiometry, **167**, 73
- LaTa_{2-2x}Nb_{2x}VO_{9-δ} (*x* = 0–0.1), spectral properties, effects of oxygen nonstoichiometry, **167**, 73
- La_{0.63}(Ti_{0.92}Nb_{0.08})O₃, orthorhombic–tetragonal phase transition, high-temperature synchrotron X-ray powder diffraction study, **164**, 51
- Li_{1+x-y}Nb_{1-x-3y}Ti_{x+4y}O₃ solid solutions, structural study, **166**, 81
- Na_{0.21}Nb₆Cl_{10.5}O₃, synthesis and crystal structure, **163**, 325
- Na_{1-x}Sr_xNbO₃ (0.1 ≤ *x* ≤ 0.9) perovskite-type compounds, structure and properties, **167**, 7
- NbB₂, electronic structure and normal-state conductivity, **169**, 168
- Nb₂₂O₅₄, *in situ* oxidation in gas reaction cell high-resolution transmission electron microscope, **163**, 137
- NbO₂F, oxygen/fluorine ordering in, electron diffraction and crystal chemical studies, **166**, 73
- ANb₂PS₁₀ (*A* = Na, Ag) one-dimensional metal thiophosphates, crystal and electronic structures, **168**, 119
- [Sr(Fe,Nb)_{0.5}S_{1.5}]_{1.13}NbS₂, crystal structure and magnetic properties, **168**, 41
- [SrGd_{0.5}S_{1.5}]_{1.16}NbS₂, crystal structure and magnetic properties, **168**, 41
- Sr(Sr_{1/3}Nb_{2/3})O₃, complex polymorphic behavior and dielectric properties, **166**, 24
- Tl_{1-x}Na_xNb₂PO₈ and related compounds, structural comparison with Ca_{0.5+x}Cs₂Nb₆P₃O₂₄ and physical properties, **164**, 272
- Nitrate salts
- as ion sources for LiMn₂O₄ spinels, effects on synthesis with tartaric acid gel and electrochemical performance, **163**, 231
- Nitrogen
- AlGaPON mixed nitrided galloaluminophosphates, structural analysis by EELS, XAS, and XPS, **163**, 163
- [Al₃P₄O₁₆][(CH₃)₂NHCH₂CH₂NH(CH₃)₂][H₃O], synthesis and characterization, **167**, 282
- (anilinium)(18-crown-6)[Ni(dimit)₂] polymorphs, structure and magnetic properties, **168**, 661
- Ba₈Cu₃In₄N₅ with nitridocuprate groups and one-dimensional infinite In clusters, synthesis and structure, **163**, 449
- calcium uranyl carbonate with multiple anionic species, structural arrangements in, **166**, 219
- charge transfer salts of bis(ethylenedioxy)tetrathiafulvalene with isothiocyanato complex anions, preparation, structure, and magnetic properties, **168**, 450
- C₅H₁₂NPO₄H₂, synthesis and crystal structure, **161**, 307; *erratum*, **168**, 714
- [C₂N₂H₁₀][Co_{4.2}Zn_{1.8}(PO₄)₄(HPO₄)]·H₂O, template synthesis and structure, **166**, 369
- [C₆N₂H₁₄][Fe^{III}F₂(HPO₄)₂(H₂PO₄)₂]·2H₂O open framework with one- and three-dimensional structures, synthesis, **165**, 334
- [C₆N₂H₁₄]₂[Fe^{III}(OH)F₃(HPO₄)₂]·2H₂O open framework with one- and three-dimensional structures, synthesis, **165**, 334
- (CN₃H₆)₂·Zn₃(HPO₃)₄·H₂O, synthesis and structure, **167**, 337
- [C₆N₄H₂₂][ZnPO₄]₄ with open framework, synthesis and structure, **165**, 182
- [Co₄(OH)₂(H₂O)₂](C₄H₁₁N₂)₂[C₆H₂(COO)₄]₂·3H₂O with tetranuclear clusters, **166**, 158
- copper salts of rigid *N,N'*-dicyanoquinone diimine derivatives, **168**, 690
- Cu(I)halide 2-ethylpyrazine coordination polymers, synthesis, crystal structure, and thermal properties, **169**, 103
- Cu(NCS)₂⁻, MDSe-TSF-based conductive radical cation salts with, synthesis, structures, and conductive properties, **168**, 582
- N,N'*-dialkylimidazolium cadmium–thiocyanate complexes, cation-controlled formation and structure, **169**, 199
- 2,6-di[dibutylamino-phenylvinyl]-1-butylpyridinium iodide monolayer rectifier, **168**, 696
- (2,5-diiododicyanoquinondiimine)₂*M* (*M* = Ag, Li, Cu), phase transition: temperature-dependent vibronic and vibrational IR absorptions, **168**, 632
- dimethylanilinoaza[C₆₀]fullerene monolayer rectifier, **168**, 696
- fullerenes C₆₀ and C₇₀ in molecular complexes with saturated amines, preparation, crystal structures, and characterization, **168**, 474
- Gd₃[SiON₃]O with non-condensed SiON₃ tetrahedra, synthesis, crystal structure, magnetism, and optical properties, **167**, 393
- γ-hexadecylquolinium tricyanoquinodimethanide, molecular properties, film properties, and unimolecular rectification by, **168**, 696
- (H₃N(CH₂)₄NH₃)[V₆O₁₄], hydrothermal synthesis and characterization, **167**, 407
- H₃N(CH₂)₃NH₃·Zn₃(HPO₃)₄·H₂O, synthesis and structure, **167**, 337
- iron diphosphonates, structures and magnetic properties, **164**, 367
- isotropic hyperfine coupling constants in nitroxide radicals, DF/HF calculations, **169**, 75
- K₂Na[Ag(CN)₂]₃, reversible luminescence thermochromism and role of structural phase transitions, **168**, 267
- lanthanide nitrate complex anions, metallic molecular crystals with, magnetism, **168**, 444
- LiNO₃, reactions with metal salts, properties of ZrO₂ formed by, **163**, 202
- Li_{0.2(1)}ZrNCl superconducting phase derived by intercalation, single-crystal X-ray structural refinement, **169**, 149
- low stress cubic BN film, preparation by physical vapor deposition, **167**, 420
- molecular conductors with rare-earth elements, crystal and electronic structures, **168**, 457
- β-MNX (*M* = Zr, Hf; *X* = Br, I), high-pressure synthesis and crystal structures, **163**, 77

- NaNO₃, reactions with metal salts, properties of ZrO₂ formed by, **163**, 202
- [NH₃(CH₂)_xNH₃][Ga₄(PO₄)_y(HPO₄)] ($x = 4, 5$; $y = 1, 4$), synthesis and properties, **167**, 17
- [NH₃(CH₂)_nNH₃][Sb{CH₂C(O)(PO₃)₂}] ($n = 4, 5$) one-dimensional diphosphonates, synthesis and characterization, **168**, 263
- (NH₄)₂₁[H₃Mo₅₇V₆(NO)₆O₁₈₃(H₂O)₁₈] · 53H₂O, single-crystal neutron structure analysis, **165**, 199
- [Ni(bpy)₃][Pd(dmit)₂] · CH₃CN, preparation and crystal structure, **168**, 390
- N*-4-nitrophenyl-*L*-prolinol nanocrystals, preparation and characterization in sol–gel matrices, **165**, 25
- organic synthetic metals, dimensionality and electrical properties, **168**, 367
- [RuNOX₅]²⁻ ($X = \text{Br, Cl}$), BEDT-TTF mixed valence radical cation salts with, synthesis, crystal and electronic structures, and transport properties, **168**, 514
- sequential substitution, effects on redox properties of bis(thiazolylidene)hydrazine and on charge transfer of TCNQ complexes, **168**, 590
- α -sialon materials doped with Tb, Ce, or Eu, luminescence properties, **165**, 19
- Sr₂NF, preparation and single-crystal structure, **169**, 13
- TCNQF₄ complexes of EDO-TTF-CONH₂ and EDT-TTF-CONH₂, charge transfer, dimensionality, and amide hydrogen bond network adaptability, **168**, 668
- tetrathiafulvalene-based charge transfer salts with anions containing selenocyanate ligands, synthesis, crystal structures, and physical properties, **168**, 573
- TPP[M(Pc)(CN)₂]₂ ($M = \text{Fe, Co, Fe}_{0.30}\text{Co}_{0.70}$) salts, magnetoresistance study, **168**, 509
- Zn₆(PO₄)₅(HPO₄) · C₈N₅H₂₈ · 5H₂O intercalated with quintuply protonated tetraethylenepentamine, synthesis and structure, **166**, 265
- Zn₄P₃O₁₁(OH) · 3C₃N₂H₄, synthesis and structure, **163**, 364
- N*-4-Nitrophenyl-*L*-prolinol nanocrystals, preparation and characterization in sol–gel matrices, **165**, 25
- Nitroprusside
- conducting salts of bis(ethylenediseleno)tetrathiafulvalene with, synthesis, structure, and characterization, **168**, 616
- Nitroxide radicals
- nitrogen in, isotropic hyperfine coupling constants for, DF/HF calculations, **169**, 75
- Nonionic amphiphiles
- blends of, in syntheses of mesoporous materials under nonaqueous conditions, **167**, 324
- Nowotny chimney ladder phases
- RuGa_nSn_w, 14-electron rule in, **164**, 210
- Nuclear magnetic resonance
- CeO_{2- γ} -Al₂O₃ mixed oxides: origin of 40 ppm peak, **169**, 113
 - conversion of highly porous zirconium aryldiphosphonates to strong Brønsted acids, **167**, 376
 - fast ionic conducting spinel-type Li₂MgCl₄, Li_{2- x} Cu _{x} MgCl₄, Li_{2- x} Na _{x} MgCl₄, and Li₂ZnCl₄, **165**, 303
 - LaNb_{2- $2x$} Ta _{$2x$} VO_{9- δ} ($x = 0-0.4$) and LaTa_{2- $2x$} Nb _{$2x$} VO_{9- δ} ($x = 0-0.1$), effects of oxygen nonstoichiometry, **167**, 73
 - Na-RUB-29 ion-exchanged microporous lithosilicate, **167**, 310
 - N*-4-nitrophenyl-*L*-prolinol nanocrystals, **165**, 25
 - poly(hydroxymethyl) grouping-containing crystals, **164**, 301
 - Sr₃Al₁₀SiO₂₀, **169**, 53
 - Zn₂(OH)_{0.14(3)}F_{0.86(3)}(PO₄) single crystals, multinuclear study, **164**, 42
- O
- Octanes
- polymethylated [4.1.1] octanes leading to zeolite SSZ-50, **167**, 289
- Optical polarized microscopy
- CeO_{2- x} epitaxial domains deposited by laser ablation on glass, **166**, 197
- Optical properties
- CdPS₃, **166**, 421
 - charge transfer salts, **168**, 675
 - Gd₃[SiON₃]O with non-condensed SiON₃ tetrahedra, **167**, 393
 - (NH₄)In(OH)PO₄, **166**, 362
 - nonlinear, Ti_{1- x} Na _{x} Nb₂PO₈ and related compounds, **164**, 272
 - PbO-As₂O₃ glasses containing Mo ions, **166**, 104
 - Ln₂Ti₂S₂O₅ ($Ln = \text{Nd, Sm, Gd, Tb, Dy, Ho, Er, Y}$), optical properties, **165**, 228
- Orbital ordering
- in BaVS₃, analysis based on first principles and semi-empirical electronic structure calculations, **165**, 345
- Order–disorder transitions
- alkali perchlorates, **163**, 294
 - hexagonal Na_{1.5}Y_{1.5}F₆, **165**, 159
 - in natural tapiolite, **163**, 218
- Ordering
- charge, in SmBaFe₂O_{5+ w} , **167**, 480
 - oxygen/fluorine, in NbO₂F, electron diffraction and crystal chemical studies, **166**, 73
- Organic conductors
- mixed valence radical cation salts of BEDT-TTF with photochromic [RuNOX₅]²⁻ ($X = \text{Br, Cl}$), synthesis, crystal and electronic structures, and transport properties, **168**, 514
 - with rare earth elements, crystal and electronic structures, **168**, 457
 - TPP[M(Pc)(CN)₂]₂ ($M = \text{Fe, Co, Fe}_{0.30}\text{Co}_{0.70}$) salts, magnetoresistance study, **168**, 509
- Organic–inorganic hybrids
- [(CuCl)₂(*o*-phen)]_∞ chainlike hybrid complex, hydrothermal synthesis and structure, **167**, 402
 - M₂(O₃PCH₂C₆H₄CH₂PO₃)₂ · 2H₂O ($M = \text{Mn, Ni, Cd}$), hydrothermal synthesis and characterization, **167**, 330
 - organo-zincophosphite chemistry, variations on (3,4)-net *motif* in, **167**, 337
 - [V₄VO₁₀(phen)₂] one-dimensional ladder-like chain complex, hydrothermal synthesis and crystal structure, **163**, 10
- Organic superconductor
- κ -(methylenediselenotetraselenafulvalene)₂Br below 4 K, **168**, 582
- Organic synthetic metals
- dimensionality and electrical properties, **168**, 367
- Osmium
- La₃OsO₇ fluorite-related phases, magnetic properties, **167**, 182
 - Ln₃OsO₇ ($Ln = \text{Pr, Nd, Sm}$), structures and magnetic properties, **169**, 189
- Oxalotitanates
- with Ti₄O₄(C₂O₄)₈ tetramers as building blocks, hydrothermal synthesis and characterization, **163**, 427
- Oxidation
- Nb₂₂O₅₄ in gas reaction cell high-resolution transmission electron microscope, **163**, 137
- Oxidation state
- transition metal ions in Li_{1- x} CoO₂ and Li_{1- x} Ni_{0.85}Co_{0.15}O₂ cathodes, **163**, 5
- Oxides
- simple, classification with polarizability approach, **163**, 100
- Oxidization–sulfidation
- in situ growth route via self-purification process for synthesis of β -In₂S₃ dendrites, **166**, 336
- Oxygen
- content in La_{1- x} Ca _{x} MnO_{3- y} ($x = 0.30, 0.50$), effect on evolution of magnetic state, **169**, 85
 - excess oxygen in LaMnO_{3+ δ} , **163**, 65
 - and fluorine, ordering in NbO₂F, electron diffraction and crystal chemical studies, **166**, 73

- loading, Verwey transition under, in $R\text{BaFe}_2\text{O}_{5+w}$ ($R = \text{Nd, Sm}$), **167**, 480
- nonstoichiometry
 effect on spectral properties of $\text{LaNb}_{2-2x}\text{Ta}_{2x}\text{VO}_{9-\delta}$ ($x = 0-0.4$) and $\text{LaTa}_{2-2x}\text{Nb}_{2x}\text{VO}_{9-\delta}$ ($x = 0-0.1$), **167**, 73
 $\text{La}_{0.3}\text{Sr}_{0.7}\text{Fe}_{1-x}\text{Ga}_x\text{O}_{2.65+\delta}$ perovskites, **167**, 203
 order–disorder-enhanced conductivity in Ruddlesden–Popper $\text{Sr}_3\text{Fe}_{2-x}\text{Ti}_x\text{O}_{6+\delta}$, **168**, 275
 stoichiometry in $\gamma\text{-Fe}_2\text{O}_3$, effects on vacancies ordering and lattice parameters, **163**, 459
 storage capacity of ceria-lanthana-based TWC promoters prepared by sol–gel routes, **163**, 527
 variation with lithium content in $\text{Li}_{1-x}\text{CoO}_2$ and $\text{Li}_{1-x}\text{Ni}_{0.85}\text{Co}_{0.15}\text{O}_2$ cathodes, **163**, 5
- P**
- Palladium**
 EuPdIn, decomposition at high temperature and pressure: formation of hexagonal Laves phase $\text{EuPd}_{0.72}\text{In}_{1.28}$, **169**, 155
 GdPdMg, structure and properties, **168**, 331
 $[\text{Ni}(\text{bpy})_3][\text{Pd}(\text{dmit})_2] \cdot \text{CH}_3\text{CN}$, preparation and crystal structure, **168**, 390
 LnPdBi, preparation and structure, **168**, 18
 Pd(dtdt)₂ bithiolene cation complexes, synthesis, structure, and properties, **168**, 464
 PdIn_{1.26}Sb_{0.74} and Pd₁₃In_{5.25}Sb_{3.75}, crystal structure and electronic structure, **164**, 110
- Paramagnetic susceptibility
 Nd₂Ti₂S₂O₅, **165**, 228
- Peierls transition
 thin films of molecular metals, **168**, 384
- Perfluoro-1,3,5-tris(*p*-oligophenyl)benzenes
 amorphous electron-transport materials with high-glass-transition temperature and high electron mobility, **168**, 470
- Periodic island structure
 Ba_{*n*}Bi_{*n*+*m*}O_{*y*} system, periodic island structure, HREM study, **163**, 44
- Perovskites
 alumina–yttria system, high-energy ball milling in, modeling, **164**, 88
 Ba_{*n*}Bi_{*n*+*m*}O_{*y*} system, HREM study, **163**, 44
 BaR(Cu_{0.5}Fe_{0.5})₂O_{5+ δ} double perovskites ($R = \text{Lu, Yb, Eu, Sm, Nd, Pr}$), interplay of Cu and Fe valences, **166**, 118; *erratum*, **168**, 354
 Ba₂ErRuO₆, ordered, magnetic and calorimetric studies, **169**, 125
 Ba₂In_{2-*x*}Co_{*x*}O₅ ($0.5 \leq x \leq 1.70$), spin glass behavior, **165**, 254
 Ba(In_{*x*}Zr_{1-*x*})O_{3-*x*/2}, crystal structure, microstructure, and ionic conductivity, **164**, 119
 Ba_{1-*x*}La_{*x*}Ti_{1-*x*}Cr_{*x*}O₃, structural characterization, **164**, 98
 Ba₃MRu₂O₉ ($M = \text{Y, In, La, Sr, Eu, Lu}$) 6H-perovskites, crystal structure and magnetic properties, **165**, 317
 BaTbO₃, crystal structure, **165**, 393
 CaTiO₃, Fe-doped, displacive phase transitions and strain analysis, high-temperature neutron diffraction study, **167**, 459
 crystallographic shear structure derived from, PbMnO_{3-*x*} high-pressure phase with, **169**, 131
 ACu₃Ru₄O₁₂ ($A = \text{Na, Ca, Sr, La, Nd}$), structure: comparison of XRD-Rietveld and EXAFS results, **167**, 126
 Ho_{0.5}Sr_{0.5}MnO₃, strained structure, **165**, 65
 La_{2/3-*x*}Li_{3*x*}TiO₃ ($x = 0.05$), conducting Li ions, crystal structure, **166**, 67
 La_{1-*x*}A_{*x*}MnO_{3± δ} ($A = \text{Ca, Sr}$), enthalpy of formation, measurement by high-temperature solution calorimetry, **163**, 186
 LaMnO_{3+ δ}
 doped with Sn, low-temperature phase formation, **168**, 100
 excess oxygen in, **163**, 65
 (La_{1-*x*}Nd_{*x*})_{0.7}Sr_{0.3}MnO₃, structural, magnetic, and electrical properties, effects of *A* cation size, **163**, 466
- La_{0.3}Sr_{0.7}Fe_{1-*x*}Ga_{*x*}O_{2.65+ δ} , oxygen nonstoichiometry, conductivity, and Seebeck coefficient, **167**, 203
 La_{0.63}(Ti_{0.92}Nb_{0.08})O₃, orthorhombic–tetragonal phase transition, high-temperature synchrotron X-ray powder diffraction study, **164**, 51
 La_{2/3}TiO₃ derivatives, structure and impedance spectroscopy, **163**, 472
 LuBaCuFeO_{5+ δ} , low-temperature magnetic properties, **166**, 251
 Mn-site-doped manganites, magnetic field-induced step-like transitions in, **165**, 6
 Na_{1-*x*}Sr_{*x*}NbO₃ ($0.1 \leq x \leq 0.9$), structure and properties, **167**, 7
 ANi_{0.98}Fe_{0.02}O₃ ($A = \text{Pr, Nd, Sm, Y, Lu, Tl}$) doped with ⁵⁷Fe, Mössbauer spectroscopy at varying temperatures, **168**, 126
 Pb(Fe_{2/3}W_{1/3})O₃–PbTiO₃ relaxor ferroelectric system, phase diagram and phase transitions, **163**, 484
 PbTiO₃, ferroelectric–paraelectric phase transition, pressure and temperature dependence, **167**, 446
 Pr_{0.5}Sr_{0.5}MnO₃, magnetoresistance properties, effect of quenching, **165**, 375
 quadruple and quintuple, ionically compensated layered cuprates with Ti blocking layers, defect analysis, **164**, 188
 SeCu_{1-*x*}Zn_{*x*}O₃ ($0 \leq x \leq 1$), crystal chemistry and magnetic properties, **168**, 149
 Sr₃CuRhO₆ and Sr₃NiRhO₆ one-dimensional oxides, magnetic behavior as function of structure, **164**, 220
 Sr_{1-*x*}La_{*x*}Ti_{1-*x*}Cr_{*x*}O₃, structure and conductivity, **165**, 381
 Sr_{4/3}(Mn_{2/3}Ni_{1/3})O₃, magnetic susceptibility and spin exchange interactions, **163**, 513
 Sr₂MnO_{3.5+*x*} reduced single-layer compound, synthesis and characterization, **167**, 145
 Sr(Sr_{1/3}Nb_{2/3})O₃, complex polymorphic behavior and dielectric properties, **166**, 24
 TmBaCuFeO_{5+ δ} , low-temperature magnetic properties, **166**, 251
 RE_{*x*}WO₃ bronzes, X-ray and electron microscopy studies, **167**, 412
 RE_{*x*}WO_{3+*y*} ($RE = \text{La, Nd}$) tungsten bronze-related phases, formation of, effects of pressure and temperature, **168**, 284
 YMe_{*x*}Mn_{1-*x*}O₃ ($Me = \text{Cu, Ni, Co}$), structural characterization, **163**, 377
- Phase analysis
 ceria-lanthana-based TWC promoters prepared by sol–gel routes, **163**, 527
- Phase diagram
 Ba_{1-*x*}La_{*x*}Ti_{1-*x*}Cr_{*x*}O₃ complex perovskites, **164**, 98
 CaO–Al₂O₃–CoO system, **166**, 191
 ferrocene, (*p*, *T*) diagram: trimorphism and overall metastability of triclinic phase, **164**, 131
 Gd–Mn–O system, **166**, 285
 Pb(Fe_{2/3}W_{1/3})O₃–PbTiO₃ relaxor ferroelectric system, **163**, 484
 Sc_{4.5-*x*}B_{57-*y*+*z*}C_{3.5-*z*} ($x = 0.27, y = 1.1, z = 0.2$), **168**, 192
 Si–Yb system, **163**, 178
- Phase equilibrium
 ferrocene: trimorphism and overall metastability of triclinic phase, **164**, 131
 Gd–Mn–O system at 1100°C, **166**, 285
 Sm–Mn–O system at 1100°C, **167**, 160
 subsolidus, in CaO–Al₂O₃–CoO system, **166**, 191
- Phase relations
 Li₂O–Al₂O₃–B₂O₃ system, **165**, 187
- Phase separation
 magnetic field-induced step-like transitions in Mn-site-doped manganites, **165**, 6
- Phase transition
 alkali perchlorates: order–disorder transitions, **163**, 294
 aluminosilicate wet gel to solid state, **165**, 111
 Ba₂In₂O₅, **164**, 119
 BICOVOX and BICUVOX, associated time-dependent degradation of conductivity below 500°C, **163**, 224

- Bi₄MO₈X (X = Cl, M = Ta; X = Br, M = Ta, Nb) layered intergrowth phases, **166**, 148
- Bi_{0.85}Ln_{0.15}(1–*n*)V_{0.15*n*}O_{1.5+0.15*n*}, **163**, 300
- (2,5-diiododicyanoquinondiimine)₂M (M = Ag, Li, Cu): temperature-dependent vibronic and vibrational IR absorptions, **168**, 632
- displacive, in Fe-doped CaTiO₃ perovskites, high-temperature neutron diffraction study, **167**, 459
- ferroelectric–paraelectric, in PbTiO₃, pressure and temperature dependence, **167**, 446
- four-layer Aurivillius-type ferroelectrics SrBi₄Ti₄O₁₅ and Bi₅Ti₃FeO₁₅, **164**, 280; *erratum*, **166**, 449
- K₂Na[Ag(CN)₂]₃, **168**, 267
- La₂W_{2–*x*}Mo_{*x*}O₉ series, **167**, 80
- LiCoO₂ at 400°C, **168**, 60
- LiIn cubic Zintl phase into tetragonal structure at low temperature, **167**, 1
- methanol in solid state, **166**, 415
- (NH₄)₂₁[H₃Mo₅₇V₆(NO)₆O₁₈₃(H₂O)₁₈]·53H₂O, **165**, 199
- (NH₄)₃H(SO₄)₂, **165**, 136
- REOCl (RE = La–Nd, Sm–Ho, Y), **165**, 48
- orthorhombic–tetragonal, La_{0.63}(Ti_{0.92}Nb_{0.08})O₃, high-temperature synchrotron X-ray powder diffraction study, **164**, 51
- Pb(Fe_{2/3}W_{1/3})O₃–PbTiO₃ relaxor ferroelectric system, **163**, 484
- poly(hydroxymethyl) grouping-containing crystals, **164**, 301
- SnP₂O₇, **166**, 42
- spontaneous, MTN-type zeolite with tetragonal symmetry, **164**, 19
- β-SrGaBO₄ formation from α-SrGaBO₄, **165**, 119
- Sr₂SnO₄, high-resolution neutron powder diffraction study, **169**, 208
- in whitlockite-type phosphate Ca₉In(PO₄)₇ at high temperature, **165**, 278
- WO₃, crystallite nanosize effect in, Raman spectroscopic study, **167**, 425
- YMe_{*x*}Mn_{1–*x*}O₃ (Me = Cu, Ni, Co) perovskites, **163**, 377
- ZnCr₂O₄ spinel, induced by high pressure, Raman spectroscopic study, **165**, 165
- o*-Phenanthroline
- [(CuCl)₂(*o*-phen)]_∞ chainlike hybrid complex, hydrothermal synthesis and structure, **167**, 402
- [V₄VO₁₀(phen)₂] one-dimensional ladder-like chain complex, hydrothermal synthesis and crystal structure, **163**, 10
- Phenol
- hydroxylation, catalytic activity of [As₂V₈^{IV}V₂^VO₂₆(H₂O)]·8H₂O for, **169**, 160
- Phenotellurazines
- substituted, fullerenes C₆₀ and C₇₀ in molecular complexes with, preparation, crystal structures, and characterization, **168**, 474
- Phenyl groups
- dication salts of phenyl-substituted TTF vinylogues, preparation and structures, **168**, 427
- Phosphomolybdic acid
- thermochromic organomodified silica composite films containing, preparation and characterization, **166**, 259
- Phosphorus
- AlGaPON mixed nitrided galloaluminophosphates, structural analysis by EELS, XAS, and XPS, **163**, 163
- AlPO₄-5/laser dye composites, host–guest interactions and laser activity in, **167**, 302
- [Al₃P₄O₁₆][(CH₃)₂NHCH₂CH₂NH(CH₃)₂][H₃O], synthesis and characterization, **167**, 282
- aluminophosphate open framework materials, crystallization from fluoride media, cyclam as structure-directed agent in, **167**, 267
- Au₂HgP₂, Au₂PbP₂, and Au₂TlP₂, with Hg, Pb, and Tl in oxidation state zero, preparation and crystal structure, **165**, 238
- BiMn₂PO₆, synthesis and structure, **167**, 245
- Bi₂PbMnO₄(PO₄)₂, crystal structure, **165**, 324
- Bi_{~1.2}M_{~1.2}PO_{5.5} (M = Mn, Co, Zn) disordered compounds, crystal structure, role of oxygen-centered tetrahedra linkage, **167**, 168
- Ca₉In(PO₄)₇ whitlockite-type phosphate, high-temperature phase transition, **165**, 278
- CdPS₃, exfoliated single layers and restacked films, **166**, 421
- C₅H₁₂NPO₄H₂, synthesis and crystal structure, **161**, 307; *erratum*, **168**, 714
- [C₂N₂H₁₀][Co_{4.2}Zn_{1.8}(PO₄)₄(HPO₄)]·H₂O, template synthesis and structure, **166**, 369
- [C₆N₂H₁₄][Fe^{III}F₂(HPO₄)₂(H₂PO₄)₂]·2H₂O open framework with one- and three-dimensional structures, synthesis, **165**, 334
- [C₆N₂H₁₄]₂[Fe^{III}(OH)F₃(HPO₄)₂]·2H₂O open framework with one- and three-dimensional structures, synthesis, **165**, 334
- (CN₃H₆)₂·Zn₃(HPO₃)₄·H₂O, synthesis and structure, **167**, 337
- [C₆N₄H₂₂][ZnPO₄]₄ with open framework, synthesis and structure, **165**, 182
- Cs₂MP₃O₁₀ (M = Ga, Al, Cr), synthesis and layer structure, **167**, 258
- Cu₂UO₂(PO₄)₂ built up from [CuO₂]_∞ chains, synthesis, structure, and magnetic properties, **165**, 89
- EuMn₂P₂ single crystals, synthesis and magnetic and electronic properties, **163**, 498
- [Fe(H₂O)(O₃P–CH₂–CO₂)], hydrothermal synthesis, structure, and magnetic properties, **164**, 354
- Fe₄(P₂O₇)₃, crystal structure structure refinement and magnetic properties, neutron diffraction and Mössbauer studies, **163**, 412
- Fe₃P₅SiO₁₉, crystal structure and magnetic properties, neutron diffraction and Mössbauer studies, **164**, 71
- H₃N(CH₂)₃NH₃·Zn₃(HPO₃)₄·H₂O, synthesis and structure, **167**, 337
- 1-hydroxy-1-phosphono-pentyl-phosphonic acid dimethyl ammonium salt, crystal structure, neutron diffraction study, **167**, 441
- iron diphosphonates, structures and magnetic properties, **164**, 367
- K₃(VO₂)₂PO₄PO₃OH·H₂O, tape-like structure, **163**, 534
- α-Li₄Zn(PO₄)₂ and high-temperature polymorph β-Li₄Zn(PO₄)₂, hydrothermal synthesis and structure, **166**, 341
- Mn₇(HOPO₃)₄(XO₄)₂, hydrothermal synthesis, spectroscopy, and magnetic behavior, **165**, 171
- (Na_{1–*x*}Li_{*x*})CdIn₂(PO₄)₃ solid solution (x = 0–1), crystal chemistry of Li in alluaudite structure, **163**, 194
- Na₂M₃(PO₄)₃ with alluaudite structure, electrical behavior, **168**, 208
- ANb₂PS₁₀ (A = Na, Ag) one-dimensional metal thiophosphates, crystal and electronic structures, **168**, 119
- [NH₃(CH₂)_{*x*}NH₃][Ga₄(PO₄)_{*y*}(HPO₄)] (x = 4,5; y = 1,4), synthesis and properties, **167**, 17
- [NH₃(CH₂)_{*n*}NH₃][Sb{CH₃C(O)(PO₃)₂}] (n = 4,5) one-dimensional diphosphonates, synthesis and characterization, **168**, 263
- (NH₄)In(OH)PO₄
- with spiral chains of InO₄(OH)₂, hydrothermal synthesis and crystal structure, **165**, 209
- synthesis and crystal structure, **166**, 362
- Ni₁₀Sn₅P₃, crystal structure, **166**, 352
- M₂(O₃PCH₂C₆H₄CH₂PO₃)·2H₂O (M = Mn, Ni, Cd), hydrothermal synthesis and characterization, **167**, 330
- open-framework Co(II) phosphates with sodalite-related architectures, **167**, 344
- Pb₆Ca₂Li₂(PO₄)₆ apatite, conductivity and structure, **166**, 237
- Pb_{*x*}Ca_{10–*x*}(PO₄)₆(OH)₂ (X = 0–1) solid solutions, preparation by wet method using acetamide, **163**, 27
- Pb₃(MoO₃)(PO₄)₅, synthesis and tunnel structure, **163**, 308
- PF₆[–], MDSe-TSF-based conductive radical cation salts with, synthesis, structures, and conductive properties, **168**, 582
- SnP₂O₇, structure and phase transitions, **166**, 42
- Sr_{1.9}Cu_{4.1}(PO₄)₄, Sr₂Cu(PO₄)₂, Sr₃Cu₃(PO₄)₄, and Sr_{9.1}Cu_{1.4}(PO₄)₇, synthesis and powder XRD, **163**, 121
- Sr₃(PO₄)₂:RE (RE = Ce, Sm, Eu, Tb), VUV–UV photoluminescence spectra, **167**, 435
- Sr₉A(PO₄)₇ (A = Sc, Cr, Fe, Ga, In) Whitlockite-type phosphates, synthesis and characterization, **168**, 237
- thio-LISICON, synthesis, **168**, 140

- Tl_{1-x}Na_xNb₂PO₈ and related compounds, structural comparison with Ca_{0.5+x}Cs₂Nb₆P₃O₂₄ and physical properties, **164**, 272
 (UO₂)₃(PO₄)₂(H₂O)₄, crystal structure, **163**, 275
 A₂(UO₂)[(UO₂)(PO₄)₄](H₂O)₂ (A = Cs, Rb, K), crystal structures, **167**, 226
 M_xVOPO₄·yH₂O (M = H, Na, K, Rb, Cs), ion-exchange properties, **163**, 281
 VOPO₄·2H₂O intercalation compound, synthesis by reaction at room temperature, **166**, 277
 zirconium aryldiphosphonates with high porosity, preparation and conversion to strong Brønsted acids, **167**, 376
 Zn₂(OH)_{0.14(3)}F_{0.86(3)}(PO₄), hydrothermal synthesis, single-crystal structure, and solid-state NMR, **164**, 42
 Zn₆(PO₄)₅(HPO₄)·C₈N₅H₂₈·5H₂O intercalated with quintuply protonated tetraethylenepentamine, synthesis and structure, **166**, 265
 Zn₄P₃O₁₁(OH)·3C₃N₂H₄, synthesis and structure, **163**, 364
 ZrCuSiP, structure and electrical transport properties, **165**, 372
- Photoacoustics
 Zintl compounds K₄Sn₂Se₆, K₄Sn₃Se₈, Na₄SnSe₄, and molecular Sn–Se oligomers, **165**, 125
- Photocatalytic oxidation
 C₇H₁₆–O₂, SO₂–O₂, and C₇H₁₆–SO₂–O₂ systems for, TiO₂ nanoparticle deactivation and regeneration in, **166**, 395
- Photochromic nanocomposite thin films
 based on polyoxometalates dispersed in polyacrylamide, sonochemical preparation, **169**, 1
- Photodecomposition
 methyl orange by TiO₂/SnO₂ nanocrystals, **165**, 193
- Photoexcitation
 fullerenes C₆₀ and C₇₀ in molecular complexes with saturated amines, **168**, 474
- Photoluminescence spectroscopy
 VUV–UV, strontium orthophosphate doped with rare earth ions, **167**, 435
- Physical vapor deposition
 low stress cubic BN film preparation, **167**, 420
- π–d interaction
 conducting molecular magnets based on TTF derivatives, **168**, 547
 insulating BEDT–TTF salts, **168**, 433
 TPP[M(Pc)(CN)₂]₂ (M = Fe, Co, Fe_{0.30}Co_{0.70}) salts, **168**, 509
- π-electron donor
 molecular conductors based on TMEO–ST–TTP, **168**, 608
 organic, and inorganic metal complexes, hybrid molecular materials based on, **168**, 616
- Piezoelectricity
 GeO₂ with α-quartz-type structure, **166**, 434
- Plasma resonance frequency
 Bi_{2-x}Sb_xSe₃ crystals, **165**, 35
- Platinum
 R₂Ba₂CuPtO₈ (R = Ho, Er, Tm, Yb, Lu, Y), magnetic behavior, **165**, 297
 Dy₂Pt₇In₁₆, complex 3-D Pt–In networks in, **169**, 118
 EuPtIn, decomposition at high temperature and pressure: formation of hexagonal Laves phase EuPt_{0.56}In_{1.44}, **169**, 155
 GdPtMg, structure and properties, **168**, 331
 Pb_{1-x}Bi_xPt₂O₄ (0 ≤ x ≤ 0.3), synthesis, electrical properties, and powder neutron crystal structure refinement, **166**, 58
 Pt/Al₂O₃ catalysts prepared by sol–gel, thermal stability, **168**, 343
 LnPtBi, preparation and structure, **168**, 18
 Pt(dddt)₂ bithiolenecation complexes, synthesis, structure, and properties, **168**, 464
 [Pt(mnt)₂]^{m-}, and BMDT–TTF and EDT–TTF, charge transfer solids based on, conducting and magnetic properties, **168**, 563
 Tb₆Pt₁₂In₂₃, complex 3-D Pt–In networks in, **169**, 118
- Polarized electronic spectroscopy
 Nd³⁺:YAB, **167**, 386
 vanadium-doped zircon, theoretical study, **169**, 6
- Polarized reflectance spectra
 two-dimensional organic metal (EO–TTP)₂AsF₆, **168**, 497
- Pole-figure analysis
 Fe_{3-x}O₄ (111)-oriented epitaxial films prepared on α-Al₂O₃ (0001) substrates, **163**, 239
- Polyacrylamide
 polyoxometalates dispersed in, photochromic nanocomposite thin films based on, sonochemical preparation, **169**, 1
- Polyaminocarboxylate ligands
 heteronuclear Bi–La and Bi–Pr complexes and complexes with Bi(III), La(III), Pr(III), synthesis and spectroscopic studies, **167**, 494
- Polymer curing agents
 α,ω-diamines, in formation of thermoset epoxy–clay nanocomposites, **167**, 354
- Polymers
 systems with branching/crosslinking, mechanical resistance and stability of, theoretical modeling, **164**, 237
- Poly-*o*-methoxyaniline
 intercalated into V₂O₅ xerogel, synthesis, characterization, and conductivity studies, **168**, 134
- Polymethylated [4.1.1] octanes
 zeolite SSZ-50 synthesis with, **167**, 289
- Polyoxometalates
 dispersed in polyacrylamide, photochromic nanocomposite thin films based on, sonochemical preparation, **169**, 1
- Polysynthetic twinning
 in NaBa₂M₂⁺M³⁺O₆ (M = Ni, Cu), **165**, 214
 RbIn₃S₅, **167**, 214
- Polyurethane
 hyperbranched, room-temperature synthesis and characterization of Ag₂S nanocrystals in, **168**, 259
- Potassium
 KAg₄I₅ superionic phases, crystal structure and ionic conductivity, **165**, 363
 KClO₄, order–disorder phase transitions, **163**, 294
 KCu₄I₅ superionic phases, crystal structure and ionic conductivity, **165**, 363
 KLnFe(II)(CN)₆·xH₂O (Ln = La–Lu), characterization and thermal evolution, **167**, 34
 K–In–Bi systems, Zintl phases in, synthesis and structure, **163**, 436
 K_{0.28}MoO₃ blue bronze, hydrothermal synthesis, **164**, 81
 K₃MoO₃F₃, superlattice ordering in, electron diffraction and XRPD study, **163**, 267
 K₂MoO₂(IO₃)₄ and β-KMoO₃(IO₃), hydrothermal preparation and structure, **166**, 442
 K_x(Mo, V)₈O₂₁ bronze with tunnel structure, synthesis and crystal structure, **163**, 210
 K₂Na[Ag(CN)₂]₃, reversible luminescence thermochromism and role of structural phase transitions, **168**, 267
 K_{1-x}Sn_{9-x}Bi_{11+x}Se₂₆, composition and structure prediction based on phase homologies, **167**, 299
 K₄Sn₂Se₆ and K₄Sn₃Se₈ Zintl compounds, microwave-assisted preparation, morphology, and photoacoustics, **165**, 125
 K₂(UO₂)[(UO₂)(PO₄)₄](H₂O)₂, crystal structure, **167**, 226
 K_xVOPO₄·yH₂O, ion-exchange properties, **163**, 281
 K₃(VO₂)₂PO₄PO₃OH·H₂O, tape-like structure, **163**, 534
- Powder neutron diffraction
 Ba₂In₂O₅ and Ba(In_xZr_{1-x})O_{3-x/2}, **164**, 119
 LnBa₂Mn₂Cu₂O_{12±y} (Ln = Sm, Eu), **167**, 237
 BaTbO₃, **165**, 393
 Bi₃^(III)Bi^(V)O₇, high-resolution structural studies, **163**, 332
 Bi₆Cr₂O₁₅ containing (Bi₁₂O₁₄)_n⁸ⁿ⁺ columns and CrO₄²⁻ tetrahedra, **163**, 144
 Bi_{2.5}Na_{0.5}Ta₂O₉ and Bi_{2.5}Na_{m-1.5}Nb_mO_{3m+3} (m = 2–4), **167**, 86

- Bi_{0.775}Ln_{0.225}O_{1.5} (Ln = La, Pr, Nd, Sm, Tb, Dy) of rhombohedral Bi–Sr–O type: structural relationship to monoclinic ϵ -Bi_{4.86}La_{1.14}O₉, **168**, 91
- Bi₄MO₈X (X = Cl, M = Ta; X = Br, M = Ta, Nb) layered intergrowth phases, **166**, 148
- Bi_{2–x}M_xRu₂O_{7–y} (M = Cu, Co; x = 0, 0.4) pyrochlores: static disorder from lone pair electrons, **169**, 24
- Bi₃SbO₇, high-resolution structural studies, **163**, 332
- Ca₁₄MnSb₁₁ zintl compound, **168**, 162
- CaTiO₃ perovskites doped with Fe: displacive phase transitions and strain analysis at high temperatures, **167**, 459
- Fe₄(P₂O₇)₃, **163**, 412
- Fe₃P₅SiO₁₉, **164**, 71
- four-layer Aurivillius-type ferroelectrics SrBi₄Ti₄O₁₅ and Bi₅Ti₃FeO₁₅, **164**, 280; *erratum*, **166**, 449
- K₂Na[Ag(CN)₂]₃, **168**, 267
- La₂(GeO₄)O and alkaline-earth-doped La_{9.33}(GeO₄)₆O₂, **168**, 294
- La_{2/3–x}Li_{3x}TiO₃ (x = 0.05) perovskite conducting Li ions: crystal structure, **166**, 67
- La_{2/3}TiO₃ derivatives, **163**, 472
- LiFe_{1–x}Co_xO₂ (0 ≤ x ≤ 1), high-resolution structural study, **163**, 406
- Li₂M(II)Sn₃O₈ (M(II) = Mn, Zn): cation ordering, **169**, 44
- local uranium environment in cesium uranates, **166**, 320
- methanol in solid state, **166**, 415
- β -Na_xCoO₂, **166**, 177
- Pb_{1–x}Bi_xPt₂O₄ (0 ≤ x ≤ 0.3), **166**, 58
- SnP₂O₇: structure and phase transitions, **166**, 42
- Sr₂MnO_{3.5+x} reduced single-layer compound, **167**, 145
- Sr₂SnO₄, high-resolution structural study, **169**, 208
- Sr(Sr_{1/3}Nb_{2/3})O₃, **166**, 24
- thermal stability of α -quartz-type structure in GeO₂, **166**, 434
- U_{1–x}M_xTi₂O₆ (M = Ca²⁺, La³⁺, Gd³⁺), **165**, 261
- Powder X-ray diffraction, *see also* Synchrotron X-ray powder diffraction
- Ag₅Pb_{2–x}Cu_xO₆ (0.0 ≤ x < 0.5), **163**, 151
- Bi₃^(III)Bi^(V)O₇, high-resolution structural studies, **163**, 332
- Bi₃SbO₇, high-resolution structural studies, **163**, 332
- Bi_{0.85}Ln_{0.15(1–n)}V_{0.15n}O_{1.5+0.15n}, **163**, 300
- Ca₂Co_{0.8}Ga_{1.2}O_{4.8}, **167**, 196
- Ca₂M³⁺(OH)₆Cl·2H₂O (M³⁺ = Al³⁺, Ga³⁺, Fe³⁺, Sc³⁺), **167**, 137
- CeO_{2–γ}-Al₂O₃ mixed oxides, **169**, 113
- Cs₂MP₃O₁₀ (M = Ga, Al, Cr), **167**, 257
- γ-Fe₂O₃: vacancies ordering and lattice parameters, **163**, 459
- Ho_{0.5}Sr_{0.5}MnO₃: strained structure, **165**, 65
- K₃MoO₃F₃: superlattice ordering in elpasolite-related oxyfluoride, **163**, 267
- LiCoO₂: structural stability at 400°C, **168**, 60
- Li_xMg_{0.857–x}Cu_{2.143}O_{3–y}, **168**, 85
- Mg_{1–x}Mn_xMn₂O_{4±δ} spinels, **166**, 171
- (Na_{1–x}Li_x)CdIn₂(PO₄)₃ solid solutions (x = 0–1), **163**, 194
- natural tapiolite: coexistence of trirutile and rutile phases, **163**, 218
- Na_{1.5}Y_{1.5}F₆: high-pressure behavior of hexagonal phase, **165**, 159
- Ni_xMg_{6–x}MnO₈ active materials for negative electrodes of lithium-ion cells, **166**, 330
- Ni₁₀Sn₅P₃, **166**, 352
- REOCl (RE = La–Nd, Sm–Ho, Y), **165**, 48
- M₂(O₃PCH₂C₆H₄CH₂PO₃)·2H₂O (M = Mn, Ni, Cd), **167**, 330
- rare-earth tungsten bronzes, **167**, 412
- SnP₂O₇: structure and phase transitions, **166**, 42
- Sr₂CoO₂X₂ (X = Cl, Br), **168**, 1
- Sr_{1.9}Cu_{4.1}(PO₄)₄, Sr₂Cu(PO₄)₂, Sr₃Cu₃(PO₄)₄, and Sr_{9.1}Cu_{1.4}(PO₄)₇, **163**, 121
- β -SrGaBO₄: *ab initio* structure determination, **165**, 119
- (UO₂)₃(PO₄)₂(H₂O)₄, **163**, 275
- V⁴⁺-ZrO₂ tetragonal solid solutions obtained from gels, **163**, 33
- RE_xWO_{3+y} (RE = La, Nd) tungsten bronze-related phases, **168**, 284
- WO₃-into-zirconia solid solutions in WO₃-ZrO₂ catalysts, **164**, 339
- YB_{17.6}Si_{4.6}, **164**, 361
- Praseodymium
- BaPr(Cu_{0.5}Fe_{0.5})₂O_{5+δ} double perovskites, interplay of Cu and Fe valences, **166**, 118; *erratum*, **168**, 354
- BaPr₂MnS₅, antiferromagnetic ordering in, spin dimer analysis, **169**, 143
- Bi–Pr complexes with polyaminocarboxylate ligands, synthesis and spectroscopic characterization, **167**, 494
- Bi_{0.775}Pr_{0.225}O_{1.5} of rhombohedral Bi–Sr–O type, structural relationship to monoclinic ϵ -Bi_{4.86}La_{1.14}O₉, **168**, 91
- Bi_{0.85}Pr_{0.15(1–n)}V_{0.15n}O_{1.5+0.15n}, stability, conductivity, and powder crystal structure studies, **163**, 300
- Bi_{3.24}Pr₂W_{0.76}O_{10.14} monoclinic compounds with pseudo-orthogonal cell based on pseudo-fcc subcell in Bi₂O₃-Pr₂O₃-WO₃, **169**, 60
- KPrFe(II)(CN)₆·xH₂O, characterization and thermal evolution, **167**, 34
- Pr(III), complexes with polyaminocarboxylate ligands, synthesis and spectroscopic characterization, **167**, 494
- PrTb (T = Rh, Ni, Pd, Pt), preparation and structure, **168**, 18
- PrCrO₄, field-induced magnetic properties, **164**, 313
- PrNi_{0.98}Fe_{0.02}O₃ perovskites doped with ⁵⁷Fe, Mössbauer spectroscopy at varying temperatures, **168**, 126
- PrOCl, stability of, bond valence study, **165**, 48
- Pr₃OsO₇, structures and magnetic properties, **169**, 189
- Pr₃RuO₇, magnetic and calorimetric studies, **164**, 163
- PrTSb (Rh, Ir), preparation and structure, **168**, 18
- PrSn_xSb₂ (x = 0.5, 0.7), magnetic and transport properties, **164**, 292
- Pr_{0.5}Sr_{0.5}MnO₃ perovskite, magnetoresistance properties, effect of quenching, **165**, 375
- Precipitation
- Ce_{1–x}Y_xO_{2–x/2} (0 ≤ x ≤ 0.35) nanocrystals with ammonium carbonate, **168**, 52
- Zn(Fe, Ga)₂O₄ spinel-type solid solutions from aqueous solutions at 90°C, **168**, 5
- Pressure
- effects on formation of tungsten bronze-related phases RE_xWO_{3+y} (RE = La, Nd), **168**, 284
- effects on hexagonal Na_{1.5}Y_{1.5}F₆, **165**, 159
- induction of phase transformation in ZnCr₂O₄ spinel, Raman spectroscopic study, **165**, 165
- induction of structural deformations in SeO₂, **168**, 184
- role in ferroelectric–paraelectric phase transition in PbTiO₃, **167**, 446
- Proton conductivity
- poly(hydroxymethyl) grouping-containing crystals, **164**, 301
- Proton intercalation
- in MnO₂, first principles study, **166**, 91
- Phthalocyanine
- TPP[M(Pc)(CN)₂]₂ (M = Fe, Co, Fe_{0.30}Co_{0.70}) salts, magnetoresistance study, **168**, 509
- p-type doping
- ionically compensated quadruple and quintuple perovskite layered cuprates with Ti blocking layers, **164**, 188
- Pyridinium ions
- hydrogen-bonding, charge carrier doping of Ni(dmit)₂ simple salts, **168**, 535
- 4-(4'-Pyridylthio)-1-methylpyridinium salts
- preparation and crystal structures, **164**, 320
- Pyrochlore
- Bi_{2–x}M_xRu₂O_{7–y} (M = Cu, Co; x = 0, 0.4), static disorder from lone pair electrons in, **169**, 24
- Bi_{1.5}Zn_{0.92}Nb_{1.5}O_{6.92}, structural study, **168**, 69
- Pyrolusite
- MnO₂, H-insertion in, first principles study, **166**, 91

Pyrolysis

preparation of (111)-oriented epitaxial $\text{Fe}_{3-x}\text{O}_4$ films on $\alpha\text{-Al}_2\text{O}_3$ (0001) substrates, **163**, 239

Pyronine-B

sublimation on p-type silicon, rectifying junctions formed by, conductance- and capacitance-frequency characteristics, **168**, 169

Q

 α -Quartz

related structure of GeO_2 , thermal stability of, neutron diffraction study, **166**, 434

Quasiparticles

charge transfer salts, **168**, 675

Quenching

effect on magnetoresistance properties in $\text{Pr}_{0.5}\text{Sr}_{0.5}\text{MnO}_3$ perovskite, **165**, 375

R

Radical recombination

solid state, in indomethacin-SiO₂ composite under mechanical stress, **164**, 27

Raman spectroscopy

$\text{Gd}_3[\text{SiON}_3]\text{O}$ with non-condensed SiON_3 tetrahedra, **167**, 393

$\text{LaNb}_{2-2x}\text{Ta}_{2x}\text{VO}_{9-\delta}$ ($x=0-0.4$) and $\text{LaTa}_{2-2x}\text{Nb}_{2x}\text{VO}_{9-\delta}$ ($x=0-0.1$), effects of oxygen nonstoichiometry, **167**, 73

magnetic/conducting hybrid compound composed of $[\text{Mn}_2^{\text{II}}\text{Cl}_5(\text{EtOH})]$ 1-D chain and BEDT-TTF stacking layer, **168**, 418

methanol in solid state, **166**, 415

$\text{Mn}_7(\text{HOXO}_3)_4(\text{XO}_4)_2$ ($X=\text{As,P}$), **165**, 171

molecular conductors based on $M(\text{ddd})_2$ bithiolenes cation complexes, **168**, 464

N-4-nitrophenyl-L-prolinol nanocrystals, **165**, 25

third-order nonlinear tungstates, relationship to vibrational properties in Raman shifters, **163**, 506

$\text{Ti}_{1-x}\text{Na}_x\text{Nb}_2\text{PO}_8$ and related compounds, **164**, 272

WO_3 structural transitions: effect of crystallite nanosize, **167**, 425

ZnCr_2O_4 spinel at high pressure, **165**, 165

Ramsdellite

MnO_2 , H-insertion in, first principles study, **166**, 91

Rare earth elements

molecular conductors with, crystal and electronic structures, **168**, 457

Rectifying junctions

formed by sublimation of pyronine-B on p-type silicon, conductance- and capacitance-frequency characteristics, **168**, 169

Redox properties

bis(thiazolylidene)hydrazine, effects of sequential nitrogen substitution, **168**, 590

radical salts derived from tetrathiafulvalene dimers, **168**, 597

Relaxor ferroelectric systems

$\text{Pb}(\text{Fe}_{2/3}\text{W}_{1/3})\text{O}_3\text{-PbTiO}_3$, phase diagram and phase transitions, **163**, 484

Relay effect

in dye-sensitized solid-state cell, **166**, 142

Rhodium

4234-type intermetallic borocarbides, synthesis, structures, and magnetic properties, **164**, 246

HfRhGa, X-ray single-crystal studies, **166**, 305

LaRhIn₅, crystal growth and structure, **166**, 245

*Ln*RhBi, preparation and structure, **168**, 18

*Ln*RhSb (*Ln*=Sm,Gd-Tm), preparation and structure, **168**, 18

$\text{Sr}_3\text{CuRhO}_6$ one-dimensional oxides, magnetic properties as function of structure, **164**, 220

$\text{Sr}_3\text{NiRhO}_6$ one-dimensional oxides, magnetic properties as function of structure, **164**, 220

ZrRhGa and ZrRh_{0.710(4)}In, X-ray single-crystal studies, **166**, 305

RTH topology

zeolite SSZ-50 synthesized with polymethylated [4.1.1] octanes, **167**, 289

Rubidium

RbX ($X=\text{Cl,Br}$) incorporated in cadmium oxalate host lattices, synthesis and crystal structure, **167**, 274

RbAg_4I_5 superionic phases, crystal structure and ionic conductivity, **165**, 363

$(\text{RbCl})_{256}$ and $(\text{RbCl})_{500}$ molten clusters, crystal nucleation from, molecular dynamics studies, **165**, 289

RbClO_4 , order-disorder phase transitions, **163**, 294

Rb-In-Bi systems, Zintl phases in, synthesis and structure, **163**, 436

RbIn_3S_5 , polysynthetic twinning in, **167**, 214

$\text{Rb}_x(\text{Mo,V})_8\text{O}_{21}$ bronze with tunnel structure, synthesis and crystal structure, **163**, 210

$\text{Rb}_{1-x}\text{Sn}_{9-x}\text{Bi}_{11+x}\text{Se}_{26}$, composition and structure prediction based on phase homologies, **167**, 299

$\text{Rb}_2(\text{UO}_2)[(\text{UO}_2)(\text{PO}_4)]_4(\text{H}_2\text{O})_2$, crystal structure, **167**, 226

$\text{Rb}_x\text{VOPO}_4 \cdot y\text{H}_2\text{O}$, ion-exchange properties, **163**, 281

rubidium uranyl molybdates, crystal chemistry, **168**, 245

Ruddlesden-Popper phases

$\text{Ba}_n\text{Bi}_{n+m}\text{O}_y$ system, HREM study, **163**, 44

$\text{Sr}_3\text{Fe}_{2-x}\text{Co}_x\text{O}_{7-\delta}$ ($0.25 \leq x \leq 1.75$), $n=2$ phases, electronic, magnetic, and magnetoresistance properties, **166**, 292

$\text{Sr}_3\text{Fe}_{2-x}\text{Ti}_x\text{O}_{6+\delta}$, order-disorder-enhanced oxygen conductivity and electron transport, **168**, 275

Ruthenium

4234-type intermetallic borocarbides, synthesis, structures, and magnetic properties, **164**, 246

$\text{Ba}_2\text{ErRuO}_6$ ordered perovskite, magnetic and calorimetric studies, **169**, 125

$\text{Ba}_3\text{MRu}_2\text{O}_9$ ($M=\text{Y,In,Lu,Sm,Eu,Lu}$) 6H-perovskites, crystal structure and magnetic properties, **165**, 317

$\text{Bi}_{2-x}\text{M}_x\text{Ru}_2\text{O}_{7-y}$ ($M=\text{Cu,Co}$; $x=0,0.4$) pyrochlores, static disorder from lone pair electrons in, **169**, 24

$\text{ACu}_3\text{Ru}_4\text{O}_{12}$ ($A=\text{Na,Ca,Sr,Lu,Nd}$), structure: comparison of XRD-Rietveld and EXAFS results, **167**, 126

La_3RuO_7 fluorite-related phases, magnetic properties, **167**, 182

$\beta\text{-La}_3\text{RuO}_7$ with isolated RuO_6 octahedra, structure and properties, **165**, 359

RuGa_3 semiconducting intermetallic compounds, synthesis and structure, **165**, 94

RuGa_vSn_w , Nowotny chimney ladder phases and 14-electron rule, **164**, 210

$\text{Ru}_3\text{Ge}_{3+x}$ ($0 < x < 1$) chimney-ladder phases, structure, stoichiometry, and properties, **166**, 389

$[\text{RuNOX}_5]^{2-}$ ($X=\text{Br,Cl}$), BEDT-TTF mixed valence radical cation salts with, synthesis, crystal and electronic structures, and transport properties, **168**, 514

Ln_3RuO_7 ($\text{Ln}=\text{Pr,Gd}$), magnetic and calorimetric studies, **164**, 163

Rutile

coexistence with trirutile phases in natural tapiolite, **163**, 218

synthesized at low temperature, crystallography and crystallite morphology, **169**, 176

trivalent vanadium rutile-like chains, $\text{Pb}_2\text{V}^{\text{III}}\text{O}(\text{VO}_4)(\text{V}_2\text{O}_7)_{0.5}$ with, crystal structure, **163**, 519

S

Samarium

$\text{BaSm}(\text{Cu}_{0.5}\text{Fe}_{0.5})_2\text{O}_{5+\delta}$ double perovskites, interplay of Cu and Fe valences, **166**, 118; *erratum*, **168**, 354

$\text{Ba}_3\text{SmRu}_2\text{O}_9$ 6H-perovskites, crystal structure and magnetic properties, **165**, 317

$\text{Bi}_{0.775}\text{Sm}_{0.225}\text{O}_{1.5}$ of rhombohedral Bi-Sr-O type, structural relationship to monoclinic $\epsilon\text{-Bi}_{4.86}\text{La}_{1.14}\text{O}_9$, **168**, 91

$\text{Bi}_{0.85}\text{Sm}_{0.15(1-n)}\text{V}_{0.15n}\text{O}_{1.5+0.15n}$, stability, conductivity, and powder crystal structure studies, **163**, 300

- KSmFe(II)(CN)₆·xH₂O, characterization and thermal evolution, **167**, 34
- lanthanide nitrate complex anions, metallic molecular crystals with magnetism, **168**, 444
- SmBaFe₂O_{5+w}, Verwey transition under oxygen loading, **167**, 480
- SmBa₂Mn₂Cu₂O_{12±y}, structure determination by powder neutron diffraction, **167**, 237
- Sm7Bi (*T* = Rh, Ni, Pd, Pt), preparation and structure, **168**, 18
- Sm–Mn–O system, phase equilibrium at 1100°C, **167**, 160
- SmNi_{0.98}Fe_{0.02}O₃ perovskites doped with ⁵⁷Fe, Mössbauer spectroscopy at varying temperatures, **168**, 126
- SmOCl, stability of, bond valence study, **165**, 48
- Sm₃OsO₇, structures and magnetic properties, **169**, 189
- Sm7Sb (Rh, Ir), preparation and structure, **168**, 18
- SmSn_xSb₂ (*x* = 0.5, 0.7), magnetic and transport properties, **164**, 292
- Sm₂Ti₂S₂O₅, optical properties, **165**, 228
- Sr₃(PO₄)₂·Sm, VUV–UV photoluminescence spectra, **167**, 435
- Scandium
- Bi_{1.5}Pb_{0.5}Ca_{2–x}Sc_x³⁺Co₂O_{8–δ}, thermoelectric properties, **167**, 472
- Ca₂Sc³⁺(OH)₆Cl·2H₂O, X-ray powder diffraction structural study, **167**, 137
- Sc₄T₂B₃C₄ intermetallic borocarbides, synthesis, structures, and magnetic properties, **164**, 246
- Sc_{4.5–x}B_{57–y+z}C_{3.5–z} (*x* = 0.27, *y* = 1.1, *z* = 0.2), phase and crystal structure studies, **168**, 192
- Sc_{0.83–x}B_{10.0–y}C_{0.17+y}Si_{0.083–z} (*x* = 0.030, *y* = 0.36, *z* = 0.026), floating zone crystal growth and structure analysis, **165**, 148
- Sc7Bi (*T* = Ni, Pd), preparation and structure, **168**, 18
- Sc₂O₃–Y₂O₃–ZrO₂–TiO₂ solid solutions, optimization for use as SOFC anode material, **165**, 12
- Sr₉Sc(PO₄)₇ Whitlockite-type phosphates, synthesis and characterization, **168**, 237
- Schottky diodes
- rectifying junctions formed by sublimation of pyronine-B on p-type silicon, **168**, 169
- Second harmonic generation
- Ca₉In(PO₄)₇ whitlockite-type phosphate, **165**, 278
- (NH₄)In(OH)PO₄, **166**, 362
- Seebeck coefficient
- La_{0.3}Sr_{0.7}Fe_{1–x}Ga_xO_{2.65+δ} perovskites, **167**, 203
- Li_xMg_{0.857–x}Cu_{2.143}O_{3–y}, **168**, 85
- Ru₃Ge_{3+x} (0 < *x* < 1) chimney-ladder phases, **166**, 389
- Selected area electron diffraction
- Ni₁₀Sn₅P₃, **166**, 352
- Selenium
- Ag₂Se, synthesis in mixed solvents at room temperature, **167**, 28
- Bi_{2–x}Sb_xSe₃ crystals, free current carrier concentration and point defects, **165**, 35
- bis(ethylenediseleno)tetrathiafulvalene conducting salts with hexacyanoferrate(III) and nitroprusside, synthesis, structure, and characterization, **168**, 616
- bis(ethylenedithio)diselenadithiafulvalene symmetric and unsymmetric salts, positional order and disorder of, **168**, 626
- Cu_{2–x}Se, synthesis in mixed solvents at room temperature, **167**, 28
- Dy₃(SeO₃)₄F, synthesis and crystal structure, **167**, 113
- Er₂(SeO₃)₃, synthesis and crystal structure, **167**, 113
- FeIn₂S₂Se₂ layered compound, magnetic and Mössbauer study, **164**, 326
- K₄Sn₂Se₆ and K₄Sn₃Se₈ Zintl compounds, microwave-assisted preparation, morphology, and photoacoustics, **165**, 125
- methylenediselenotetrathiafulvalene-based conductive radical cation salts, synthesis, structures, and conductive properties, **168**, 582
- molecular conductors
- with rare-earth elements, crystal and electronic structures, **168**, 457
- TMEO-ST-TTP-based, structure and transport properties, **168**, 608
- Na₄SnSe₄ Zintl compounds, microwave-assisted preparation, morphology, and photoacoustics, **165**, 125
- [Ni(dsit)₂]₂^{2–}, conducting molecular solid based on, anion packing in, **168**, 653
- organic synthetic metals, dimensionality and electrical properties, **168**, 367
- SeCu_{1–x}Zn_xO₃ (0 ≤ *x* ≤ 1) perovskites, crystal chemistry and magnetic properties, **168**, 149
- SeO₂, pressure-induced structural deformations, **168**, 184
- A_{1–x}Sn_{9–x}Bi_{11+x}Se₂₆ (*A* = K, Rb, Cs), composition and structure prediction based on phase homologies, **167**, 299
- Sn–Se Zintl molecular oligomers, microwave-assisted preparation, morphology, and photoacoustics, **165**, 125
- Sr[(UO₂)(SeO₃)₂]·2H₂O, variable dimensionality and topology, **168**, 358
- tetrathiafulvalene-based charge transfer salts with anions containing selenocyanate ligands, synthesis, crystal structures, and physical properties, **168**, 573
- AE[(UO₂)(SeO₃)₂] (*AE* = Ca, Ba), variable dimensionality and new topologies, **168**, 358
- Selenocyanate ligands
- anions containing, TTF-based charge transfer salts with, synthesis, crystal structures, and physical properties, **168**, 573
- Self-purification
- β-In₂S₃ dendrites synthesized in situ via oxidization–sulfidation route, **166**, 336
- Semiconductors
- FeGa₃ intermetallic compounds, synthesis and structure, **165**, 94
- β-FeSi₂, doped with impurities, geometrical and electronic structure, first-principle calculation, **163**, 248
- Ni(dmit)₂ simple salts doped with hydrogen-bonding pyridinium cations, preparation and characterization, **168**, 535
- rectifying junctions formed by sublimation of pyronine-B on p-type silicon, **168**, 169
- RuGa₃ intermetallic compounds, synthesis and structure, **165**, 94
- A_{1–x}Sn_{9–x}Bi_{11+x}Se₂₆ (*A* = K, Rb, Cs), composition and structure prediction based on phase homologies, **167**, 299
- wurtzite CdS and ZnS nanorods, synthesis from coordination polymer, **166**, 49
- Shear structure
- crystallographic, perovskite-derived, PbMnO_{3–x} high-pressure phase with, **169**, 131
- α-Sialon
- materials doped with Tb, Ce, or Eu, luminescence properties, **165**, 19
- Silicon
- aluminosilicate wet gel, transformation to solid state, **165**, 111
- CaZn₂Si₂, synthesis and characterization, **167**, 107
- [Cu(en)₂]₄[SiMo₈V₄O₄₀(V^{IV}O)₂][MoO₄]₂·5H₂O, hydrothermal synthesis and crystal structure, **165**, 1
- EuZn₂Si₂ grown from Zn or Ga(In)/Zn flux, crystal structure and electrical and magnetic properties, **163**, 37
- Fe₃P₅SiO₁₉, crystal structure and magnetic properties, neutron diffraction and Mössbauer studies, **164**, 71
- β-FeSi₂ semiconductors doped with impurities, geometrical and electronic structure, first-principle calculation, **163**, 248
- β-Fe(Si_{2–x}Ge_x), electronic structure, **169**, 19
- Gd₃[SiON₃]₃O with non-condensed SiON₃ tetrahedra, synthesis, crystal structure, magnetism, and optical properties, **167**, 393
- indomethacin–SiO₂ composite under mechanical stress, solid state radical recombination and charge transfer across boundary between, **164**, 27
- Na–RUB-29 ion-exchanged microporous lithosilicate, synchrotron X-ray single-crystal diffraction and ⁶Li MAS NMR, **167**, 310
- p-type, rectifying junctions formed by pyronine-B on, conductance– and capacitance–frequency characteristics, **168**, 169

- Sc_{0.83-x}B_{10.0-y}C_{0.17+y}Si_{0.083-z} ($x=0.030, y=0.36, z=0.026$), floating zone crystal growth and structure analysis, **165**, 148
- α -sialon materials doped with Tb, Ce, or Eu, luminescence properties, **165**, 19
- SiO₂, nanocrystalline CeO₂ supported on, structure evolution, effect of temperature and atmosphere, **168**, 110
- Si–Yb system, constitution, crystal chemistry, and physical properties, **163**, 178
- Sr₃Al₁₀SiO₂₀, synthesis and structural characterization by XRD and solid-state NMR, **169**, 53
- Sr₂TiSi₂O₈, crystal structure, **166**, 15
- thermochromic organomodified silica composite films containing phosphomolybdic acid, preparation and characterization, **166**, 259
- thio-LISICON, synthesis, **168**, 140
- Yb_{1-y}Al_{3-x}Si_x, homoatomic clustering in, **163**, 113
- YB_{17.6}Si_{4.6}, synthesis and crystal structure, **164**, 361
- ZrCuSiP, structure and electrical transport properties, **165**, 372
- ZrSiO₄–MgCa(CO₃)₂ reactions, monitoring by neutron thermogravimetry, **166**, 426
- Silver**
- AgI, ordered nanoclusters inside zeolite host, ordered luminescence, **169**, 81
- REAgMg ($RE=La, Ce, Eu, Yb$), magnetic and electrical properties, ¹⁵¹Eu Mössbauer spectroscopy, and chemical bonding, **164**, 201
- AgNb₂PS₁₀ one-dimensional metal thiophosphates, crystal and electronic structures, **168**, 119
- Ag₂O, mechanochemical reaction with V₂O₅ to form crystalline silver vanadates, **169**, 139
- Ag₂O–V₂O₅ system, mechanochemically treated, reactivity and structure in relation to AgVO₃ polymorphs, **164**, 144
- Ag₃Pb_{2-x}Cu_xO₆ ($0.0 \leq x < 0.5$), synthesis, characterization, and electrical properties, **163**, 151
- Ag₂S nanocrystals, synthesis and characterization in hyperbranched polyurethane at room temperature, **168**, 259
- Ag₂Se, synthesis in mixed solvents at room temperature, **167**, 28
- Ag₂Te, synthesis in mixed solvents at room temperature, **167**, 28
- AgVO₃ polymorphs, relationship to reactivity and structure of mechanochemically treated Ag₂O–V₂O₅ system, **164**, 144
- Ag₄V₂O₇ crystals, mechanochemical synthesis by reaction of Ag₂O and V₂O₅, **169**, 139
- (2,5-diiododicyanoquinondiimine)₂Ag, phase transition: temperature-dependent vibronic and vibrational IR absorptions, **168**, 632
- GdAgMg, structure and properties, **168**, 331
- KAg₄I₅ superionic phases, crystal structure and ionic conductivity, **165**, 363
- K₂Na[Ag(CN)₂]₃, reversible luminescence thermochromism and role of structural phase transitions, **168**, 267
- RbAg₄I₅ superionic phases, crystal structure and ionic conductivity, **165**, 363
- Simulated annealing**
- solution of low-temperature crystal structure of S-camphor from powder synchrotron X-ray diffraction, **163**, 253
- Sintering**
- Pt/Al₂O₃ catalysts prepared by sol–gel, **168**, 343
- rutile synthesized at low temperature, **169**, 176
- Small angle X-ray scattering**
- aluminosilicate wet gel transformation to solid state, **165**, 111
- Sodalite**
- related open-framework Co(II) phosphates, hydrothermal synthesis and structure, **167**, 344
- Sodium**
- Bi_{2.5}Na_{0.5}Ta₂O₉ and Bi_{2.5}Na_{m-1.5}Nb_mO_{3m+3} ($m=2-4$), neutron powder diffraction and electron microscopy structural studies, **167**, 86
- K₂Na[Ag(CN)₂]₃, reversible luminescence thermochromism and role of structural phase transitions, **168**, 267
- Li_{2-x}Na_xMgCl₄ fast ionic conducting spinel-type chloride, ⁶Li and ⁷Li MAS NMR studies, **165**, 303
- NaBa₂M₂⁺M³⁺O₆ ($M=Ni, Cu$), polysynthetic twinning characterization and crystallographic refinement, **165**, 214
- β -Na₂B₈O₁₃, crystal structure, **168**, 316
- Na_{6.45}Ca_{3.55}(SO₄)₆(F_xCl_{1-x})_{1.55}, crystal structure, **163**, 398
- NaClO₄, order–disorder phase transitions, **163**, 294
- β -Na_xCoO₂, crystal structure and electric and magnetic properties, **166**, 177
- NaCu₃Ru₄O₁₂, structure: comparison of XRD-Rietveld and EXAFS results, **167**, 126
- Na₄FeO₄, synthesis and crystal and magnetic structures, neutron diffraction and Mössbauer studies, **165**, 266
- Na–In–Bi systems, Zintl phases in, synthesis and structure, **163**, 436
- (Na_{1-x}Li_x)CdIn₂(PO₄)₃ solid solution ($x=0-1$), crystal chemistry of Li in alluaudite structure, **163**, 194
- Na_{0.21}Nb₆Cl_{10.5}O₃, synthesis and crystal structure, **163**, 325
- NaNb₂PS₁₀ one-dimensional metal thiophosphates, crystal and electronic structures, **168**, 119
- NaNNO₃, reactions with metal salts, properties of ZrO₂ formed by, **163**, 202
- Na₂M₃(PO₄)₃ ($M_3=GaMn_2, GaCd_2, InMn_2, FeMnCd$) with alluaudite structure, electrical behavior, **168**, 208
- Na–RUB-29 ion-exchanged microporous lithosilicate, synchrotron X-ray single-crystal diffraction and ⁶Li MAS NMR, **167**, 310
- Na₄SnSe₄ Zintl compounds, microwave-assisted preparation, morphology, and photoacoustics, **165**, 125
- Na_{1-x}Sr_xNbO₃ ($0.1 \leq x \leq 0.9$) perovskite-type compounds, structure and properties, **167**, 7
- Na₆(UO₂)(SO₄)₄(H₂O)₂, synthesis and crystal structure, **163**, 313
- Na_xVOPO₄·yH₂O, ion-exchange properties, **163**, 281
- Na₂W₂O₇·1/2H₂O synthesized under high pressure and temperature, structure, **167**, 525
- Na_{1.5}Y_{1.5}F₆, hexagonal phase, high-pressure behavior, **165**, 159
- Tl_{1-x}Na_xNb₂PO₈ and related compounds, structural comparison with Ca_{0.5+x}Cs₂Nb₆P₃O₂₄ and physical properties, **164**, 272
- Soft chemistry**
- γ -Fe₂O₃ synthesis, conditions of, effects on vacancies ordering and lattice parameters, **163**, 459
- Sol–gel film**
- thermochromic organomodified silica containing phosphomolybdic acid, preparation and characterization, **166**, 259
- Sol–gel synthesis**
- BaFe₁₂O₁₉ doped with Co, **167**, 254
- boehmite via hydrothermal annealing, **166**, 182
- ceria-lanthana-based TWC promoters prepared by, phase analysis and oxygen storage capacity, **163**, 527
- LiCo_{0.5}Mn_{0.5}O₂ as highly ordered nanowire arrays, **165**, 247
- Mg/M(III) ($M=Al, Ga, In$) layered double hydroxides, **168**, 156
- N-4-nitrophenyl-L-prolinol nanocrystals, **165**, 25
- Pt/Al₂O₃ catalysts prepared by, thermal stability, **168**, 343
- V⁴⁺–ZrO₂ tetragonal solid solutions, **163**, 33
- Solid oxide fuel cell**
- Y₂O₃–ZrO₂–TiO₂ and Sc₂O₃–Y₂O₃–ZrO₂–TiO₂ solid solutions as anode materials for, optimization, **165**, 12
- Solid solutions**
- Ag₃Pb_{2-x}Cu_xO₆ ($0.0 \leq x < 0.5$), synthesis, characterization, and electrical properties, **163**, 151
- Bi₂₆Mo_{10-x}Cr_xO₆₉, synthesis, structure, and electrical properties, **166**, 7
- Bi₂PbMnO₄(PO₄)₂, crystal structure, **165**, 324
- Bi–W–Nb–O phases, microstructures, **163**, 479
- Cd_{1+x}In_{2-2x}Sn_xO₄, transparent conductor, cation distribution in, **163**, 259

- $\text{Ce}_{1-x}\text{Y}_x\text{O}_{2-x/2}$ ($0 \leq x \leq 0.35$) nanocrystals, synthesis via carbonate precipitation and characterization, **168**, 52
- $M(\text{II})_{1-x}\text{Eu}_x\text{AlF}_5$ ($M = \text{Ca}, \text{Sr}, \text{Ba}$), single-crystal growth and structural classification, **164**, 150
- $\text{LaNb}_{2-2x}\text{Ta}_x\text{VO}_{9-\delta}$ ($x = 0-0.4$) and $\text{LaTa}_{2-2x}\text{Nb}_{2x}\text{VO}_{9-\delta}$ ($x = 0-0.1$), spectral properties, effects of oxygen nonstoichiometry, **167**, 73
- $\text{Li}_{1+x-y}\text{Nb}_{1-x-3y}\text{Ti}_{x+4y}\text{O}_3$, structural study, **166**, 81
- $\text{Na}_{6.45}\text{Ca}_{3.55}(\text{SO}_4)_6(\text{F}_x\text{Cl}_{1-x})_{1.55}$, crystal structure, **163**, 398
- $(\text{Na}_{1-x}\text{Li}_x)\text{CdIn}_2(\text{PO}_4)_3$ ($x = 0-1$), crystal chemistry of Li in alluaudite structure, **163**, 194
- $\text{Pb}_x\text{Ca}_{10-x}(\text{PO}_4)_6(\text{OH})_2$ ($X = 0-1$), preparation by wet method using acetamide, **163**, 27
- $\text{Sc}_2\text{O}_3\text{-Y}_2\text{O}_3\text{-ZrO}_2\text{-TiO}_2$, optimization for use as SOFC anode material, **165**, 12
- $\text{SeCu}_{1-x}\text{Zn}_x\text{O}_3$ ($0 \leq x \leq 1$) perovskites, crystal chemistry and magnetic properties, **168**, 149
- $\text{U}_{1-x}\text{M}_x\text{Ti}_2\text{O}_6$ ($M = \text{Ca}^{2+}, \text{La}^{3+}, \text{Gd}^{3+}$), synthesis and crystal structure, **165**, 261
- $\text{V}^{4+}\text{-ZrO}_2$, tetragonal, obtained from gels, Rietveld refinement of, **163**, 33
- $\text{WO}_3\text{-into-zirconia}$ solid solutions in $\text{WO}_3\text{-ZrO}_2$ catalysts, **164**, 339
- $\text{YMe}_x\text{Mn}_{1-x}\text{O}_3$ ($\text{Me} = \text{Cu}, \text{Ni}, \text{Co}$) perovskites, structural characterization, **163**, 377
- $\text{Y}_2\text{O}_3\text{-ZrO}_2\text{-TiO}_2$, optimization for use as SOFC anode material, **165**, 12
- $\text{Zn}(\text{Fe}, \text{Ga})_2\text{O}_4$ spinel-type solutions, precipitation from aqueous solutions at 90°C , **168**, 5
- Solvothermal synthesis
- $\text{Li}_{1-x}\text{Mn}_2\text{O}_{4-\delta}$ superfine powders, **163**, 132
 - $[\text{NH}_3(\text{CH}_2)_x\text{NH}_3][\text{Ga}_4(\text{PO}_4)_y(\text{HPO}_4)]$ ($x = 4, 5$; $y = 1, 4$), **167**, 17
 - SnS_2 nanoflakes from tetrabutyltin precursors, **164**, 106
 - wurtzite CdS and ZnS nanorods from coordination polymer, **166**, 49
- Sonochemical preparation
- photochromic nanocomposite thin film based on polyoxometalates dispersed in polyacrylamide, **169**, 1
- Specific heat
- $\text{Ba}_3\text{MRu}_2\text{O}_9$ ($M = \text{Y}, \text{In}, \text{La}, \text{Sm}, \text{Eu}, \text{Lu}$) 6H-perovskites, **165**, 317
 - magnetic field dependence, step-like transitions in Mn-site-doped manganites, **165**, 6
 - Ln_3RuO_7 ($\text{Ln} = \text{Pr}, \text{Gd}$), **164**, 163
- Spin densities
- nitrogen isotropic hyperfine coupling constants in nitroxide radicals, DF/HF calculations, **169**, 75
- Spin dimer analysis
- three-dimensional antiferromagnetic ordering in $\text{BaLn}_2\text{MnS}_5$ ($\text{Ln} = \text{La}, \text{Ce}, \text{Pr}$), **169**, 143
- Spinel
- $\text{Cd}_{1+x}\text{In}_{2-2x}\text{Sn}_x\text{O}_4$, transparent conducting solid solution, cation distribution in, **163**, 259
 - $\text{Li}_{1-x}\text{Co}_2\text{O}_{4-\delta}$, chemical synthesis and properties, **164**, 332
 - LiCoO_2 , structural stability at 400°C , **168**, 60
 - $\text{Li}_{2-x}\text{Cu}_x\text{MgCl}_4$, Li_2MgCl_4 , $\text{Li}_{2-x}\text{Na}_x\text{MgCl}_4$, and Li_2ZnCl_4 fast ionic conductors, ^6Li and ^7Li MAS NMR studies, **165**, 303
 - Li_xMnO_2 and $\text{Li}_x\text{Mn}_2\text{O}_4$, chemical properties, dependence on structure, **164**, 5
 - LiMn_2O_4 , synthesis with tartaric acid gel and electrochemical performance, effects of metal ion sources, **163**, 231
 - $\text{LiNi}_{1-x}\text{Mn}_x\text{VO}_4$, synthesis and electrochemical studies, **165**, 312
 - $\text{Mg}_{1-x}\text{Mn}_x\text{Mn}_2\text{O}_{4\pm\delta}$, structural and transport properties, **166**, 171
 - ZnCr_2O_4 , high-pressure Raman spectroscopy, **165**, 165
 - $\text{Zn}(\text{Fe}, \text{Ga})_2\text{O}_4$ solid solutions, precipitation from aqueous solutions at 90°C , **168**, 5
- Spin exchange interactions
- $\text{BaLn}_2\text{MnS}_5$ ($\text{Ln} = \text{La}, \text{Ce}, \text{Pr}$), **169**, 143
 - BaVS_3 , analysis based on first principles and semi-empirical electronic structure calculations, **165**, 345
 - $\text{Sr}_{4/3}(\text{Mn}_{2/3}\text{Ni}_{1/3})\text{O}_3$ hexagonal perovskite-type oxides, **163**, 513
- Spin freezing
- $\text{LuBaCuFeO}_{5+\delta}$ and $\text{TmBaCuFeO}_{5+\delta}$, **166**, 251
- Spin glasses
- $\text{Ba}_2\text{In}_{2-x}\text{Co}_x\text{O}_5$ ($0.5 \leq x \leq 1.70$) perovskites, **165**, 254
 - $\text{FeIn}_2\text{S}_2\text{Se}_2$ layered compound, magnetic and Mössbauer study, **164**, 326
 - $\text{La}_{1-x}\text{Ca}_x\text{MnO}_{3-y}$ ($x = 0.30, 0.50$), evolution of magnetic state depending on oxygen content, **169**, 85
- Spin ladder
- (anilinium)(18-crown-6)[Ni(dimit)] polymorphs, **168**, 661
- Spin ladder cuprates
- Ca-rich composite-type crystal $[\text{A}_2\text{Cu}_2\text{O}_3]_{7+\delta}[\text{CuO}_2]_{10}$ with disorder phenomena in CuO_2 sublattice, 4D structural study, **163**, 17
- Spontaneous strain
- in CaTiO_3 perovskites doped with Fe, high-temperature neutron diffraction study, **167**, 459
- Stereochemistry
- Ti_2S , **168**, 322
- Strain analysis
- CaTiO_3 perovskites doped with Fe, high-temperature neutron diffraction study, **167**, 459
- Strontium
- $\text{Bi}_{0.4}\text{Sr}_{2.5}\text{Cr}_{1.1}\text{O}_{4.9}$ and $\text{Bi}_{0.4}\text{Sr}_{2.5}\text{Fe}_{1.1}\text{O}_5$, synthesis, structure, and properties, **167**, 48
 - $\text{Ca}_{1-x}\text{Sr}_x\text{Al}_2\text{O}_4$, synthesis and evolution of crystalline phases, **168**, 229
 - $\text{Cu}(\text{Ba}_{0.8}\text{Sr}_{0.2})_2(\text{Yb}_{1-x}\text{Ca}_x)\text{Cu}_2\text{O}_{6+z}$, XANES study: hole generation and distribution via Ca substitution and O doping, **166**, 229
 - $\text{Ho}_{0.5}\text{Sr}_{0.5}\text{MnO}_3$, strained structure, **165**, 65
 - $\text{La}_{9.33}(\text{GeO}_4)_6\text{O}_2$ doped with, structural study, **168**, 294
 - $(\text{La}_{1-x}\text{Nd}_x)_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ perovskites, structural, magnetic, and electrical properties, effects of A cation size, **163**, 466
 - $\text{La}_{0.3}\text{Sr}_{0.7}\text{Fe}_{1-x}\text{Ga}_x\text{O}_{2.65+\delta}$ perovskites, oxygen nonstoichiometry, conductivity, and Seebeck coefficient, **167**, 203
 - $\text{La}_{1-x}\text{Sr}_x\text{MnO}_{3\pm\delta}$, enthalpy of formation, measurement by high-temperature solution calorimetry, **163**, 186
 - $\text{La}_2\text{Sr}_2\text{BMnO}_8$ ($B = \text{Mg}, \text{Zn}$), structural and magnetic chemistry, **168**, 202
 - $\text{Na}_{1-x}\text{Sr}_x\text{NbO}_3$ ($0.1 \leq x \leq 0.9$) perovskite-type compounds, structure and properties, **167**, 7
 - $\text{Pr}_{0.5}\text{Sr}_{0.5}\text{MnO}_3$ perovskite, magnetoresistance properties, effect of quenching, **165**, 375
 - $\text{Sr}_3\text{Al}_{10}\text{SiO}_{20}$, synthesis and structural characterization by XRD and solid-state NMR, **169**, 53
 - $(\text{Sr}_5\text{Ba}_6)\text{Sb}_{10}$, synthesis and crystal structure, **164**, 169
 - $\text{Sr}_{11}\text{Bi}_{10}$, synthesis and crystal structure, **164**, 169
 - $\text{SrBi}_4\text{Ti}_4\text{O}_{15}$ four-layer Aurivillius-phase ferroelectrics, structural behavior, **164**, 280; *erratum*, **166**, 449
 - $\text{Sr}_2\text{B}_5\text{O}_9\text{X}:\text{Yb}$ ($X = \text{Cl}, \text{Br}$), valence states and luminescence properties Yb^{2+} and Yb^{3+} ions in, **166**, 271
 - $[(\text{Sr}_{0.43}\text{Ca}_{0.55}\text{Bi}_{0.03})_2\text{Cu}_2\text{O}_3]_{7+\delta}[\text{CuO}_2]_{10}$ with disorder phenomena in CuO_2 sublattice, 4D structural study, **163**, 17
 - $\text{SrCaMnGaO}_{5+\delta}$, crystal structure and magnetic properties, **167**, 188
 - $\text{Sr}_2\text{CoO}_2\text{X}_2$ ($X = \text{Cl}, \text{Br}$), synthesis and structure, **168**, 1
 - $\text{Sr}_{1.9}\text{Cu}_{4.1}(\text{PO}_4)_4$, $\text{Sr}_2\text{Cu}(\text{PO}_4)_2$, $\text{Sr}_3\text{Cu}_3(\text{PO}_4)_4$, and $\text{Sr}_{9.1}\text{Cu}_{1.4}(\text{PO}_4)_7$, synthesis and powder XRD, **163**, 121
 - $\text{Sr}_3\text{CuRhO}_6$ one-dimensional oxides, magnetic properties as function of structure, **164**, 220
 - $\text{SrCu}_3\text{Ru}_4\text{O}_{12}$, structure: comparison of XRD-Rietveld and EXAFS results, **167**, 126
 - $\text{Sr}_{1-x}\text{Eu}_x\text{AlF}_5$, single-crystal growth and structural classification, **164**, 150
 - $\text{Sr}_3\text{Fe}_{2-x}\text{Co}_x\text{O}_{7-\delta}$ ($0.25 \leq x \leq 1.75$) $n = 2$ Ruddlesden–Popper phases, electronic, magnetic, and magnetoresistance properties, **166**, 292

- [Sr(Fe,Nb)_{0.5}S_{1.5}]_{1.13}NbS₂, crystal structure and magnetic properties, **168**, 41
- Sr₃Fe_{2-x}Ti_xO_{6+δ} Ruddlesden-Popper phases, order–disorder-enhanced oxygen conductivity and electron transport, **168**, 275
- β-SrGaBO₄, *ab initio* structure determination from powder X-ray diffraction data, **165**, 119
- [SrGd_{0.5}S_{1.5}]_{1.16}NbS₂, crystal structure and magnetic properties, **168**, 41
- Sr_{1-x}La_xTi_{1-x}Cr_xO₃ perovskites, structure and conductivity, **165**, 381
- Sr_{4/3}(Mn_{2/3}Ni_{1/3})O₃ hexagonal perovskite-type oxides, magnetic susceptibility and spin exchange interactions, **163**, 513
- Sr₂MnO_{3.5+x} reduced single-layer compound, synthesis and characterization, **167**, 145
- Sr₂NF, preparation and single-crystal structure, **169**, 13
- Sr₃NiRhO₆ one-dimensional oxides, magnetic properties as function of structure, **164**, 220
- Sr₅Pb₃CoO₁₂, synthesis, crystal structure, and magnetic properties, **164**, 12
- Sr₃(PO₄)₂:RE (RE = Ce, Sm, Eu, Tb), VUV–UV photoluminescence spectra, **167**, 435
- Sr₉A(PO₄)₇ (A = Sc, Cr, Fe, Ga, In) Whitlockite-type phosphates, synthesis and characterization, **168**, 237
- Sr₂SnO₄, structure, high-resolution neutron powder diffraction study, **169**, 208
- Sr(Sr_{1/3}Nb_{2/3})O₃, complex polymorphic behavior and dielectric properties, **166**, 24
- Sr₂TiSi₂O₈, crystal structure, **166**, 15
- Sr[(UO₂)(SeO₃)₂]·2H₂O, variable dimensionality and topology, **168**, 358
- Structure, *see also* Band structure; Crystal structure; Defect structure; Electronic structure; Magnetic structure; Superstructure
- Ag₂O–V₂O₅ system after mechanochemical treatment, relationship to AgVO₃ polymorphs, **164**, 144
- AlGaPON mixed nitrided galloaluminophosphates, EELS, XAS, and XPS studies, **163**, 163
- alluaudite, lithium in, crystal chemistry, **163**, 194
- Ba_nBi_{n+m}O_y system, periodic island structure, HREM study, **163**, 44
- Ba₂In₂O₅ microstructure, **164**, 119
- Ba(In_xZr_{1-x})O_{3-x/2}, microstructure, **164**, 119
- LnBa₂Mn₂Cu₂O_{12±y} (Ln = Sm, Eu), powder neutron diffraction study, **167**, 237
- Bi₂₆Mo_{10-x}Cr_xO₆₉ solid solution, **166**, 7
- Bi–W–Nb–O phases, microstructures, **163**, 479
- Ca₂M³⁺(OH)₆Cl·2H₂O (M³⁺ = Al³⁺, Ga³⁺, Fe³⁺, Sc³⁺), X-ray powder diffraction study, **167**, 137
- columnar [Bi₂O₁₄]_n structural types in Bi–Mo–Cr–O system, **166**, 7
- δ-Co₂Zn₁₅, double-helix icosahedra structure, **166**, 53
- β-FeSi₂ semiconductors doped with impurities, geometrical structure, first-principle calculation, **163**, 248
- ⁴I_{9/2} ground state of Nd³⁺:YAB, crystal field structure, **167**, 386
- La₂W_{2-x}Mo_xO₉ series, **167**, 80
- LiCo_{0.5}Mn_{0.5}O₂ as highly ordered nanowire arrays, **165**, 247
- lithium nickel manganese oxides and their delithiated phases, **169**, 35
- manganese dioxides, tunnel structure, influence on chemical properties, **164**, 5
- Mg_{1-x}Mn_xMn₂O_{4±δ} spinels, **166**, 171
- γ-MnO₂ synthesized from three-dimensional framework and layered structures, **166**, 375
- NaBa₂M₂⁺M³⁺O₆ (M = Ni, Cu), **165**, 214
- PbMnO_{3-x} high-pressure phase: perovskite-derived crystallographic shear structure, **169**, 131
- TeO₂–WO₃ glass, IR, XPS, and XANES studies, **168**, 175
- third-order nonlinear tungstates, relationship to vibrational properties in Raman shifters, **163**, 506
- [(ZrO₂)_{0.92}(Y₂O₃)_{0.08}]_{0.9}(TiO₂)_{0.1}, **165**, 79
- Stucky, D. Galen
special issue dedicated to, **167**, 265
- Sublimation
pyronine-B on p-type silicon, rectifying junctions formed by, conductance– and capacitance–frequency characteristics, **168**, 169
- Subperoxides
superconducting, creation and annihilation, role of lattice pressure, **163**, 390
- Sulfide bridge
donor–acceptor-type molecules with, assembly, **164**, 320
- Sulfonation
highly porous zirconium aryldiphosphonates: formation of strong Brønsted acids, **167**, 376
- Sulfur
Ag₂S nanocrystals, synthesis and characterization in hyperbranched polyurethane at room temperature, **168**, 259
- (anilinium)(18-crown-6)[Ni(dmit)₂] polymorphs, structure and magnetic properties, **168**, 661
- BaLn₂MnS₅ (Ln = La, Ce, Pr), antiferromagnetic ordering in, spin dimer analysis, **169**, 143
- BaVS₃, electron localization, anisotropy of electrical conductivity, orbital ordering, and spin-exchange interactions, **165**, 345
- bis(ethylenediseleno)tetrathiafulvalene conducting salts with hexacyanoferrate(III) and nitroprusside, synthesis, structure, and characterization, **168**, 610
- bis(ethylenedithio)diselenadithia-fulvalene symmetric and unsymmetric salts, positional order and disorder of, **168**, 626
- B₂S₃, high-pressure synthesis and crystal structure, **166**, 164
- CdPS₃, exfoliated single layers and restacked films, **166**, 421
- CdS wurtzite nanorods, synthesis from coordination polymer, **166**, 49
- charge transfer salts
based on [M(mnt)₂]ⁿ⁻ and BMDT-TTF and EDT-TTF, conducting and magnetic properties, **168**, 563
- bis(ethylenedioxo)tetrathiafulvalene with isothiocyanato complex anions, preparation, structure, and magnetic properties, **168**, 450
- conducting cation radical salts with tetraiodotellurate(II) and hexaiodotellurate(II), structural and physical properties, **168**, 396
- conducting molecular magnets based on TTF derivatives, **168**, 547
- Cu(NCS)₂, MDSe-TSF-based conductive radical cation salts with, synthesis, structures, and conductive properties, **168**, 582
- Cu₇S₄ and Cu₉S₈ nanocrystals, synthesis via microwave-assisted elemental-direct-reaction route, **167**, 249
- N,N'-dialkylimidazolium cadmium–thiocyanate complexes, cation-controlled formation and structure, **169**, 199
- N,N'-dialkylimidazolium salts [(Cy₂Im)₂][Cd₂(SCN)₆]·C₃H₆O and [(Me₂Im)₂][Cd₂(SCN)₆], synthesis and X-ray structure, **167**, 119
- dication salts of phenyl-substituted TTF vinylogues, preparation and structures, **168**, 427
- (ethylenedithiotetrathiafulvalenoquinone-1,3-dithiolethimide)₂·GaX₄ plate crystals, structure and electrical conducting and magnetic properties, **168**, 408
- Eu_{1.3}Nb_{1.9}S₅, crystal structure, **164**, 345
- FeIn₂S₂Se₂ layered compound, magnetic and Mössbauer study, **164**, 326
- β-In₂S₃ dendrites, synthesis in situ by oxidization–sulfidation route via self-purification process, **166**, 336
- magnetic/conducting hybrid compound composed of [Mn^{II}Cl₅(EtOH)] 1-D chain and BEDT-TTF stacking layer, **168**, 418
- metallic molecular crystals with rare-earth complex ions, magnetism, **168**, 444
- molecular conductors
based on M(dddt)₂ bithiolenecation complexes, synthesis, structure, and properties, **168**, 464

- based on TMEO-ST-TTP, structure and transport properties, **168**, 608
with rare-earth elements, crystal and electronic structures, **168**, 457
- $\text{Na}_{6.45}\text{Ca}_{3.55}(\text{SO}_4)_6(\text{F}_x\text{Cl}_{1-x})_{1.55}$, crystal structure, **163**, 398
- $\text{Na}_6(\text{UO}_2)(\text{SO}_4)_4(\text{H}_2\text{O})_2$, synthesis and crystal structure, **163**, 313
- $\text{ANb}_2\text{PS}_{10}$ ($A = \text{Na}, \text{Ag}$) one-dimensional metal thiophosphates, crystal and electronic structures, **168**, 119
- $(\text{NH}_4)_3\text{H}(\text{SO}_4)_2$, disordered high-temperature structure, relationship to room-temperature phase, **165**, 136
- $[\text{Ni}(\text{bpy})_3][\text{Pd}(\text{dmit})_2] \cdot \text{CH}_3\text{CN}$, preparation and crystal structure, **168**, 390
- $\text{Ni}(\text{dmit})_2$ simple salts, charge carrier doping by hydrogen-bonding pyridinium cations, **168**, 535
- $[\text{Ni}(\text{dmit})_2]_2^+$, conducting molecular solid based on, anion packing in, **168**, 653
- organic synthetic metals, dimensionality and electrical properties, **168**, 367
- radical salts derived from tetrathiafulvalene dimers, synthesis and electroconductive properties, **168**, 597
- RbIn_3S_5 , polysynthetic twinning in, **167**, 214
- SnS_2 nanoflakes, synthesis from tetrabutyltin precursors, **164**, 106
- $[\text{Sr}(\text{Fe}, \text{Nb})_{0.5}\text{S}_{1.5}]_{1.13}\text{NbS}_2$, crystal structure and magnetic properties, **168**, 41
- $[\text{SrGd}_{0.5}\text{S}_{1.5}]_{1.16}\text{NbS}_2$, crystal structure and magnetic properties, **168**, 41
- TCNQF_4 complexes of EDO-TTF- CONH_2 and EDT-TTF- CONH_2 , charge transfer, dimensionality, and amide hydrogen bond network adaptability, **168**, 668
- tetrachloroferrate(III) salts of BDH-TTP and BDA-TTP, crystal structure and physical properties, **168**, 503
- tetrathiafulvalene-based charge transfer salts with anions containing selenocyanate ligands, synthesis, crystal structures, and physical properties, **168**, 573
- thio-LISICON, synthesis, **168**, 140
- $\text{Ln}_2\text{Ti}_2\text{S}_2\text{O}_5$ ($\text{Ln} = \text{Nd}, \text{Sm}, \text{Gd}, \text{Tb}, \text{Dy}, \text{Ho}, \text{Er}, \text{Y}$), optical properties, **165**, 228
- Ti_2S , crystal structure and stereochemistry, **168**, 322
- $\text{TTF}[\text{Ni}(\text{dimit})_2]_2$, thin films and nanowires, formation and characterization, **168**, 438
- two-dimensional organic metal (EO-TTP) $_2\text{AsF}_6$, optical study, **168**, 497
- ZnS wurtzite nanorods, synthesis from coordination polymer, **166**, 49
- Sulfur dioxide
and $\text{C}_7\text{H}_{16}\text{-SO}_2$, photocatalytic oxidation systems, deactivation and regeneration of TiO_2 nanoparticles in, **166**, 395
- Superconductivity
 $\text{Be}_{1.09}\text{B}_3$, **163**, 385
charge transfer salts, **168**, 675
fullerenes, **168**, 639
in κ -(methylenediselenotetraselenafulvalene) $_2\text{Br}$ below 4 K, **168**, 582
 LaMIn_5 ($M = \text{Co}, \text{Rh}, \text{Ir}$), **166**, 245
 $\text{Li}_x\text{Mg}_{0.857-x}\text{Cu}_{2.143}\text{O}_{3-y}$, **168**, 85
- Superconductors
 $\text{Cu}(\text{Ba}_{0.8}\text{Sr}_{0.2})_2(\text{Yb}_{1-x}\text{Ca}_x)\text{Cu}_2\text{O}_{6+z}$, XANES study: hole generation and distribution via Ca substitution and O doping, **166**, 229
 $\text{Li}_{0.2(1)}\text{ZrNCl}$ phase derived by intercalation, single-crystal X-ray structural refinement, **169**, 149
 MgB_2 , electronic structure, comparison with AlB_2 , ZrB_2 , NbB_2 , and TaB_2 , **169**, 168
subperoxides, creation and annihilation, role of lattice pressure, **163**, 390
 $\text{TTF}[\text{Ni}(\text{dimit})_2]_2$ thin films and nanowires, formation and characterization, **168**, 438
- Superexchange interactions
 $\text{R}_2\text{Ba}_2\text{CuPtO}_8$ ($R = \text{Ho}, \text{Er}, \text{Tm}, \text{Yb}, \text{Lu}, \text{Y}$), **165**, 297
- Superfine powders
 $\text{Li}_{1-x}\text{Mn}_2\text{O}_{4-\delta}$, solvothermal synthesis, **163**, 132
- Superionic phases
 MAI_5 , crystal structures and ionic conductivities, **165**, 363
- Superlattice ordering
elpasolite-related oxyfluoride $\text{K}_3\text{MoO}_3\text{F}_3$, electron diffraction and XRPD study, **163**, 267
- Superparamagnetism
 $\text{LaMnO}_{3+\delta}$ perovskite doped with Sn, **168**, 100
- Superstructure
 Bi-W-Nb-O phases, **163**, 479
 $\text{Bi}_{3.24}\text{Ln}_2\text{W}_{0.76}\text{O}_{10.14}$ monoclinic compounds with pseudo-orthogonal cell based on pseudo-fcc subcell in $\text{Bi}_2\text{O}_3\text{-Ln}_2\text{O}_3\text{-WO}_3$ ($\text{Ln} = \text{La}, \text{Pr}, \text{Nd}$), **169**, 60
 $\text{InFe}_{1-x}\text{Ti}_x\text{O}_{3+x/2}$ ($x = 2/3$), **163**, 455
 $\text{Li}_2\text{M}(\text{II})\text{Sn}_3\text{O}_8$ ($\text{M}(\text{II}) = \text{Mn}, \text{Zn}$): cation ordering, **169**, 44
 $\text{LuBaCuFeO}_{5+\delta}$ and $\text{TmBaCuFeO}_{5+\delta}$, **166**, 251
 $\text{Ni}_{10}\text{Sn}_5\text{P}_3$, **166**, 352
 Ln_3OsO_7 ($\text{Ln} = \text{Pr}, \text{Nd}, \text{Sm}$), **169**, 189
 Pb_xWO_3 tetragonal bronze, **168**, 306
rare-earth tungsten bronzes, **167**, 412
- Symmetry mode analysis
 $(\text{NH}_4)_3\text{H}(\text{SO}_4)_2$, disordered high-temperature and room-temperature phases, **165**, 136
- Synchrotron XANES
thin films of molecular metals, **168**, 384
- Synchrotron X-ray powder diffraction
 $\text{Ba}_{42}\text{Ti}_{51}\text{Fe}_{20}\text{O}_{174}$ multilayered magnetic dielectric ceramic in $\text{BaO-TiO}_2\text{-Fe}_2\text{O}_3$ system, **166**, 400
S-camphor: low-temperature crystal structure, **163**, 253
 $\text{K}_2\text{Na}[\text{Ag}(\text{CN})_2]_3$, **168**, 267
 $\text{La}_{0.63}(\text{Ti}_{0.92}\text{Nb}_{0.08})\text{O}_3$ at high temperature: orthorhombic-tetragonal phase transition, **164**, 51
 $\alpha\text{-Li}_4\text{Zn}(\text{PO}_4)_2$ and high-temperature polymorph $\beta\text{-Li}_4\text{Zn}(\text{PO}_4)_2$, **166**, 341
 $\text{Sr}_9\text{A}(\text{PO}_4)_7$ ($A = \text{Sc}, \text{Cr}, \text{Fe}, \text{Ga}, \text{In}$) Whitlockite-type phosphates, **168**, 237
- Synchrotron X-ray single-crystal diffraction
Na-RUB-29 ion-exchanged microporous lithosilicate, **167**, 310
- Synthesis
4234-type intermetallic borocarbides, **164**, 246
 $\text{Ag}_5\text{Pb}_{2-x}\text{Cu}_x\text{O}_6$ ($0.0 \leq x < 0.5$), **163**, 151
 Ag_2S nanocrystals in hyperbranched polyurethane at room temperature, **168**, 259
 Ag_2Se in mixed solvents at room temperature, **167**, 28
 Ag_2Te in mixed solvents at room temperature, **167**, 28
alkyl-substituted bis(thiazolylidene)hydrazine, **168**, 590
 $[\text{Al}_3\text{P}_4\text{O}_{16}][(\text{CH}_3)_2\text{NHCH}_2\text{CH}_2\text{NH}(\text{CH}_3)_2][\text{H}_3\text{O}]$, **167**, 282
 $[\text{As}_2\text{V}_8^{\text{IVV}}\text{V}_2\text{O}_{26}(\text{H}_2\text{O})] \cdot 8\text{H}_2\text{O}$ with large cavities with nanosized channels in 3-D neutral framework, **169**, 160
 $\text{Ba}_{11}\text{Bi}_{10}$, **164**, 169
 $\text{Ba}_7\text{Ca}_2\text{Mn}_5\text{O}_{20}$, **168**, 11
 $\text{Ba}_8\text{Cu}_3\text{In}_4\text{N}_5$ with nitridocuprate groups and one-dimensional infinite In clusters, **163**, 449
 $\text{Ba}_2\text{In}_{2-x}\text{Co}_x\text{O}_5$ ($0.5 \leq x \leq 1.70$) perovskites, **165**, 254
 $\text{Ba}_{1-x}\text{La}_x\text{Ti}_{1-x}\text{Cr}_x\text{O}_3$ complex perovskites, **164**, 98
 $\text{Be}_{1.09}\text{B}_3$, **163**, 385
 $\text{BiMg}_{2.5}\text{V}_{18.5}\text{O}_{38}$, **164**, 138
 BiMnAsO_5 , **168**, 224
 BiMn_2MO_6 ($M = \text{P}, \text{As}, \text{V}$), **167**, 245
 BiMnVO_5 , **168**, 224
 $\text{Bi}_{26}\text{Mo}_{10-x}\text{Cr}_x\text{O}_{69}$ solid solution, **166**, 7
bis(ethylenediseleno)tetrathiafulvalene conducting salts with hexacyanoferrate(III) and nitroprusside, **168**, 616
 $\text{Bi}_{0.4}\text{Sr}_{2.5}\text{Cr}_{1.1}\text{O}_{4.9}$ and $\text{Bi}_{0.4}\text{Sr}_{2.5}\text{Fe}_{1.1}\text{O}_5$, **167**, 48
 B_2S_3 at high pressure, **166**, 164
 $\text{Ca}_2\text{Co}_{0.8}\text{Ga}_{1.2}\text{O}_{4.8}$, **167**, 196

- calcium uranyl carbonates with multiple anionic species, **166**, 219
 $\text{Ca}_{1-x}\text{Sr}_x\text{Al}_2\text{O}_4$, **168**, 229
 CaZn_2Si_2 , **167**, 107
 $\text{Ce}_{1-x}\text{Y}_x\text{O}_{2-x/2}$ ($0 \leq x \leq 0.35$) nanocrystals via carbonate precipitation, **168**, 52
charge transfer salts of bis(ethylenedioxy)tetrathiafulvalene with isothiocyanato complex anions, **168**, 450
 $\text{C}_5\text{H}_{12}\text{NPO}_4\text{H}_2$, **161**, 307; *erratum*, **168**, 714
 $(\text{CN}_3\text{H}_6)_2 \cdot \text{Zn}_3(\text{HPO}_3)_4 \cdot \text{H}_2\text{O}$, **167**, 337
conducting molecular solids based on $[\text{Ni}(\text{dmf})_6]^{2+}$ and $[\text{Ni}(\text{dsit})_2]^{2-}$, **168**, 653
 $\delta\text{-Co}_2\text{Zn}_{15}$ with double-helix icosahedra structure, **166**, 53
 $\text{Cs}_2\text{Nb}_6\text{Br}_5\text{F}_{12}$, **163**, 319
 $\text{Cs}_2\text{MP}_3\text{O}_{10}$ ($M = \text{Ga}, \text{Al}, \text{Cr}$), **167**, 258
 $\text{Cu}(\text{I})$ halide 2-ethylpyrazine coordination polymers: effects of solid-state kinetics, **169**, 103
 Cu_7S_4 and Cu_9S_8 nanocrystals via microwave-assisted elemental-direct-reaction route, **167**, 249
 Cu_{2-x}Se in mixed solvents at room temperature, **167**, 28
 Cu_2Te in mixed solvents at room temperature, **167**, 28
 $\text{Cu}_2\text{UO}_2(\text{PO}_4)_2$ built up from $[\text{CuO}_2]_\infty$ chains, **165**, 89
 N,N' -dialkylimidazolium cadmium–thiocyanate complexes, cation-controlled formation, **169**, 199
 N,N' -dialkylimidazolium salts $[(\text{C}_y\text{I}_m)_2][\text{Cd}_2(\text{SCN})_6] \cdot \text{C}_3\text{H}_6\text{O}$ and $[(\text{Me}_2\text{Im})_2][\text{Cd}_2(\text{SCN})_6]$, **167**, 119
dication salts of phenyl-substituted TTF vinylogues, **168**, 427
 $\chi\text{-DyBO}_3$, multianvil high-pressure synthesis, **166**, 203
 $\text{Dy}_3(\text{SeO}_3)_4\text{F}$, **167**, 113
 $\chi\text{-ErBO}_3$, multianvil high-pressure synthesis, **166**, 203
 $\text{Er}_2(\text{SeO}_3)_3$, **167**, 113
 EuMn_2P_2 single crystals, **163**, 498
 $\text{EuPd}_{0.72}\text{In}_{1.28}$ hexagonal Laves phase by EuPdIn decomposition at high temperature and pressure, **169**, 155
 $\text{EuPt}_{0.56}\text{In}_{1.44}$ hexagonal Laves phase by EuPtIn decomposition at high temperature and pressure, **169**, 155
 EuZn_2Ge_2 , **167**, 107
 FeGa_3 semiconducting intermetallic compounds, **165**, 94
 $\gamma\text{-Fe}_2\text{O}_3$, conditions of, effects on vacancies ordering and lattice parameters, **163**, 459
fullerenes C_{60} and C_{70} in molecular complexes with saturated amines, **168**, 474
 $\text{Gd}_3[\text{SiON}_3]\text{O}$ with non-condensed SiON_3 tetrahedra, **167**, 393
 $\text{H}_{1.6}\text{Mn}_{1.6}\text{O}_4$ by ion exchange with $\text{Li}_{1.6}\text{Mn}_{1.6}\text{O}_4$, **163**, 1
 $\text{H}_3\text{N}(\text{CH}_2)_3\text{NH}_3 \cdot \text{Zn}_3(\text{HPO}_3)_4 \cdot \text{H}_2\text{O}$, **167**, 337
inorganic coordination polymers based on cadmium oxalates, **166**, 128
 $\beta\text{-In}_2\text{S}_3$ dendrites in situ by oxidization–sulfidation route via self-purification process, **166**, 336
 $\text{K}_3(\text{VO}_2)_2\text{PO}_4\text{PO}_3\text{OH} \cdot \text{H}_2\text{O}$ with tape-like structure, **163**, 534
 La_3MO_7 ($M = \text{Ru}, \text{Os}$) fluorite-related phases, **167**, 182
 $\text{La}_2\text{W}_{2-x}\text{Mo}_x\text{O}_9$ series, **167**, 80
 $\text{Li}_3\text{AlB}_2\text{O}_6$, **163**, 369
 $\text{Li}_{1-x}\text{Co}_2\text{O}_{4-\delta}$ spinel, **164**, 332
 $\text{Li}_2\text{CuZrO}_4$ polymorphs, **166**, 311
 $\text{Li}_x\text{Mg}_{0.857-x}\text{Cu}_{2.143}\text{O}_{3-y}$, **168**, 85
 LiMnO_2 in orthorhombic form by solid-phase reaction under steam atmosphere, **169**, 66
 $o\text{-LiMnO}_2$ by microwave irradiation, **163**, 1
 LiMn_2O_4 spinel using tartaric acid gel process, effects of metal ion sources, **163**, 231
 $\text{Li}_{1.6}\text{Mn}_{1.6}\text{O}_4$ by heat treatment of $o\text{-LiMnO}_2$, **163**, 1
 $\text{LiNi}_{1-x}\text{Mn}_x\text{VO}_4$ spinel, **165**, 312
 Li_xNiO_2 , **163**, 340
lithium nickel manganese oxides and their delithiated phases, **169**, 35
mesoporous materials, directed by blends of nonionic amphiphiles under nonaqueous conditions, **167**, 324
metallic molecular crystals with rare-earth complex anions, **168**, 444
methylenediselenotetraselenafulvalene-based conductive radical cation salts, **168**, 582
 $\text{Mg}_{1-x}\text{Mn}_x\text{Mn}_2\text{O}_{4\pm\delta}$ spinels, **166**, 171
microporous/mesoporous material MMM-1, **167**, 363
mixed valence radical cation salts of BEDT-TTF with $[\text{RuNOX}_5]^{2-}$ ($X = \text{Br}, \text{Cl}$), **168**, 514
 Mn-Al layered double hydroxides, **167**, 152
molecular conductors
based on $M(\text{ddd})_2$ bithiolenes cation complexes, **168**, 464
with rare earth elements, **168**, 457
 $A_x(\text{Mo}, \text{V})\text{O}_{21}$ ($A = \text{K}^+, \text{Rb}^+, \text{Cs}^+$) bronze with tunnel structure, **163**, 210
 $\beta\text{-MNX}$ ($M = \text{Zr}, \text{Hf}$; $X = \text{Br}, \text{I}$) at high pressure, **163**, 77
 Na_4FeO_4 , **165**, 266
 $\text{Na}_{0.21}\text{Nb}_6\text{Cl}_{10.5}\text{O}_3$, **163**, 325
 $\text{Na}_2M_3(\text{PO}_4)_3$ ($M_3 = \text{GaMn}_2, \text{GaCd}_2, \text{InMn}_2, \text{FeMnCd}$) with alluaudite structure, **168**, 208
 Na-RUB-29 ion-exchanged microporous lithosilicate, **167**, 310
 $\text{Na}_6(\text{UO}_2)(\text{SO}_4)_4(\text{H}_2\text{O})_2$, **163**, 313
 $\text{Na}_2\text{W}_2\text{O}_7 \cdot 1/2\text{H}_2\text{O}$ under high pressure and temperature, **167**, 525
 $[\text{NH}_3(\text{CH}_2)_n\text{NH}_3][\text{Sb}\{\text{CH}_3\text{C}(\text{O})(\text{PO}_3)_2\}]$ ($n = 4, 5$) one-dimensional diphosphonates, **168**, 263
 $[\text{Ni}(\text{bpy})_3][\text{Pd}(\text{dmit})_2] \cdot \text{CH}_3\text{CN}$, **168**, 390
 $\text{Ni}_x\text{Mg}_{6-x}\text{MnO}_8$ as active materials for negative electrodes of lithium-ion cells, **166**, 330
 $\text{Pb}_{1-x}\text{Bi}_x\text{Pt}_2\text{O}_4$ ($0 \leq x \leq 0.3$), **166**, 58
 $\text{Pb}_6\text{Ca}_2\text{Li}_2(\text{PO}_4)_6$ apatite, **166**, 237
 $\text{Pb}_3(\text{MoO}_3)(\text{PO}_4)_5$ with tunnel structure, **163**, 308
perfluoro-1,3,5-tris(*p*-oligophenyl)benzenes amorphous electron-transport materials with high-glass-transition temperature and high electron mobility, **168**, 470
poly-*o*-methoxyaniline intercalated into V_2O_5 xerogel, **168**, 134
4-(4'-pyridylthio)-1-methylpyridinium salts, **164**, 320
radical salts derived from tetrathiafulvalene dimers, **168**, 597
rare earth tungsten bronzes, **169**, 182
 RuGa_3 semiconducting intermetallic compounds, **165**, 94
rutile at low temperature, **169**, 176
 $A_{1-x}\text{Sn}_x\text{Bi}_{1+x}\text{Se}_{26}$ ($A = \text{K}, \text{Rb}, \text{Cs}$), **167**, 299
 $\text{Sr}_3\text{Al}_{10}\text{SiO}_{20}$, **169**, 53
 $(\text{Sr}_5\text{Ba}_6)\text{Sb}_{10}$, **164**, 169
 $\text{Sr}_{11}\text{Bi}_{10}$, **164**, 169
 $\text{Sr}_2\text{CoO}_2\text{X}_2$ ($X = \text{Cl}, \text{Br}$), **168**, 1
 $\text{Sr}_{1.9}\text{Cu}_{4.1}(\text{PO}_4)_4$, $\text{Sr}_2\text{Cu}(\text{PO}_4)_2$, $\text{Sr}_3\text{Cu}_3(\text{PO}_4)_4$, and $\text{Sr}_{9.1}\text{Cu}_{1.4}(\text{PO}_4)_7$, **163**, 121
 $\text{Sr}_3\text{CuRhO}_6$ one-dimensional oxides, **164**, 220
 $\text{Sr}_2\text{MnO}_{3.5+x}$ reduced single-layer compound, **167**, 145
 Sr_2NF , **169**, 13
 $\text{Sr}_3\text{NiRhO}_6$ one-dimensional oxides, **164**, 220
 $\text{Sr}_3\text{Pb}_3\text{CoO}_{12}$, **164**, 12
 $\text{Sr}_9\text{A}(\text{PO}_4)_7$ ($A = \text{Sc}, \text{Cr}, \text{Fe}, \text{Ga}, \text{In}$) Whitlockite-type phosphates, **168**, 237
 $M_x\text{Ta}_{11-x}\text{Ge}_8$ ($M = \text{Ti}, \text{Zr}, \text{Hf}$), **167**, 517
tetrathiafulvalene-based conducting charge transfer salts with anions containing selenocyanate ligands, **168**, 573
thio-LISICON, **168**, 140
 $\text{TiO}_2/\text{SnO}_2$ nanocrystals, **165**, 193
 $\text{Ti}_{1-x}\text{Na}_x\text{Nb}_2\text{PO}_8$ and related compounds, **164**, 272
 $\text{U}_{1-x}\text{M}_x\text{Ti}_2\text{O}_6$ ($M = \text{Ca}^{2+}, \text{La}^{3+}, \text{Gd}^{3+}$), **165**, 261
 $\text{V}_2\text{GeO}_4\text{F}_2$ with chains of VO_4F_2 octahedra, **165**, 74
 $M_x\text{V}_2\text{O}_5\text{A}_y \cdot n\text{H}_2\text{O}$ with high lithium capacity for rechargeable batteries, **163**, 93
 $\text{RE}_x\text{WO}_{3+y}$ ($\text{RE} = \text{La}, \text{Nd}$) tungsten bronze-related phases, **168**, 284
 $\text{YB}_{17.6}\text{Si}_{4.6}$, **164**, 361
zeolite SSZ-50, polymethylated [4.1.1] octanes leading to, **167**, 289
Zintl compounds $\text{K}_4\text{Sn}_2\text{Se}_6$, $\text{K}_4\text{Sn}_3\text{Se}_8$, Na_4SnSe_4 , and molecular Sn–Se oligomers, **165**, 125

- Zintl phases in alkali metal–In–Bi systems, **163**, 436
 ZrO₂, by metal salt–alkali metal nitrate reactions, **163**, 202
- T**
- Tantalum**
 Bi_{2.5}Na_{0.5}Ta₂O₉, neutron powder diffraction and electron microscopy structural studies, **167**, 86
 Bi₄TaO₈X (X=Cl,Br) layered intergrowth phases, structure and electrophysical properties, **166**, 148
 LaNb_{2–2x}Ta_{2x}VO_{9–δ} (x=0–0.4) and LaTa_{2–2x}Nb_{2x}VO_{9–δ} (x=0–0.1), spectral properties, effects of oxygen nonstoichiometry, **167**, 73
 TaB₂, electronic structure and normal-state conductivity, **169**, 168
 M_xTa_{11–x}Ge₈ (M=Ti,Zr,Hf), structure and stabilization, **167**, 517
- Tapiolite**
 natural, coexistence of trirutile and rutile phases in, **163**, 218
- Tartaric acid gel process**
 LiMn₂O₄ spinel synthesis, effects of metal ion sources, **163**, 231
- Tellurium**
 Ag₂Te, synthesis in mixed solvents at room temperature, **167**, 28
 conducting cation radical salts with tetraiodotellurate(II) and hexaiodotellurate(II), structural and physical properties, **168**, 396
 Cu₂Te, synthesis in mixed solvents at room temperature, **167**, 28
 hexamethylenetetraethylenetetrafulvalene charge transfer complexes of donor–acceptor type, preparation, electronic spectra, and conductivity, **168**, 486
 TeO₂–WO₃ glasses, IR, XPS, and XANES structural studies, **168**, 175
 U₃Te₅Z_x (Z=Ge,Sn), structures and magnetic properties, **168**, 217
- Temperature effects**
 ferroelectric–paraelectric phase transition in PbTiO₃, **167**, 446
 formation of tungsten bronze-related phases RE_xWO_{3+y} (RE=La,Nd), **168**, 284
 Mössbauer spectroscopy of ANi_{0.98}Fe_{0.02}O₃ (A=Pr,Nd,Sm,Y,Lu,Tl) perovskites doped with ⁵⁷Fe, **168**, 126
 structure–energy state in poly(hydroxymethyl) grouping-containing crystals, **164**, 301
 structure evolution of nanocrystalline CeO₂ supported on silica, **168**, 110
- Temperature-programmed reduction**
 CeO_{2–γ}–Al₂O₃ mixed oxides, **169**, 113
- Terbium**
 BaTbO₃, crystal structure, **165**, 393
 Bi_{0.775}Tb_{0.225}O_{1.5} of rhombohedral Bi–Sr–O type, structural relationship to monoclinic ε-Bi_{4.86}La_{1.14}O₉, **168**, 91
 Bi_{0.85}Tb_{0.15(1–n)}V_{0.15n}O_{1.5+0.15n}, stability, conductivity, and powder crystal structure studies, **163**, 300
 KTbFe(II)(CN)₆·xH₂O, characterization and thermal evolution, **167**, 34
 α-sialon materials doped with, luminescence properties, **165**, 19
 Sr₃(PO₄)₂:Tb, VUV–UV photoluminescence spectra, **167**, 435
 TbTbI (T=Rh,Ni,Pd,Pt), preparation and structure, **168**, 18
 TbCrO₄, field-induced magnetic properties, **164**, 313
 TbOCl, stability of, bond valence study, **165**, 48
 Tb₆Pt₁₂In₂₃, complex 3-D Pt–In networks in, **169**, 118
 Tb₇Sb (Rh,Ir), preparation and structure, **168**, 18
 Tb₂Ti₂S₂O₅, optical properties, **165**, 228
 Tb_xWO₃ bronzes, X-ray and electron microscopy studies, **167**, 412
- N,N,N',N'*-Tetrabenzyl-*p*-phenylenediamine
 fullerenes C₆₀ and C₇₀ in molecular complexes with, preparation, crystal structures, and characterization, **168**, 474
- Tetra-*n*-butylammonium dysprosium(III) complex**
 crystal and electronic structures, **168**, 457
- Tetrabutyltin**
 SnS₂ nanoflake synthesis from, **164**, 106
- Tetrachloroferrate(III) salts**
 BDH-TTP and BDA-TTP, crystal structure and physical properties, **168**, 503
- Tetracyanoquinodimethane**
 bis(thiazolyldiene)hydrazine complexes with, charge transfer, effects of sequential nitrogen substitution, **168**, 590
 organic synthetic metals, dimensionality and electrical properties, **168**, 367
 TCNQF₄ complexes of EDO-TTF-CONH₂ and EDT-TTF-CONH₂, charge transfer, dimensionality, and amide hydrogen bond network adaptability, **168**, 668
 TTF-TCNQ thin films, characterization, **168**, 384
- Tetraethylenepentamine**
 quintuply protonated, Zn₆(PO₄)₅(HPO₄)·C₈N₅H₂₈·5H₂O intercalated with, synthesis and structure, **166**, 265
- Tetraiodotellurate(II)**
 conducting cation radical salts with, structural and physical properties, **168**, 396
- N,N,N',N'*-Tetramethyl-*p*-phenylenediamine
 fullerenes C₆₀ and C₇₀ in molecular complexes with, preparation, crystal structures, and characterization, **168**, 474
- Tetramethyltetraselenafulvalene**
 molecular conductors with rare-earth elements, crystal and electronic structures, **168**, 457
 organic synthetic metals, dimensionality and electrical properties, **168**, 367
- Tetramethyltetrafulvalene**
 conducting cation radical salts with tetraiodotellurate(II) and hexaiodotellurate(II), structural and physical properties, **168**, 396
- Tetraphenylphosphonium ion**
 TPP[M(Pc)(CN)₂]₂ (M=Fe,Co,Fe_{0.30}Co_{0.70}) salts, magnetoresistance study, **168**, 509
- Tetrathiafulvalene**
 conducting charge transfer salts based on, with anions containing selenocyanate ligands, synthesis, crystal structures, and physical properties, **168**, 573
 derivatives, conducting cation radical salts with tetraiodotellurate(II) and hexaiodotellurate(II), structural and physical properties, **168**, 396
 dimers, radical salts derived from, synthesis and electroconductive properties, **168**, 597
 organic synthetic metals, dimensionality and electrical properties, **168**, 367
 phenyl-substituted TTF vinylogues, dication salts of, preparation and structures, **168**, 427
 TTF[Ni(dimitt)₂]₂, thin films and nanowires, formation and characterization, **168**, 438
 TTF-TCNQ thin films, characterization, **168**, 384
- Thallium**
 Au₂TIP₂ with Tl in oxidation state zero, preparation and crystal structure, **165**, 238
 [(NH₄(18-Crown-6))₄MnX₄][TlX₄]₂ (X=Cl,Br), cubic *F*23 crystals, defects and luminescence behavior, **163**, 286
 Tl_{1–x}Na_xNb₂PO₈ and related compounds, structural comparison with Ca_{0.5+x}Cs₂Nb₆P₃O₂₄ and physical properties, **164**, 272
 TlNi_{0.98}Fe_{0.02}O₃ perovskites doped with ⁵⁷Fe, Mössbauer spectroscopy at varying temperatures, **168**, 126
 Tl₂S, crystal structure and stereochemistry, **168**, 322
- Thermal analysis**
 aluminosilicate wet gel transformation to solid state, **165**, 111
 Bi₄MO₈X (X=Cl, M=Ta; X=Br, M=Ta,Nb) layered intergrowth phases, **166**, 148
- Thermal conductivity**
 Ru₃Ge_{3+x} (0<x<1) chimney-ladder phases, **166**, 389
- Thermal decomposition**
 Mn–Al layered double hydroxides, **167**, 152

- Thermal evolution
 $KLnFe(II)(CN)_6 \cdot xH_2O$ ($Ln = La-Lu$), **167**, 34
- Thermal expansion
 $La_2W_{2-x}Mo_xO_9$ series, **167**, 80
 SnP_2O_7 , **166**, 42
- Thermal properties
 coordination polymer constructed from paddle-wheel building units, **166**, 213
 Cu(I)halide 2-ethylpyrazine coordination polymers, **169**, 103
 Li_xNiO_2 , **163**, 340
 oxometalate-intercalated layered double hydroxides, **167**, 59
 WO_3 -into-zirconia solid solutions in WO_3 - ZrO_2 catalysts, **164**, 339
- Thermal stability
 $Bi_{0.85}Ln_{0.15(1-n)}V_{0.15n}O_{1.5+0.15n}$, **163**, 300
 GeO_2 α -quartz-type structure, neutron diffraction study, **166**, 434
 $La_{0.10}WO_{3+y}$, **163**, 84
 $Li_3AlB_2O_6$, **163**, 369
 $Li_2O-Al_2O_3-B_2O_3$ system, **165**, 187
 Pt/Al_2O_3 catalysts prepared by sol-gel, **168**, 343
- Thermal treatment
 α - $LiMnO_2$: production of $Li_{1.6}Mn_{1.6}O_4$, **163**, 1
- Thermochromic sol-gel film
 organomodified silica composite, containing phosphomolybdic acid, preparation and characterization, **166**, 259
- Thermodynamics
 $La_{1-x}A_xMnO_{3\pm\delta}$ ($A = Ca, Sr$), high-temperature solution calorimetric measurements, **163**, 186
 mechanical characteristics of polymeric systems, **164**, 237
 $NdFeO_3$, **164**, 34
- Thermoelectric materials
 $Bi_{1.5}Pb_{0.5}Ca_{2-x}M_xCo_2O_{8-\delta}$ ($M = Sc^{3+}, Y^{3+}, La^{3+}$), **167**, 472
 β - Na_xCoO_2 , crystal structure and electric and magnetic properties, **166**, 177
 $A_{1-x}Sn_{9-x}Bi_{11+x}Se_{26}$ ($A = K, Rb, Cs$), composition and structure prediction based on phase homologies, **167**, 299
- Thermoelectric power
 molecular conductors based on TMEQ-ST-TTP, **168**, 608
 $Ni(dmit)_2$ simple salts doped with hydrogen-bonding pyridinium cations, **168**, 535
- Thermogravimetry
 $ACu_3Ru_4O_{12}$ ($A = Na, Ca, Sr, La, Nd$), **167**, 126
 $Gd-M-O$ system, **166**, 285
 Li_xNiO_2 , **163**, 340
 $Sm-Mn-O$ system: phase equilibrium at 1100°C, **167**, 160
- Thermopower
 $Bi_{1.5}Pb_{0.5}Ca_{2-x}M_xCo_2O_{8-\delta}$ ($M = Sc^{3+}, Y^{3+}, La^{3+}$), **167**, 472
 $Ca_2Co_{0.8}Ga_{1.2}O_{4.8}$ at high temperature, **167**, 196
 ionically compensated quadruple and quintuple perovskite layered cuprates with Ti blocking layers, **164**, 188
 $Sr_3Fe_{2-x}Ti_xO_{6+\delta}$ Ruddlesden-Popper phases, **168**, 275
- Thermoset epoxy-clay nanocomposites
 formation, role of α,ω -diamines as clay surface modifiers and polymer curing agents, **167**, 354
- Thin films
 $La_{0.8}MnO_{3-\delta}$ magnetoresistive thin film, crystal structure transformations, **164**, 177
 $LiCoO_2$, IR study, **165**, 42
 molecular metals: TTF-TCNQ, **168**, 384
 photochromic nanocomposites based on polyoxometalates dispersed in polyacrylamide, sonochemical preparation, **169**, 1
 TTF[Ni(dimit)₂]₂, formation and characterization, **168**, 438
- Thiocyanate
 N,N' -dialkylimidazolium cadmium-thiocyanate complexes, cation-controlled formation and structure, **169**, 199
 N,N' -dialkylimidazolium salts [(C₂Im)₂][Cd₂(SCN)₆]·C₃H₆O and [(Me₂Im)₂][Cd₂(SCN)₆], synthesis and X-ray structure, **167**, 119
- 2-Thioxo-1,3-dithiole-4,5-dithiolate
 (anilinium)(18-crown-6)[Ni(dimit)₂] polymorphs, structure and magnetic properties, **168**, 661
- Three-way catalysts
 ceria-lanthana-based promoters of, prepared by sol-gel routes, phase analysis and oxygen storage capacity, **163**, 527
- Thulium
 $TmBaCuFeO_{5+\delta}$, low-temperature magnetic properties, **166**, 251
 $Tm_2Ba_2CuPtO_8$, magnetic behavior, **165**, 297
 $TmTBi$ ($T = Ni, Pd, Pt$), preparation and structure, **168**, 18
 $TmCrO_4$, field-induced magnetic properties, **164**, 313
 $TmMnO_3$, magnetic properties, **165**, 131
 $TmTSb$ (Rh, Ir), preparation and structure, **168**, 18
- Tin
 $Cd_{1+x}In_{2-2x}Sn_xO_4$, transparent conducting solid solution, cation distribution in, **163**, 259
 $IrSn_4$, polymorphism, **168**, 34
 $K_4Sn_2Se_6$ and $K_4Sn_3Se_8$ Zintl compounds, microwave-assisted preparation, morphology, and photoacoustics, **165**, 125
 $LaGa_3Sn_3Sb_2$, structure, **167**, 41
 $LaMnO_{3+\delta}$ perovskite doped with, low-temperature phase formation, **168**, 100
 $Li_2M(II)Sn_3O_8$ ($M(II) = Mn, Zn$), cation ordering in, **169**, 44
 Na_4SnSe_4 Zintl compounds, microwave-assisted preparation, morphology, and photoacoustics, **165**, 125
 $Ni_{10}Sn_5P_3$, crystal structure, **166**, 352
 $RuGa_3Sn_w$, Nowotny chimney ladder phases and 14-electron rule, **164**, 210
 $A_{1-x}Sn_{9-x}Bi_{11+x}Se_{26}$ ($A = K, Rb, Cs$), composition and structure prediction based on phase homologies, **167**, 299
 SnP_2O_7 , structure and phase transitions, **166**, 42
 SnS_2 nanoflakes, synthesis from tetrabutyltin precursors, **164**, 106
 $RESn_xSb_2$ ($RE = La, Ce, Pr, Nd, Sm$; $x = 0.5, 0.7$), magnetic and transport properties, **164**, 292
 $Sn-Se$ Zintl molecular oligomers, microwave-assisted preparation, morphology, and photoacoustics, **165**, 125
 Sr_2SnO_4 , structure, high-resolution neutron powder diffraction study, **169**, 208
 TiO_2/SnO_2 nanocrystals, rapid synthesis and photocatalytic activity for methyl orange decomposition, **165**, 193
 $U_3Te_5Sn_x$, structures and magnetic properties, **168**, 217
- Titanium
 $Ba_{1-x}La_xTi_{1-x}Cr_xO_3$ complex perovskites, structural characterization, **164**, 98
 $Ba_{42}Ti_{51}Fe_{20}O_{174}$ multilayered magnetic dielectric ceramic in $BaO-TiO_2-Fe_2O_3$ system, X-ray structural determination, **166**, 400
 $Bi_5Ti_3FeO_{15}$, four-layer Aurivillius-phase ferroelectrics, structural behavior, **164**, 280; *erratum*, **166**, 449
 $Bi_7Ti_4NbO_{21}$ Aurivillius-type compounds, crystal chemistry, **164**, 261
 $CaTiO_3$ perovskites doped with Fe, displacive phase transitions and strain analysis, high-temperature neutron diffraction study, **167**, 459
 $InFe_{1-x}Ti_xO_{3+x/2}$ ($x = 2/3$), crystal structure, **163**, 455
 ionically compensated quadruple and quintuple perovskite layered cuprates with Ti blocking layers, defect analysis, **164**, 188
 $La_{2/3-x}Li_{3x}TiO_3$ ($x = 0.05$) perovskite conducting Li ions, crystal structure, **166**, 67
 $La_{0.63}(Ti_{0.92}Nb_{0.08})O_3$, orthorhombic-tetragonal phase transition, high-temperature synchrotron X-ray powder diffraction study, **164**, 51
 $La_{2/3}TiO_3$ derivatives, structure and impedance spectroscopy, **163**, 472
 $Li_{1+x-y}Nb_{1-x-3y}Ti_{x+4y}O_3$ solid solutions, structural study, **166**, 81
 oxalato-titanates with $Ti_4O_4(C_2O_4)_8$ tetramers as building blocks, hydrothermal synthesis and characterization, **163**, 427
 $Pb(Fe_{2/3}W_{1/3})O_3-PbTiO_3$ relaxor ferroelectric system, phase diagram and phase transitions, **163**, 484

- PbTiO₃, ferroelectric–paraelectric phase transition, pressure and temperature dependence, **167**, 446
- Sc₂O₃–Y₂O₃–ZrO₂–TiO₂ solid solutions, optimization for use as SOFC anode material, **165**, 12
- SrBi₄Ti₄O₁₅ four-layer Aurivillius-phase ferroelectrics, structural behavior, **164**, 280; *erratum*, **166**, 449
- Sr₃Fe_{2–x}Ti_xO_{6+δ} Ruddlesden-Popper phases, order–disorder-enhanced oxygen conductivity and electron transport, **168**, 275
- Sr_{1–x}La_xTi_{1–x}Cr_xO₃ perovskites, structure and conductivity, **165**, 381
- Sr₂TiSi₂O₈, crystal structure, **166**, 15
- TiO₂ nanoparticles, deactivation and regeneration in photocatalytic oxidation systems, **166**, 395
- TiO₂/dye/CuI cell, charge generation under different modes of illumination, **166**, 142
- TiO₂/SnO₂ nanocrystals, rapid synthesis and photocatalytic activity for methyl orange decomposition, **165**, 193
- Ln₂Ti₂S₂O₅ (*Ln* = Nd, Sm, Gd, Tb, Dy, Ho, Er, Y), optical properties, **165**, 228
- Ti_xTa_{11–x}Ge₈, structure and stabilization, **167**, 517
- U_{1–x}M_xTi₂O₆ (*M* = Ca²⁺, La³⁺, Gd³⁺), synthesis and crystal structure, **165**, 261
- Y₂O₃–ZrO₂–TiO₂ solid solutions, optimization for use as SOFC anode material, **165**, 12
- [(ZrO₂)_{0.92}(Y₂O₃)_{0.08}]_{0.9}(TiO₂)_{0.1}, structure, microstructure, and mixed conduction, **165**, 79
- Topological diagram
ferrocene: trimorphism and overall metastability of triclinic phase, **164**, 131
- Topotaxy
postepitaxial, via (0001)-oriented α-Fe₂O₃, in preparation of (111)-oriented epitaxial Fe_{3–x}O₄ films on α-Al₂O₃ (0001) substrates, **163**, 239
- Transition metals
3d, substitutional effects on magnetic and structural properties of quasi-two-dimensional La₅Mo₄O₁₆, **164**, 60
- Transmission electron microscopy
Bi_{0.775}Ln_{0.225}O_{1.5} (*Ln* = La, Pr, Nd, Sm, Tb, Dy) of rhombohedral Bi–Sr–O type: structural relationship to monoclinic ε-Bi_{4.86}La_{1.14}O₉, **168**, 91
- Ca₉In(PO₄)₇ whitlockite-type phosphate, **165**, 278
- CeO_{2–x} epitaxial domains deposited by laser ablation on glass, **166**, 197
- CeO₂ nanocrystals supported on SiO₂, **168**, 110
- La_{0.8}MnO_{3–δ} magnetoresistive thin film: crystal structure transformations, **164**, 177
- LiCoO₂: structural stability at 400°C, **168**, 60
- Sr(Sr_{1/3}Nb_{2/3})O₃, **166**, 24
- Transmutation
long-life actinides, rare earth tungsten bronzes as inert matrices for, **169**, 182
- Trifluoromethylsulfonyl anions
BEDT-TTF salts with, crystal and electronic structures and physical properties, **168**, 524
- Triphenylamine
fullerenes C₆₀ and C₇₀ in molecular complexes with, preparation, crystal structures, and characterization, **168**, 474
- Trirutile
coexistence with rutile phases in natural tapiolite, **163**, 218
- Tris(2,2′-bipyridine)nickel(II) bis(1,3-dithiole-2-thione-4,5-dithiolato) palladate(II) mono-acetonitrile
paramagnetic, preparation and crystal structure, **168**, 390
- Tris(hydroxymethyl)aminomethane
temperature-dependent structure–energy changes, **164**, 301
- Tris(hydroxymethyl)nitromethane
temperature-dependent structure–energy changes, **164**, 301
- Tungsten
Bi–W–Nb–O phases, microstructures, **163**, 479
- Bi_{3.24}Ln₂W_{0.76}O_{10.14} monoclinic compounds with pseudo-orthogonal cell based on pseudo-fcc subcell in Bi₂O₃–Ln₂O₃–WO₃ (*Ln* = La, Pr, Nd), **169**, 60
- La₂W_{2–x}Mo_xO₉ series, synthesis, structure, and thermal expansion, **167**, 80
- La_{0.10}WO_{3+y} hexagonal tungsten bronze-related phase formed at high pressure, structure and thermal stability, **163**, 84
- Na₂W₂O₇·1/2H₂O synthesized under high pressure and temperature, structure, **167**, 525
- oxometalate-intercalated layered double hydroxides, thermal behavior, **167**, 59
- Pb(Fe_{2/3}W_{1/3})O₃–PbTiO₃ relaxor ferroelectric system, phase diagram and phase transitions, **163**, 484
- Pb_xWO₃ tetragonal bronze, superstructure, **168**, 306
- rare earth tungsten bronzes, synthesis and application as inert matrices for transmutation of long-life actinides, **169**, 182
- TeO₂–WO₃ glasses, IR, XPS, and XANES structural studies, **168**, 175
- third-order nonlinear tungstates, relationship of structural and vibrational properties in Raman shifters, **163**, 506
- WO₃, structural transitions, crystallite nanosize effect on, Raman spectroscopic study, **167**, 425
- RE_xWO₃ bronzes, X-ray and electron microscopy studies, **167**, 412
- RE_xWO_{3+y} (*RE* = La, Nd) tungsten bronze-related phases, formation of, effects of pressure and temperature, **168**, 284
- WO₃-into-zirconia solid solutions in WO₃–ZrO₂ catalysts, **164**, 339
- Tunnel structure
manganese dioxides, influence on chemical properties, **164**, 5
- A_x(Mo,V)₈O₂₁ (*A* = K⁺, Rb⁺, Cs⁺) bronze with, synthesis and crystal structure, **163**, 210
- Pb₃(MoO₃)(PO₄)₅, **163**, 308
- Twinning
in 4234-type intermetallic borocarbides, **164**, 246
- in La_{0.8}MnO_{3–δ} magnetoresistive thin films, **164**, 177
- α-Li₄Zn(PO₄)₂, **166**, 341
- polysynthetic
in NaBa₂M₂⁺M³⁺O₆ (*M* = Ni, Cu), **165**, 214
- RbIn₃S₅, **167**, 214
- Two-band model
Bi_{1.5}Pb_{0.5}Ca_{2–x}M_xCo₂O_{8–δ} (*M* = Sc³⁺, Y³⁺, La³⁺), **167**, 472
- U
- Ultraviolet–visible–near-infrared spectroscopy
hexamethylenetetraethylurathiafulvalene charge transfer complexes of donor–acceptor type, **168**, 486
- Ultraviolet–visible spectroscopy
Gd₃[SiON₃]O with non-condensed SiON₃ tetrahedra, **167**, 393
- Uranium
calcium uranyl carbonates with multiple anionic species, structural arrangements in, **166**, 219
- cesium uranates, local uranium environment in, combined XPS, XAS, XRD, and neutron diffraction analysis, **166**, 320
- Cu₂UO₂(PO₄)₂ built up from [CuO₂]_∞ chains, synthesis, structure, and magnetic properties, **165**, 89
- Na₆(UO₂)(SO₄)₄(H₂O)₂, synthesis and crystal structure, **163**, 313
- rubidium uranyl molybdates, crystal chemistry, **168**, 245
- Sr[(UO₂)(SeO₃)₂]·2H₂O, **168**, 358
- (UO₂)₃(PO₄)₂(H₂O)₄, crystal structure, **163**, 275
- AE[(UO₂)(SeO₃)₂] (*AE* = Ca, Ba), variable dimensionality and topology, **168**, 358
- A₂(UO₂)[(UO₂)(PO₄)₄](H₂O)₂ (*A* = Cs, Rb, K), crystal structures, **167**, 226
- U₃Te₅Z_x (*Z* = Ge, Sn), structures and magnetic properties, **168**, 217
- U_{1–x}M_xTi₂O₆ (*M* = Ca²⁺, La³⁺, Gd³⁺), synthesis and crystal structure, **165**, 261

- V
- Valence
- $R\text{BaFe}_2\text{O}_{5+w}$ ($R = \text{Nd, Sm}$), **167**, 480
- bond valence sum calculations for local uranium environment in cesium uranates, **166**, 320
- CeNiGa, **168**, 28
- Cu and Fe in $\text{BaR}(\text{Cu}_{0.5}\text{Fe}_{0.5})_2\text{O}_{5+\delta}$ double perovskites ($R = \text{Lu, Yb, Eu, Sm, Nd, Pr}$), interplay between, **166**, 118; *erratum*, **168**, 354
- $\text{Cu}_{2.33-x}\text{V}_4\text{O}_{11}$, **166**, 382
- iron, in starting salt for precipitation of $\text{Zn}(\text{Fe, Ga})_2\text{O}_4$ solid solutions from aqueous solutions at 90°C , effect on crystallite growth, **168**, 5
- $\beta\text{-Na}_x\text{CoO}_2$, **166**, 177
- REOCl ($RE = \text{La-Nd, Sm-Ho, Y}$), **165**, 48
- Yb^{2+} and Yb^{3+} ions in strontium haloborates, **166**, 271
- Vanadium
- $\text{Ag}_2\text{O-V}_2\text{O}_5$ system, mechanochemically treated, reactivity and structure in relation to AgVO_3 polymorphs, **164**, 144
- $\text{Ag}_4\text{V}_2\text{O}_7$ crystals, mechanochemical synthesis by reaction of Ag_2O and V_2O_5 , **169**, 139
- $[\text{As}_2\text{V}_8^{\text{IVV}}\text{V}_2\text{O}_{26}(\text{H}_2\text{O})] \cdot 8\text{H}_2\text{O}$ with large cavities with nanosized channels in 3-D neutral framework, **169**, 160
- BaVS_3 , electron localization, anisotropy of electrical conductivity, orbital ordering, and spin-exchange interactions, **165**, 345
- BICOVOX and BICUVOX, conductivity, time-dependent degradation due to phase changes below 500°C , **163**, 224
- $\text{BiMg}_{2.5}\text{V}_{18.5}\text{O}_{38}$, preparation and characterization, **164**, 138
- BiMnVO_5 , synthesis and structure, **168**, 224
- BiMn_2VO_6 , synthesis and structure, **167**, 245
- $\text{Bi}_{0.85}\text{Ln}_{0.15(1-n)}\text{V}_{0.15n}\text{O}_{1.5+0.15n}$, stability, conductivity, and powder crystal structure studies, **163**, 300
- $[\text{Cu}(\text{en})_2]_4[\text{SiMo}_8\text{V}_4\text{O}_{40}(\text{V}^{\text{IV}}\text{O})_2][\text{MoO}_4]_2 \cdot 5\text{H}_2\text{O}$, hydrothermal synthesis and crystal structure, **165**, 1
- $\text{Cu}_{2.33-x}\text{V}_4\text{O}_{11}$, electrical resistivity, magnetic susceptibility, XPS studies, and electronic band structure, **166**, 382
- $(\text{H}_3\text{N}(\text{CH}_2)_4\text{NH}_3)[\text{V}_6\text{O}_{14}]$, hydrothermal synthesis and characterization, **167**, 407
- $\text{K}_3(\text{VO}_2)_2\text{PO}_4\text{PO}_3\text{OH} \cdot \text{H}_2\text{O}$, tape-like structure, **163**, 534
- $\text{LaNb}_{2-2x}\text{Ta}_{2x}\text{VO}_{9-\delta}$ ($x = 0-0.4$) and $\text{LaTa}_{2-2x}\text{Nb}_{2x}\text{VO}_{9-\delta}$ ($x = 0-0.1$), spectral properties, effects of oxygen nonstoichiometry, **167**, 73
- $\text{LiNi}_{1-x}\text{Mn}_x\text{VO}_4$ spinel, synthesis and electrochemical studies, **165**, 312
- $\text{Li}_{1+x}\text{V}_3\text{O}_8$, electronic state of vanadium ions in, EPR study, **163**, 421
- $A_x(\text{Mo, V})_8\text{O}_{21}$ ($A = \text{K}^+, \text{Rb}^+, \text{Cs}^+$) bronze with tunnel structure, synthesis and crystal structure, **163**, 210
- $(\text{NH}_4)_{21}[\text{H}_3\text{Mo}_{57}\text{V}_6(\text{NO})_6\text{O}_{183}(\text{H}_2\text{O})_{18}] \cdot 53\text{H}_2\text{O}$, single-crystal neutron structure analysis, **165**, 199
- $\text{Pb}_2\text{V}^{\text{III}}\text{O}(\text{VO}_4)(\text{V}_2\text{O}_7)_{0.5}$ with trivalent vanadium rutile-like chains, crystal structure, **163**, 519
- $\text{V}_2\text{GeO}_4\text{F}_2$, with chains of VO_4F_2 octahedra, preparation, structure, and properties, **165**, 74
- V_2O_5
- mechanochemical reaction with Ag_2O to form crystalline silver vanadates, **169**, 139
- xerogel, poly-*o*-methoxyaniline intercalated into, synthesis, characterization, and conductivity studies, **168**, 134
- $M_x\text{V}_2\text{O}_5A_y \cdot n\text{H}_2\text{O}$, high lithium capacity for rechargeable batteries, **163**, 93
- $[\text{V}_4\text{O}_{10}(\text{phen})_2]$ one-dimensional ladder-like chain complex, hydrothermal synthesis and crystal structure, **163**, 10
- $M_x\text{VOPO}_4 \cdot y\text{H}_2\text{O}$ ($M = \text{H, Na, K, Rb, Cs}$), ion-exchange properties, **163**, 281
- $\text{VOPO}_4 \cdot 2\text{H}_2\text{O}$ intercalation compound, synthesis by reaction at room temperature, **166**, 277
- $\text{V}^{4+}\text{-ZrO}_2$ tetragonal solid solutions obtained from gels, Rietveld refinement, **163**, 33
- zircon doped with, polarized electronic absorption spectra, theoretical study, **169**, 6
- $\text{Zr}_{1-\delta}\text{V}_{1+\delta}\text{As}$, crystal structure predictions, **169**, 96
- Verwey transition
- in $\text{RBAFe}_2\text{O}_{5+w}$ ($R = \text{Nd, Sm}$) under oxygen loading, **167**, 480
- W
- Water
- $[\text{As}_2\text{V}_8^{\text{IVV}}\text{V}_2\text{O}_{26}(\text{H}_2\text{O})] \cdot 8\text{H}_2\text{O}$ with large cavities with nanosized channels in 3-D neutral framework, **169**, 160
- calcium uranyl carbonates with multiple anionic species, structural arrangements in, **166**, 219
- $\text{Ca}_2M^{3+}(\text{OH})_6\text{Cl} \cdot 2\text{H}_2\text{O}$ ($M^{3+} = \text{Al}^{3+}, \text{Ga}^{3+}, \text{Fe}^{3+}, \text{Sc}^{3+}$), X-ray powder diffraction structural study, **167**, 137
- $[\text{C}_2\text{N}_2\text{H}_{10}][\text{Co}_{4.2}\text{Zn}_{1.8}(\text{PO}_4)_4(\text{HPO}_4)] \cdot \text{H}_2\text{O}$, template synthesis and structure, **166**, 369
- $[\text{C}_6\text{N}_2\text{H}_{14}][\text{Fe}_2^{\text{III}}\text{F}_2(\text{HPO}_4)_2(\text{H}_2\text{PO}_4)_2] \cdot 2\text{H}_2\text{O}$ open framework with one- and three-dimensional structures, synthesis, **165**, 334
- $[\text{C}_6\text{N}_2\text{H}_{14}][\text{Fe}_2^{\text{III}}(\text{OH})\text{F}_3(\text{HPO}_4)_2] \cdot 2\text{H}_2\text{O}$ open framework with one- and three-dimensional structures, synthesis, **165**, 334
- $(\text{CN}_3\text{H}_6)_2 \cdot \text{Zn}_3(\text{HPO}_3)_4 \cdot \text{H}_2\text{O}$, synthesis and structure, **167**, 337
- $\text{Co}_2\text{Fe}_y\text{Al}_{1-y}(\text{OH})_6\text{Cl} \cdot n\text{H}_2\text{O}$, trivalent cation substitution effect, **167**, 508
- $[\text{Co}_4(\text{OH})_2(\text{H}_2\text{O})_2](\text{C}_4\text{H}_{11}\text{N}_2)_2[\text{C}_6\text{H}_2(\text{COO})_4]_2 \cdot 3\text{H}_2\text{O}$ with tetranuclear clusters, **166**, 158
- $[\text{Cu}(\text{en})_2]_4[\text{SiMo}_8\text{V}_4\text{O}_{40}(\text{V}^{\text{IV}}\text{O})_2][\text{MoO}_4]_2 \cdot 5\text{H}_2\text{O}$, hydrothermal synthesis and crystal structure, **165**, 1
- doped calcium tartrate tetrahydrate, structural characterization, **163**, 491
- $[\text{Fe}(\text{H}_2\text{O})(\text{O}_3\text{P-CH}_2\text{-CO}_2)]$, hydrothermal synthesis, structure, and magnetic properties, **164**, 354
- $\text{H}_3\text{N}(\text{CH}_2)_3\text{NH}_3 \cdot \text{Zn}_3(\text{HPO}_3)_4 \cdot \text{H}_2\text{O}$, synthesis and structure, **167**, 337
- iron diphosphonates, structures and magnetic properties, **164**, 367
- $\text{KLnFe}(\text{II})(\text{CN})_6 \cdot x\text{H}_2\text{O}$ ($\text{Ln} = \text{La-Lu}$), characterization and thermal evolution, **167**, 34
- $\text{K}_3(\text{VO}_2)_2\text{PO}_4\text{PO}_3\text{OH} \cdot \text{H}_2\text{O}$, tape-like structure, **163**, 534
- $\text{Mn}_2(\text{H}_2\text{O})[\text{O}_3\text{C}(\text{CH}_2)_6\text{CO}_2]_2$, hydrothermal synthesis, crystal structure, and magnetic properties, **166**, 279
- Na-RUB-29 ion-exchanged microporous lithosilicate, synchrotron X-ray single-crystal diffraction and ^6Li MAS NMR, **167**, 310
- $\text{Na}_6(\text{UO}_2)(\text{SO}_4)_4(\text{H}_2\text{O})_2$, synthesis and crystal structure, **163**, 313
- $\text{Na}_2\text{W}_2\text{O}_7 \cdot 1/2\text{H}_2\text{O}$ synthesized under high pressure and temperature, structure, **167**, 525
- $(\text{NH}_4)_{21}[\text{H}_3\text{Mo}_{57}\text{V}_6(\text{NO})_6\text{O}_{183}(\text{H}_2\text{O})_{18}] \cdot 53\text{H}_2\text{O}$, single-crystal neutron structure analysis, **165**, 199
- $[\{\text{Ni}(\text{pca})(\text{H}_2\text{O})\}_2\text{Mo}_8\text{O}_{26}]$ molecular cluster, **167**, 370
- $M_2(\text{O}_3\text{PCH}_2\text{C}_6\text{H}_4\text{CH}_2\text{PO}_3) \cdot 2\text{H}_2\text{O}$ ($M = \text{Mn, Ni, Cd}$), hydrothermal synthesis and characterization, **167**, 330
- $\text{Sr}[(\text{UO}_2)(\text{SeO}_3)_2] \cdot 2\text{H}_2\text{O}$, variable dimensionality and topology, **168**, 358
- $(\text{UO}_2)_3(\text{PO}_4)_2(\text{H}_2\text{O})_4$, crystal structure, **163**, 275
- $A_2(\text{UO}_2)[(\text{UO}_2)(\text{PO}_4)]_4(\text{H}_2\text{O})_2$ ($A = \text{Cs, Rb, K}$), crystal structures, **167**, 226
- $M_x\text{V}_2\text{O}_5A_y \cdot n\text{H}_2\text{O}$, high lithium capacity for rechargeable batteries, **163**, 93
- $M_x\text{VOPO}_4 \cdot y\text{H}_2\text{O}$ ($M = \text{H, Na, K, Rb, Cs}$), ion-exchange properties, **163**, 281
- $\text{VOPO}_4 \cdot 2\text{H}_2\text{O}$ intercalation compound, synthesis by reaction at room temperature, **166**, 277
- $\text{Zn}_6(\text{PO}_4)_5(\text{HPO}_4) \cdot \text{C}_8\text{N}_3\text{H}_{28} \cdot 5\text{H}_2\text{O}$ intercalated with quintuply protonated tetraethylenepentamine, synthesis and structure, **166**, 265
- $\text{ZrOCl}_2 \cdot 8\text{H}_2\text{O}$, reactions with alkali metal nitrates, properties of ZrO_2 formed by, **163**, 202

Whitlockite-type phosphates

- $\text{Ca}_9\text{In}(\text{PO}_4)_7$, high-temperature phase transition, **165**, 278
 $\text{Sr}_9\text{A}(\text{PO}_4)_7$ ($A = \text{Sc}, \text{Cr}, \text{Fe}, \text{Ga}, \text{In}$), synthesis and characterization, **168**, 237

Wurtzite

- CdS and ZnS nanorods, synthesis from coordination polymer, **166**, 49

X

X-ray absorption fine structure

- energy-dispersive, exchange reaction of CuCl and BaO , **163**, 158

X-ray absorption near-edge structure

- 3d transition metal substitutional effects on magnetic and structural properties of quasi-two-dimensional $\text{La}_5\text{Mo}_4\text{O}_{16}$, **164**, 60

$\text{Bi}_{0.4}\text{Sr}_{2.5}\text{Cr}_{1.1}\text{O}_{4.9}$ and $\text{Bi}_{0.4}\text{Sr}_{2.5}\text{Fe}_{1.1}\text{O}_5$, **167**, 48

$\text{Cu}(\text{Ba}_{0.8}\text{Sr}_{0.2})_2(\text{Yb}_{1-x}\text{Ca}_x)\text{Cu}_2\text{O}_{6+z}$: hole generation and distribution via Ca substitution and O doping, **166**, 229

local uranium environment in cesium uranates, **166**, 320

TeO_2 - WO_3 glass, **168**, 175

thin films of molecular metals, **168**, 384

time-resolved, exchange reaction of CuCl and BaO , **163**, 158

X-ray absorption spectroscopy

AlGaPON mixed nitrided galloaluminophosphates, structural study, **163**, 163

$\text{Co}_2\text{Fe}_y\text{Al}_{1-y}(\text{OH})_6\text{Cl} \cdot n\text{H}_2\text{O}$: trivalent cation substitution effect, **167**, 508

EuZn_2Ge_2 and EuZn_2Si_2 grown from Zn or $\text{Ga}(\text{In})/\text{Zn}$ flux, **163**, 37
 local uranium environment in cesium uranates, **166**, 320

X-ray diffraction, *see also* Powder X-ray diffraction

aluminophosphate open framework materials crystallized from fluoride media, **167**, 267

aluminosilicate wet gel transformation to solid state, **165**, 111

$\text{Ba}_8\text{Cu}_3\text{In}_4\text{N}_5$ with nitridocuprate groups and one-dimensional infinite In clusters, **163**, 449

$\text{Ca}_3\text{CoAl}_4\text{O}_{10}$, **166**, 191

$\text{Ca}_9\text{In}(\text{PO}_4)_7$ whitlockite-type phosphate, **165**, 278

CdPS_3 , **166**, 421

CeNiGa , **168**, 28

$\text{Co}_2\text{Fe}_y\text{Al}_{1-y}(\text{OH})_6\text{Cl} \cdot n\text{H}_2\text{O}$: trivalent cation substitution effect, **167**, 508

$\text{Cs}_2\text{Nb}_6\text{Br}_3\text{F}_{12}$, **163**, 319

$\text{ACu}_3\text{Ru}_4\text{O}_{12}$ ($A = \text{Na}, \text{Ca}, \text{Sr}, \text{La}, \text{Nd}$), structural analysis by, comparison with EXAFS results, **167**, 126

$\text{Cu}_2\text{UO}_2(\text{PO}_4)_2$ built up from $[\text{CuO}_2]_\infty$ chains, **165**, 89

HfRhGa , **166**, 305

$(\text{H}_3\text{N}(\text{CH}_2)_4\text{NH}_3)[\text{V}_6\text{O}_{14}]$, **167**, 407

Li_xNiO_2 , **163**, 340

$\text{Li}_{0.2(1)}\text{ZrNCl}$ superconducting phase derived by intercalation, single-crystal refinement, **169**, 149

local uranium environment in cesium uranates, **166**, 320

molecular conductors based on TMEO-ST-TTP, **168**, 608

$\text{A}_x(\text{Mo}, \text{V})_8\text{O}_{21}$ ($A = \text{K}^+, \text{Rb}^+, \text{Cs}^+$) bronze with tunnel structure, **163**, 210

$\text{Na}_{0.21}\text{Nb}_6\text{Cl}_{10.5}\text{O}_3$, **163**, 325

$\text{Na}_2\text{W}_2\text{O}_7 \cdot 1/2\text{H}_2\text{O}$ synthesized under high pressure and temperature, **167**, 525

$\text{Ni}_{10}\text{Sn}_5\text{P}_3$, **166**, 352

$\text{Sr}_3\text{Al}_{10}\text{SiO}_{20}$, **169**, 53

$\text{U}_3\text{Te}_5\text{Z}_x$ ($Z = \text{Ge}, \text{Sn}$), **168**, 217

ZrRhGa and $\text{ZrRh}_{0.710(4)}\text{In}$, **166**, 305

X-ray photoelectron spectroscopy

AlGaPON mixed nitrided galloaluminophosphates, structural study, **163**, 163

$\text{Cu}_{2.33-x}\text{V}_4\text{O}_{11}$, **166**, 382

local uranium environment in cesium uranates, **166**, 320

TeO_2 - WO_3 glass, **168**, 175

m-Xylene

isomerization over MMM-1, **167**, 363

Y

Ytterbium

$\text{BaYb}(\text{Cu}_{0.5}\text{Fe}_{0.5})_2\text{O}_{5+\delta}$ double perovskites, interplay of Cu and Fe valences, **166**, 118; *erratum*, **168**, 354

$\text{Bi}_{0.85}\text{Yb}_{0.15(1-n)}\text{V}_{0.15n}\text{O}_{1.5+0.15n}$, stability, conductivity, and powder crystal structure studies, **163**, 300

$\text{Cu}(\text{Ba}_{0.8}\text{Sr}_{0.2})_2(\text{Yb}_{1-x}\text{Ca}_x)\text{Cu}_2\text{O}_{6+z}$: XANES study: hole generation and distribution via Ca substitution and O doping, **166**, 229

$\text{KYbFe}(\text{II})(\text{CN})_6 \cdot x\text{H}_2\text{O}$, characterization and thermal evolution, **167**, 34

Si–Yb system, constitution, crystal chemistry, and physical properties, **163**, 178

Yb^{2+} and Yb^{3+} ions in strontium haloborates, valence states and luminescence properties, **166**, 271

YbAgMg , magnetic and electrical properties, ^{151}Eu Mössbauer spectroscopy, and chemical bonding, **164**, 201

$\text{Yb}_{1-y}\text{Al}_{3-x}\text{Ge}_x$ and $\text{Yb}_{1-y}\text{Al}_{3-x}\text{Si}_x$, homoatomic clustering in, **163**, 113

$\text{Yb}_2\text{Ba}_2\text{CuPtO}_8$, magnetic behavior, **165**, 297

Yb_7Bi ($T = \text{Pd}, \text{Pt}$), preparation and structure, **168**, 18

YbCrO_4 , field-induced magnetic properties, **164**, 313

Yb_3Ge_5 , structure and properties, **165**, 178

YbMnO_3 , magnetic properties, **165**, 131

Yttrium

alumina–yttria system, high-energy ball milling in, modeling, **164**, 88

$\text{BaY}(\text{Cu}_{0.5}\text{Fe}_{0.5})_2\text{O}_{5+\delta}$ double perovskites, interplay of Cu and Fe valences, **166**, 118; *erratum*, **168**, 354

$\text{Ba}_3\text{YRu}_2\text{O}_9$ 6H-perovskites, crystal structure and magnetic properties, **165**, 317

$\text{Bi}_{1.5}\text{Pb}_{0.5}\text{Ca}_{2-x}\text{Y}_x^{3+}\text{Co}_2\text{O}_{8-\delta}$, thermoelectric properties, **167**, 472

(bis(ethylenedithio)tetrathiafulvalene) $_5[\text{Y}(\text{NCS})_6\text{NO}_3] \cdot \text{C}_2\text{H}_5\text{OH}$, crystal and electronic structures, **168**, 457

$\text{Ce}_{1-x}\text{Y}_x\text{O}_{2-x/2}$ ($0 \leq x \leq 0.35$) nanocrystals, synthesis via carbonate precipitation and characterization, **168**, 52

$\text{Na}_{1.5}\text{Y}_{1.5}\text{F}_6$, hexagonal phase, high-pressure behavior, **165**, 159

$\text{Nd}^{3+}:\text{YAB}$, spectroscopic and crystal field investigation, **167**, 386

Sc_2O_3 - Y_2O_3 - ZrO_2 - TiO_2 solid solutions, optimization for use as SOFC anode material, **165**, 12

(tetramethyltetraselenafulvalene) $_3[\text{Y}(\text{NO}_3)_5] \cdot 2\text{C}_6\text{H}_5\text{Cl}$, crystal and electronic structures, **168**, 457

$\text{Y}_2\text{Ba}_2\text{CuPtO}_8$, magnetic behavior, **165**, 297

$\text{Y}_4\text{T}_2\text{B}_3\text{C}_4$ intermetallic borocarbides, synthesis, structures, and magnetic properties, **164**, 246

Y_7Bi ($T = \text{Ni}, \text{Pd}, \text{Pt}$), preparation and structure, **168**, 18

$\text{YB}_{17.6}\text{Si}_{4.6}$, synthesis and crystal structure, **164**, 361

$\text{YMe}_x\text{Mn}_{1-x}\text{O}_3$ ($\text{Me} = \text{Cu}, \text{Ni}, \text{Co}$) perovskites, structural characterization, **163**, 377

$\text{YNi}_{0.98}\text{Fe}_{0.02}\text{O}_3$ perovskites doped with ^{57}Fe , Mössbauer spectroscopy at varying temperatures, **168**, 126

YOCl , stability of, bond valence study, **165**, 48

Y_2O_3 - ZrO_2 - TiO_2 solid solutions, optimization for use as SOFC anode material, **165**, 12

$\text{Y}_2\text{Ti}_2\text{S}_2\text{O}_5$, optical properties, **165**, 228

$[(\text{ZrO}_2)_{0.92}(\text{Y}_2\text{O}_3)_{0.08}]_{0.9}(\text{TiO}_2)_{0.1}$, structure, microstructure, and mixed conduction, **165**, 79

Z

Zeolites

aluminophosphate open framework materials, crystallization from fluoride media, cyclam as structure-directed agent in, **167**, 267

MTN-type, with tetragonal symmetry, crystallization and spontaneous phase transformation, **164**, 19

- SSZ-50, polymethylated [4.1.1] octanes leading to, **167**, 289
 Y, ordered silver iodide nanoclusters inside, luminescence, **169**, 81
- Zinc
 Bi_{1.5}Zn_{0.92}Nb_{1.5}O_{6.92} cubic pyrochlore, structural study, **168**, 69
 Bi_{~1.2}Zn_{~1.2}PO_{5.5} disordered compounds, crystal structure, role of oxygen-centered tetrahedra linkage, **167**, 168
 CaZn₂Ge₂, electronic structure, **167**, 107
 CaZn₂Si₂, synthesis and characterization, **167**, 107
 [C₂N₂H₁₀][Co_{4.2}Zn_{1.8}(PO₄)₄(HPO₄)]·H₂O, template synthesis and structure, **166**, 369
 (CN₃H₆)₂·Zn₃(HPO₃)₄·H₂O, synthesis and structure, **167**, 337
 [C₆N₄H₂₂][ZnPO₄]₄ with open framework, synthesis and structure, **165**, 182
 CoGa_{3-x}Zn_x and CoIn_{3-x}Zn_x systems, FeGa₃ structure type variations in, **165**, 100
 δ-Co₂Zn₁₅, preparation and double-helix icosahedra structure, **166**, 53
 EuZn₂Ge₂
 grown from Zn or Ga(In)/Zn flux, crystal structure and electrical and magnetic properties, **163**, 37
 synthesis and characterization, **167**, 107
 EuZn₂Si₂ grown from Zn or Ga(In)/Zn flux, crystal structure and electrical and magnetic properties, **163**, 37
 H₃N(CH₂)₃NH₃·Zn₃(HPO₃)₄·H₂O, synthesis and structure, **167**, 337
 La₂Sr₂ZnMnO₈, structural and magnetic chemistry, **168**, 202
 Li₂ZnCl₄ fast ionic conducting spinel-type chloride, ⁶Li and ⁷Li MAS NMR studies, **165**, 303
 α-Li₄Zn(PO₄)₂ and high-temperature polymorph β-Li₄Zn(PO₄)₂, hydrothermal synthesis and structure, **166**, 341
 Li₂Zn(II)Sn₃O₈, cation ordering in, **169**, 44
 SeCu_{1-x}Zn_xO₃ (0 ≤ x ≤ 1) perovskites, crystal chemistry and magnetic properties, **168**, 149
 ZnCr₂O₄ spinel, high-pressure Raman spectroscopy, **165**, 165
 Zn(Fe,Ga)₂O₄ spinel-type solid solutions, precipitation from aqueous solutions at 90°C, **168**, 5
 Zn₂(OH)_{0.14(3)}F_{0.86(3)}(PO₄), hydrothermal synthesis, single-crystal structure, and solid-state NMR, **164**, 42
 Zn₆(PO₄)₅(HPO₄)·C₈N₅H₂₈·5H₂O intercalated with quintuply protonated tetraethylenepentamine, synthesis and structure, **166**, 265
 Zn₄P₃O₁₁(OH)·3C₃N₂H₄, synthesis and structure, **163**, 364
 ZnS wurtzite nanorods, synthesis from coordination polymer, **166**, 49
- Zintl clusters
 one-dimensional infinite, Ba₈Cu₃In₄N₅ with, synthesis and structure, **163**, 449
- Zintl phases
 alkali metal–In–Bi systems, synthesis and structure, **163**, 436
 Ca₁₄MnSb₁₁, neutron diffraction study, **168**, 162
 K₄Sn₂Se₆, K₄Sn₃Se₈, Na₄SnSe₄, and molecular Sn–Se oligomers, microwave-assisted preparation, morphology, and photoacoustics, **165**, 125
 LiIn, cubic phase, transition into tetragonal structure at low temperature, **167**, 1
- Zircon
 reaction with dolomite, monitoring by neutron thermodiffraction, **166**, 426
 vanadium-doped, polarized electronic absorption spectra, theoretical study, **169**, 6
- Zirconium
 Ba(In_xZr_{1-x})O_{3-x/2}, crystal structure, microstructure, and ionic conductivity, **164**, 119
 Li₂CuZrO₄ polymorphs, synthesis and crystal structure, **166**, 311
 Li_{0.2(1)}ZrNCl superconducting phase derived by intercalation, single-crystal X-ray structural refinement, **169**, 149
 Sc₂O₃–Y₂O₃–ZrO₂–TiO₂ solid solutions, optimization for use as SOFC anode material, **165**, 12
 V⁴⁺–ZrO₂ tetragonal solid solutions obtained from gels, Rietveld refinement, **163**, 33
 WO₃-into-zirconia solid solutions in WO₃–ZrO₂ catalysts, **164**, 339
 Y₂O₃–ZrO₂–TiO₂ solid solutions, optimization for use as SOFC anode material, **165**, 12
 ZrB₂, electronic structure and normal-state conductivity, **169**, 168
 ZrCl₄, reactions with alkali metal nitrates, properties of ZrO₂ formed by, **163**, 202
 ZrCuSiP, structure and electrical transport properties, **165**, 372
 β-ZrNX (X = Br, I), high-pressure synthesis and crystal structures, **163**, 77
 ZrO₂, formed by metal salt–alkali metal nitrate reactions, properties, role of metal precursors and alkali metal ions, **163**, 202
 ZrOCl₂·8H₂O, reactions with alkali metal nitrates, properties of ZrO₂ formed by, **163**, 202
 [(ZrO₂)_{0.92}(Y₂O₃)_{0.08}]_{0.9}(TiO₂)_{0.1}, structure, microstructure, and mixed conduction, **165**, 79
 ZrRhGa and ZrRh_{0.710(4)}In, X-ray single-crystal studies, **166**, 305
 ZrSiO₄–MgCa(CO₃)₂ reactions, monitoring by neutron thermodiffraction, **166**, 426
 Zr_xTa_{11-x}Ge₈, structure and stabilization, **167**, 517
 Zr_{1-δ}V_{1+δ}As, crystal structure predictions, **169**, 96
- Zirconium aryldiphosphonates
 with high porosity, preparation and conversion to strong Brønsted acids, **167**, 376