

Cumulative Keyword Index for Volume 178

A

Ab initio calculation, 47, 314, 464, 1284, 2117
Absorption spectrum, 1925
AC magnetic susceptibility, 3461
Acid, 15
Acid properties, 3571
Acid–base properties, 3265
Actinide spectra, 408
Actinide spectroscopy, 505
Actinide, 483, 554, 578
Actinide valence, 563
Activation energy, 1959
Additive, 855
Adsorption, 2420
Adsorption dynamics, 2491
AEM, 661
Aerogel, 218
Agglomeration, 688
²⁷Al SATRAS NMR, 3655
Al₂(WO₄)₃, 998
Al₂O₃–TiO₂ phase system, 2897
Alkali borate glasses, 3376
Alkali metal, 194
Alkaline earth, 567, 1478
Alloys of ZnTe/CuInTe₂, 3476
Alternating antiferromagnetic Heisenberg chain, 3145
Alternative adsorption–desorption, 638
Aluminates, 1978
Aluminium triphosphate, 1212
Alumino-borate, 1513
Aluminophosphate, 782, 1929, 2322
Aluminum borate, 2262
Aluminum oxide, 2262
Aluminum phosphate-oxalate, 2686
Aluminum titanate, 2897
Americium, 578, 1898
Amide, 1241
Amine, 1880
1-Aminoethylidenediphosphonate, 1049
2-(Aminoethyl)phosphonic acid, 2658
Ammonium Iron(III) carboxyethylphosphonate, 306
Amorphous, 2346
Amorphous calcium phosphate, 1337
Amorphous phase, 477
Amorphous-to-crystal transformation, 1526
Anatase, 15, 2953
Anatase nanowire, 2179
Anatase phase, 329
Anatase TiO₂, 3110
A_nB_nO_{3n+2}, 2934
Anharmonic atomic vibrations, 2987
Anion doping, 3293, 3352
Anion exchange, 3648
Anion exchange material, 2292
Anion exchange resin, 390

Anionic clays, 142
Antiferromagnetic, 1203, 2376
Antiferromagnetic transition, 1221
Antiferromagnetism, 2274, 3615
Antiferromagnets, 928, 1712
Antimonate, 1165
Antimony oxide, 1030, 2602
Apatite, 1337, 2050, 3284
Aqueous solution, 855
Aqueous solution–gel, 166
Argentophilicity, 3074
Argon etching, 3405
Argyrodites, 3366
Array, 1589
Arsenic, 3740
5-asa intercalation, 3485
Asymmetric catalysis, 2486
Atom economic reactions, 58
Atomic spectra, 589
Atomistic simulation, 1959
Aurivillius phase, 180, 2873
Auto irradiation, 1898
Autocorrelation analysis, 882
Azide/nitrate route, 3708

B

B32 structure type, 2825
¹¹B-NMR, 1452
(Ba_{1-x}La_x)₂In₂O_{5+x} solid solution, 882
Ba₂In₂O₅, 346
Ba₃CaNb₂O₉, 1959
Ba₃MnNb₂O₉, 3389
Ba₃Ti₃O₆(BO₃)₂, 2067
Ba₄CaCu₃O_{8+δ}, 3207
Ba₅Pb₃ problems, 2959
Ba₆Ge₂₅, 715
Bad metals, 3679
Ball milling, 3672
BAM phosphor, 1414
BaMgAl₁₀O₁₇:Eu²⁺, 441
BaMoO₄, 2346
Band bending, 3352
Band gap, 245, 2128, 3169
Band gap energy, 1786
Band structural calculation, 2778, 3293
BaO–B₂O₃–TiO₂, 1452
Barium cobalt oxychloride, 3066
Barium molybdenum phosphates, 1406
Barium strontium aluminate, 3662
Barium strontium titanate, 279
Barium titanate, 1367
Barium zirconium diorthophosphate, 2144
BaTi(BO₃)₂, 2067
Battery materials, 1230

- 1,4-Benzenedicarboxylic acid, 621
 Bi³⁺, 3284
 Bi–Sr–Fe–O system, 1133
 Bi₂Sr₄Fe₂O₁₀, 1133
 Bi₂Te₃, 2163
 Bi₂WO₆, 1968
 Bi₄Ti₃O₁₂–SrBi₄Ti₄O₁₅, 2832
 Bi₁₂Sr₂₂Fe₁₁O₅₆, 1133
 2,2'-Bibenzimidazole, 3336
 Bicapped Keggin, 1988
 Bicomponent oxides, 1464
 Bimetallic alkoxides, 1464
 BIMEVOX materials, 2873
 Binary Ba–Ge system, 715
 Binary systems Mg–M–O (*M* = Y, La, Ce), 3265
 Biphasic mixtures, 3190
 Bis(maleonitriledithiolate)nickelate(III) complex, 100
 Bismuth, 1753, 2015
 Bismuth iodide, 3529
 Bismuth layer-structured ferroelectrics, 64
 Bismuth oxide, 180, 207
 Bismuth pyrochlore, 1575
 Bismuth(III) sulfide, 1786
 BiVO₄, 1145
 Blue bronze, 1471
 Blue bronze Rb_{0.3}MoO₃, 1440
 Bond lengths, 464
 Bond orders, 563
 Bond properties, 545
 Bond valence sum, 2934
 Borate, 671, 680, 729, 2987, 3563
 Boron nitride, 1925
 Borophosphate glasses, 1837, 1888
 Bromide, 3323
 Brownmillerite, 3679
 Brucite, 1940
 Bulk and surface structural parameters, 3265
 BVS, 2811
- C
- ¹³C, 621
 C14, 1799
 C15, 1799
 Ca–Co–Cu–O system, 2973
 Ca₂SnO₄: Eu³⁺, 917
 Ca₃Co₂O₆, 1670
 Ca₅Sn₃ problems, 2959
 Ca_{6.3}Mn₃Ga_{4.4}Al_{1.3}O₁₈, 3137
 Ca₇Co₃Ga₅O₁₈, 2197
 Ca₁₄AlSb₁₁ structure type, 1935
 Cable-like, 1589
 Cadmium, 1830
 Cadmium(II), 2306
 Cadmium(II) complex, 3336
 Calcium, 1807, 2947
 Calcium aluminate cement, 3256
 Calcium carbonate, 861
 Calcium pentafluoroaluminate beta, 3655
 Calcium pyrophosphate, 2354
 Calcium-deficient apatite, 3190
 Californium, 578, 589
 Calorimetry, 106
 CaO₆ octahedra, 1959
 Carbon nanotubes, 2262
 Carbon paste electrode, 1386
 Carbonate, 567
 Carnall, 448
 Catalysis, 85
 Catalytic activity, 128
 Cathode materials, 2692
 Cathodoluminescence, 2205
 Cation disorder, 1575
 Cation distribution, 3183
 Cation substitution, 2778
 Cation vacancies, 2042
 Cation-ordered perovskite, 153
 Cation-ordered structure, 1254
 Cationic conductivity, 3218
 Cavities, 776
 CdS, 2680
 Ce³⁺, 464
 Ce₂PdGa₁₂, 3547
 Cement hydration, 3256
 CePdGa₆, 3547
 Ceramic microstructure, 3595
 Ceramics, 1284
 Cerium, 976, 3323
 Cerium (IV), 1054
 Cerium dioxide, 2036
 Cerium oxide, 1973
 Cerium oxide carbonate hydrate, 2036
 Cermet, 1595
 Cesium, 41, 2109
 Cesium oxide, 1190
 Cesium silver antimony sulfide, 212
 Cetyltrimethylammonium bromide, 861
 Chain of non-perfect [Sb₅O₅(H₂O)₂]_{*n*}^{5*n*+}, 1030
 Chain structure, 3445
 Chalcogenide, 2128, 3117
 Channel, 2306, 2511
 Channels structure, 2376
 Characteristic diffuse distributions, 2647
 Characterization, 1609, 2152
 Charge density wave, 1440
 Charge–discharge property, 2741
 Charge order, 3615
 Charge transfer, 483, 2947
 Charge-transfer states, 419
 Chemical bath deposition, 2036
 Chemical bonding, 831, 3420
 Chemical deposition, 1786
 Chemical stability, 395, 1844
 Chemical synthesis, 908, 1925
 Chiral structure, 1929
 Chloride, 976, 3323
 Chloroantimonates(III), 2237
 1-(4'-Chlorobenzyl)-4-aminopyridinium, 100
 Chromate intercalated, 3571
 Chromium, 1830
 Chromium chalcogenide, 2778
 Chromium fluorides, 2191
 Chromium pairs, 2231
 Chromium vanadates with Zn, 2231
 Citrate, 166
 Citrate sol–gel, 3004
 Citric acid, 1915
 Cluster, 554
 Cluster-glass, 2778
 Clusters, 3563
 Co₇Se_{8–*x*}S_{*x*}, 1508
 Co/Al multilayer, 47
 Co-mediated synthesis, 1038

- Co-ordination frameworks, 2414
Co-ordination polymer, 2414
Coating, 2205
Cobalt, 868, 1049, 2376
Cobalt(II), 2306, 2658
Cobalt and nickel chalcogenides, 1508
Cobalt molybdate, 2791
Cobalt oxide, 769, 792
Cobaltite, 868, 1670
Coercivity, 2798, 3183
Coherent nanoparticle, 661
Coincidence doppler broadening spectroscopy, 2062
Collapsed structure, 1133
Colorimetry, 1145
Combustion synthesis, 382, 477, 1595
CoMoO₄·nH₂O, 2791
Complex perovskite, 1959
Composite, 85, 650, 2186, 3595
Composite crystal, 2973
Composite modulated structure, 1903, 2133
Composition, 2001
Compositional stoichiometry, 1644
Conduction, 2109
Conductivity, 390, 921
Conductivity and magnetization characterization, 1949
Configuration interaction, 412
Controlled growth, 2804
Controlled precipitation, 2766
Controlled reduction, 1326
Controlled release, 736
Controlled synthesis, 861
Cooperative processes, 470
Coordination analysis, 2586
Coordination chemistry, 72
Coordination number, 253
Coordination polymer, 2475, 2858, 3359
Copper, 142
Copper molybdate, 3145
Copper phosphate, 3461
Copper phosphide, 970
Copper–Schiff base complex, 3405
Coprecipitation, 3485
Coprecipitation synthesis, 2301
Core-shell, 1647
Core/shell structure, 85
Correlated tetrahedral rotations, 2647
Correlation crystal-field parameters, 536
Coulometric titration, 185
Covalent bonding, 2663
Cr³⁺ EPR, 3655
Crednerite, 2751
Crystal chemistry, 1559
Crystal chemistry of L-Ta₂O₅-related phases, 3308
Crystal engineering, 1445, 2475, 2486
Crystal growth, 200, 950, 1609, 2036, 3176, 3667
Crystal morphology, 950
Crystal structure, 28, 36, 41, 79, 120, 135, 200, 212, 270, 339, 454, 608, 680, 694, 702, 729, 776, 874, 902, 912, 976, 1003, 1017, 1049, 1071, 1087, 1112, 1125, 1241, 1247, 1312, 1349, 1495, 1503, 1569, 1620, 1637, 1753, 1851, 1874, 1880, 2015, 2024, 2030, 2091, 2128, 2197, 2237, 2256, 2282, 2363, 2414, 2613, 2673, 2724, 2791, 2867, 2942, 2947, 2959, 2973, 2987, 3014, 3066, 3117, 3137, 3169, 3176, 3197, 3251, 3323, 3359, 3396, 3420, 3453, 3514, 3529, 3581, 3589, 3605, 3667, 3708, 3722, 3729, 3740
Crystal structure determination, 1292, 1697
Crystal structure of molybdenum phosphates, 1406
Crystal structure refinement, 3218, 3437
Crystal-field, 536
Crystal-field parameters, 536
Crystal-field potential, 470
Crystal-field spectra, 419
Crystal-field theory, 489
Crystalline Y₂O₂CO₃, 3601
Crystallinity, 329, 1526
Crystallization, 15, 1337, 1675
Crystallized glass, 2067
Crystals, 1284
CST, 253
Cu valence, 1705, 3464
Cubic rare earths oxide, 395
Cuboctahedra, 52
Cuprous oxide, 1488
Cyano-bridged, 36
1,4-Cyclohexanedicarboxylic acid, 3152
- D
- Damage, 1898
Dangling bonds, 715
Decomposition mechanism, 142
Defect chemistry, 3027
Defect structure, 185, 2715
Deficient perovskite, 114
Dehydrogenation kinetics, 3672
Delafossite structure, 285
Density functional theory, 1422
Desymmetrization, 2608
Development, 3074
DFT-calculations, 1071
Diamine, 782, 2322
Diamond-like, 776
1,4-Diazacycloheptane, 694
Dicyanamides, 72
Dieke diagram, 412
Dielectric property, 3389
Differential scanning calorimetry, 1221
Differential thermal calorimetry, 356
Diffusion, 2608
4,4'-Dimethylenebiphenyldiphosphonic acid, 1349
Dipotassium copper antimony trisulfide, 3169
Direct precipitation reaction, 645
Disorder, 346, 702
Dispersion, 688
Displacive distortion, 742
Displacive transitions, 2191
Disproportionation, 3679
DNA chip, 3735
Dopant substitution, 1959
Doped ceria, 2062
Doped lanthanum chromite, 234
Double molybdates, 1580
Double perovskite, 200, 207, 1356
Double perturbation theory, 470
Double templates, 2383
Double-wall tubes, 1765
Drift processes, 3027
DSC, 2109
DTA, 2897
Dual-doped, 897
Dye self-sensitization, 321
Dye-sensitized solar cell, 1044
Dynamical disorder, 2647

E

Effect of doping upon, 3159, 3159
 Effective operators, 470
 Einsteinium, 589
 Electrical conductivity, 2715
 Electrical conductivity spectra, 3376
 Electrical properties, 613, 957, 1844, 2339
 Electrical resistivity, 1786, 1851, 3494, 3639
 Electrocatalysis, 1386
 Electrochemical, 3130
 Electrochemical insertion, 2998
 Electrochemical property, 1988
 Electrochemical response, 3352
 Electrochemistry, 1386
 Electroless deposition, 3595
 Electrolytic reduction, 1440
 Electron correlation effects, 470
 Electron density analysis, 3667
 Electron density distribution, 2741, 3662
 Electron diffraction, 742, 882, 1903, 2197
 Electron microscopy, 114, 1652, 2811, 3137, 3476, 3631
 Electron paramagnetic resonance, 1661
 Electron probe micro analysis (EPMA), 3323
 Electron spin resonance, 1973
 Electronegativity, 2663
 Electronic polarizability, 831, 2067
 Electronic structure, 41, 212, 230, 554, 1023, 1087, 1422, 1559, 3169, 3251, 3426
 Electronic transport, 868, 2050
 Element substitution, 1670
 ELNES, 1008
 Elpasolite, 153, 464
 Emission spectra, 645
 Energy level scheme, 435
 Energy levels, 412, 419, 448, 536
 Energy loss near edge fine structure, 3426
 Energy transfer, 505
 Energy transfer mechanism, 470
 Enthalpies, 1337
 Enthalpy of formation, 234, 1182, 1230
 Enthalpy of oxidation, 234
 Epitaxial films, 64, 245, 2001
 Epitaxial growth, 2262
 EPR, 2231, 3027
 EPR of vanadium oxides, 1551
 EPR spectroscopy, 2692
 ESR, 3686
 Ethylenediamine, 874, 1139
 Ettringite, 3256
 Eu^{2+} , 2354
 Eu^{3+} , 419, 2354, 3284
 $\text{Eu}_2\text{LiIrO}_6$, 200
 Eulytite, 3715
 Europium, 435
 EXAFS, 563, 567, 1773, 2759
 Exchange interactions, 3020
 Excitation spectra, 645, 2643
 Excited states, 464

F

^{19}F MAS NMR, 3655
 $f-d$ transitions, 483
 f to d transitions, 464
 F -elements, 505

f -element spectroscopy, 489, 511
 Faradaic efficiency, 2050
 Fast-ion conductors, 3366
 ^{57}Fe Mössbauer spectroscopy, 142
 Fe-bearing sphalerites, 655
 β - FeOOH , 3130
 Fe_2O_3 , 3130
 Fermi surface, 3159
 Fermium, 589
 Ferrites, 921
 Ferroelectric, 180
 Ferroelectric property, 2832
 Ferroelectricity, 3095
 Ferroic crystals, 2237
 Ferromagnetic, 1203
 Ferromagnetic interaction, 100
 Ferromagnetism, 120, 2339, 2798, 3431
 Filament-like crystals, 1539
 Film, 3735
 First-principles calculation, 412, 3381
 First-principles DFT calculations, 1023
 $5f$ -electron structure, 545
 $5f-5f$, 584
 Flexibility, 2420
 Flexible networks, 2519
 Flowerlike, 1139
 Fluorescence, 1445, 2159, 2858, 3396
 Fluorescent property, 1003
 Fluoride, 2167, 2620, 3197
 Fluorine, 1262
 Fluorite structure, 1254
 Fluorite-structured layers, 3464
 Fluorite-type superstructure, 1753, 2015
 Fluorophosphate glass, 2663
 5-Fluorouracil, 736
 Flux growth, 52, 2091, 3494
 Flux method, 3601
 Flux synthesis, 3233
 Formaldehyde, 1968
 Formation mechanism, 158
 $4f-5d$ transition, 2643
 FP-LMTO, 1773
 Framework flexibility, 2491
 Framework structure, 253
 Frank–Kasper phases, 1620
 Frequency upconversion, 2159
 FT-IR, 395, 1080, 2880, 3601
 FTRaman, 2880
 Fullerenoid oxide, 3137

G

Gadolinium, 1973
 Gadolinium diiodide, 2339
 Gadolinium gallium oxide system, 2301
 Gadolinium hydride iodides, 2339
 Gallides, 52
 Gallium, 3722
 Gallophosphate, 1197
 Gas sorption, 2527
 Gas-occlusion properties, 2555
 $\text{GdCaAl}_3\text{O}_7:\text{RE}^{3+}$ ($\text{RE} = \text{Eu}, \text{Tb}$), 3004
 Ge–Ge bond breaking, 715
 Geometric isomer, 3648
 Germanides, 3233
 Glass, 2067, 3507

- Glass structure, 1837
Glass–ceramic composites, 1888
Glycine, 382
Glycolate, 1094
Gold, 1765
Graphite, 2947
Graphite fluoride, 1262
Graphs, 2480
Gravimetry, 3672
Green synthesis, 58
Grignard reagent, 908
Group electronegativity, 1
Growth temperature, 3210
Gypsum, 3256
- H
- ^1H , 621
Half-metallic, 262
Halides, 464, 1807, 3117
Halloysite template, 3595
Halobismuthate, 3529
HAP, 3190
Hausmannite, 2368
Heat capacity, 1071
Heat of formation, 106
Heavy fermion, 3547, 3639
Heisenberg antiferromagnet, 709, 3461
Hematite, 2798
Hercinitite, 1644
Heteropolar bonding, 1023
Heterostructures, 2163
Heusler phase, 3303
Hewettite, 22
Hexacyanoferrate(III), 1940
Hexagonal perovskite, 3066, 3426
Hexagonal perovskite-intergrowth, 3176
Hexagonal tubes, 1765
Hierarchical structure, 2804
High pressure, 8, 356, 998, 2218, 2602
High pressure synthesis, 2620
High surface area, 1818
High temperature, 2602
High-field magnetization, 709
High-pressure effects in solids, 93
High-pressure phases, 3275
High-pressure synthesis, 135, 2594
High-pressure synthesis in oxygen atmosphere, 1661
High- T_c superconductive copper oxides, 3464
High-temperature XRD, 2144, 2709
Hollandite, 1903
Hollandite-type structure, 2741
Hollow, 3522
Hollow carbon nanospheres, 908
Hollow microspheres, 390, 861
Hollow silica nanotubes, 2383
Hollow spheres, 1647
Holmium, 2663
Holmium hydroxyapatite, 3275
Homologous series, 3464
Host-guest, 2409
Host-guest chemistry, 2436
HP-HT synthesis, 3431
HTXRPD, 2987
Hückel theory, 1269
Hybrid material, 736, 2292
Hydration, 811
Hydration products, 3256
Hydride, 356
Hydrogen adsorption, 2527
Hydrogen bond, 1445, 2880
Hydrogen bonding, 2475
Hydrogen bonding interaction, 2306
Hydrogen evolution, 329
Hydrogen exchange reactions, 2555
Hydrogen storage, 1799, 2211
Hydrogen storage materials, 3672
Hydrogenphosphate, 1054
Hydrolysis, 1337
Hydro(solvo)thermal synthesis, 1197
Hydrotalcite, 736, 1940, 2701, 3571
Hydrotalcite-like compounds, 142
Hydrothermal, 970, 1017, 1395, 2332, 2394, 3210
Hydrothermal crystallisation, 1738
Hydrothermal deposition, 1864
Hydrothermal process, 2179
Hydrothermal reaction, 1968, 2256, 3703
Hydrothermal stability, 1630
Hydrothermal synthesis, 158, 306, 499, 608, 621, 694, 729, 825, 902, 912, 1003, 1317, 1321, 1349, 1825, 1880, 1929, 1988, 2167, 2613, 2673, 2858, 2913, 3359, 3437, 3514, 3740
Hydrothermally synthesized, 776
Hydrotreating, 2759
Hydroxide flux, 200
Hydroxyapatite, 2838
Hyperfine structure, 589
- I
- Illumination, 1145
Imidazole, 3152
Iminodiacetic acid, 3729
Impedance spectroscopy, 172
Impurity-sensitized luminescence, 470
In situ measurements, 2867
Incommensurate phase, 2880
Incorporation, 47
Indium, 79, 1247, 2128, 2724
Indium compounds, 3494
Indium oxalate, 3703
Indium oxide, 3703
Infrared emissivity, 650
Inorganic compound semiconductors, 957
Inorganic microporous material, 1003
Inorganic oxides, 2430
Inorganic structures, 2452
Inorganic/organic composites, 3074
Inorganic–organic hybrid, 1321, 1386, 2376, 3514
Intercalation, 64, 314, 811, 1778, 2701, 2947
Interconnect, 234
Intergrowth structure, 2897
Intermediate phase, 661
Intermetallic compound, 79, 339, 1247, 1292, 1620, 2077, 2724, 3101
Intermetallics, 262, 1595, 3233, 3420, 3547
Internal photoelectric effect, 1786
Interpenetration, 2452, 2475
Inverse spinel, 3500
Iodobismuthate, 3529
Ion exchange, 499, 811, 1614, 2838
Ion exchanger, 253
Ion pair receptors, 2436
Ion transference number, 2050

- Ion-exchange property, 2741
Ionic conduction, 346
Ionic conductivity, 172, 680, 2015
Ionic conductors, 2873
Ionic liquid, 1722
Ion–ion energy transfer, 511
Ion–ligand interaction, 489
IR, 1569, 3554, 3686
IR powder absorption spectroscopy, 882
IR spectroscopy, 3284
Ir–Al binary system, 339
Iron, 36, 1133, 1503
Iron nitride, 2390
Iron phosphonate, 1125
IRRS, 2663
Isonicotinic acid, 2858
Isosbestic point, 2663
Isosteric heat of adsorption, 2527
Isotope shift, 589
- J**
- Jahn–Teller cooperative ordering, 2191
Jahn–Teller effect, 1165, 2751
Joint Rietveld refinement, 1620
- K**
- $K_2InC_{10}O_{10}H_6F_9$, 3197
 β - K_2SO_4 structure, 1601
 $K_2S_2O_7$, 1697
 $K_3InC_{12}O_{12}F_{18}$, 3197
 $K_3InC_{12}O_{14}H_4F_{18}$, 3197
 K_3InF_6 , 3197
Kinetic phase transition, 2608
Kinetics, 1526
K–Ag–In system, 3494
 $KNaS_2O_7$, 1697
- L**
- L– Ta_2O_5 structure, 3308
 $La_{0.75}Sr_{0.25}Cr_{1-x}Mn_xO_3$, 1844
 La_2LiIrO_6 , 200
 La_2O_3 , 395
 La_5Ga_3 problems, 2959
 La_5Ge_3Ga –synthesis and structure, 1112
 La_5Ge_3Pb –synthesis and structure, 1112
 $La_5Ge_3Si_{0.75}$ –synthesis and structure, 1112
 La_5Ge_3Si –synthesis and structures, 1112
 La_5Ge_3Sn –synthesis and structure, 1112
 La_5Ge_4 derivatives, 1112
 $LaMgAl_{11}O_{19}$, 2734
 $LaNiO_2$, 1326
 $LaNiO_3$ nanowires, 1157
Lanthanide, 429, 448, 483, 1094, 1221, 2414, 2586
Lanthanide complexes, 464
Lanthanide metal, 36
Lanthanide molybdate, 702
Lanthanide spectra, 408
Lanthanide(III)–copper(II) coordination polymers, 3729
Lanthanum, 166, 1637, 3581
Lanthanum cuprate, 28
Lanthanum silicate, 2050, 3275
Lanthanum substitution, 2832
 $LaSb_2Sn_x$, 2133
Laser-induced crystallization, 3507
Laser-induced fluorescence, 511
Lattice parameters, 230, 245, 2001
Laves phase, 356, 1799
Layer, 1003, 2686
Layer structure, 64, 3074
Layer-by-layer self-assembly, 3735
Layered cobalt oxide, 3667
Layered cobaltite, 2186
Layered compounds, 2256, 2575, 3218
Layered crystal structure, 3471
Layered double hydroxide, 142, 736, 1830, 2701, 3485, 3648
Layered lanthanon titanates, 761
Layered materials, 3514
Layered MoO_3 , 390
Layered perovskite, 811
Layered potassium antimonates, 172
Layered structure, 114, 499, 1513, 2922
LDH nanoparticles, 2766
Lead nitrate, 2608
Lead oxide, 1422
Lead vanadium phosphate, 3715
 $Li_{0.25}(Ag_{1-x}In_x)_{0.75}$, 3303
 $LiAg_2In$, 3303
 $LiAl_{0.05}Mn_{1.95}O_{3.95}F_{0.05}$, 897
 $LiAlO_2$, 3667
 LiB_3O_5 , 2987
 $LiCoO_2$, 3667
 $Li_{1+x}Mn_{2-x}O_4$, 1182
Li-ion batteries, 2575
Ligands, 2414
Light element electron probe microanalyses, 976
 $LiMn_2O_4$, 897
 $LiMO_2$, 1230
Line broadening, 1799
Liquid ammonia, 1241
Lithium, 1241
Lithium batteries, 22
Lithium insertion, 22
Lithium ion batteries, 897, 1182
Lithium ion conductor, 1915
Lithium nickelates, 1661, 2692
Lithium tetrahydroaluminate, 3672
Lithium vanadate, 22
 $Ln_2Mo_3O_9$, 1471
Local structure, 346, 521
Lone pairs, 715, 1422
Lone-pair elements, 2024
Long-range ordering, 3461
Low temperature, 1925, 2218
Low-field magnetization, 2778
Low-temperature absorption spectra, 536
Low-temperature synthesis, 158, 847, 970, 1471
Lower valence oxide, 1471
 $Lu_2Si_2O_7$, 1
Luminescence, 441, 603, 825, 989, 1064, 1414, 2354, 2620, 2734, 3004, 3624, 3686
Luminescence properties, 1647
Luminescent, 2267
Luminescent materials, 1692
Luminescent properties, 2167
Lutetium disilicate, 3275
Lux–ampere characteristics, 1786
Lysine, 2880

M

- M_5X_4 structure types comparison, 1112
 Macroporous, 2838
 Magnesium, 2231, 3190
 Magnesium oxide, 245
 Magnesium substitution, 1203
 Magnetic, 776, 1049, 2390
 Magnetic and electrical properties, 1559
 Magnetic behavior, 1851, 2913, 3554
 Magnetic circular dichroism, 429
 Magnetic cluster, 2368
 Magnetic frustration, 1495
 Magnetic material, 1935, 3485
 Magnetic measurements, 1071, 2091
 Magnetic moment, 1203
 Magnetic phase transition, 2339
 Magnetic properties, 200, 306, 912, 957, 1003, 1104, 1221, 1356, 1508, 1830, 1988, 2030, 2104, 2394, 2658, 2751, 2942, 3014, 3020, 3137, 3176, 3485, 3708, 3715
 Magnetic properties of Mo(V) compounds, 1406
 Magnetic structure, 1495, 2626, 3315, 3453, 3605
 Magnetic susceptibility, 28, 52, 709, 1221, 2024, 2231, 2267, 3639, 3686
 Magnetic Zintl phase, 1935
 Magnetically ordered materials, 3020
 Magnetism, 356, 868, 976, 2077, 3101
 Magnetite, 1644
 Magnetolectrics, 3605
 Magnetoresistance, 868, 1559, 3615
 Malate, 776
 Manganese, 1503
 Manganese oxide, 370, 2368, 2751
 Manganese-iridium germanide, 1495
 Manganite, 120, 629, 1104, 1652, 1683, 1949, 2042, 2368, 3615
 Maximum-entropy method, 2741, 3662
 Maxwell–Wagner polarization, 613
 Mechanical alloying, 93
 Mechanical treatment, 2301
 Mechanochemistry, 3243
 MEM, 3667
 Membrane, 1765
 Mesoporous, 85
 Mesoporous materials, 2980
 Mesoporous molecular sieves, 1630
 Mesoporous oxides, 128
 Mesoporous shell, 1818
 Mesoporous silica, 650
 Mesoporous TiO_2 , 321
 Mesoporous titania, 329
 Mesostructure, 2383
 Metal, 1023
 Metal complex, 1929
 Metal hydrides, 1292, 1620, 1799, 3381
 Metal hypodiphosphate, 1308
 Metal organic framework, 2527, 3342
 Metal organic framework materials, 2491
 Metal phosphonate, 2267, 2658, 3514
 Metal to insulator transition, 868
 Metal-organic, 2409
 Metal-organic frameworks, 621, 2519
 Metal-organic subunit, 1349
 Metal-oxygen cluster, 3740
 Metal-transition oxide, 868
 Metallization, 831
 Metallo-organic precursors, 928, 1712
 Metallo-supramolecular, 2409
 Metalloporphyrin, 2555
 Metals, 1609
 Metamagnet, 52, 3547
 Metamagnetism, 1712
 Metastable phase, 1254, 1317
 Metastable state, 2301
 Methanol electro-oxidation, 1996
 Method of moments, 1269
 Methylammonium lead chloride, 1376
 Mg, 2231, 3190
 Mg–Cu–H system, 2211
 MI transition, 120
 Microcalorimetry, 1337
 Microcrystalline, 970
 Microparticles, 855
 Microporous, 2420
 Microporous aluminophosphates, 2647
 Microporous core, 1818
 Microporous material, 2555
 Microporous pillared compound, 306
 Microstructure, 892, 1367, 1670, 2179
 Microtubes, 1539
 Microwave conductivity of thin CuI films, 3010
 Microwave heating, 58
 Mild conditions, 2152
 Misfit-layer compounds, 1539
 Mixed alkali effect, 3376
 Mixed conductors, 2715
 Mixed metal oxide, 1044
 Mixed oxides, 142, 928, 1712, 2635, 3500
 Mixed sites, 1637
 Mixed valence actinide oxide, 521
 MnO_2 , 2368
 α - MnO_2 , 2741
 $MnOOH$, 2368
 Mn_3O_4 , 2368
 Mo(V) phosphates, 1406
 Mo_6 cluster compound, 3117
 Mobility, 921
 Modulated layered structure derived from the perovskite, 792
 Modulated NiAs-type structure, 742
 MOFs, 2533
 Molecular beam epitaxy, 245
 Molecular structures, 3206
 Molybdate, 153, 2218
 Molybdenum, 1221, 2759
 Molybdenum(V) clusters, 363
 Molybdoantimonate, 902
 Monoclinic structure, 1675
 Morphology, 441, 855, 861, 1488, 2001
 Mössbauer, 961
 Mössbauer spectra, 3183
 Mössbauer spectroscopy, 545, 1125, 2077, 3101, 3243
 Multiplets, 412
 Multiwall carbon nanotubes, 1488

N

- N-doped, 2953
 α - $NaFeO_2$ type, 1165
 $Na_2S_2O_7$, 1697
 $Na_3La_2(BO_3)_3$, 3624
 Na_3RuO_4 , 2104
 Nano-octahedron, 2394
 Nano-SrAl₂O₄ crystal, 230
 Nanobelt, 399
 Nanocrystalline, 382, 603

- Nanocrystalline ferrites, 1080
Nanocrystalline $\text{Lu}_2\text{O}_3\text{:Eu}$, 477
Nanocrystalline materials, 93
Nanocrystalline $\text{YVO}_4\text{:Eu}^{3+}$, 645
Nanocrystalline zirconia, 1675
Nanocrystallite, 892
Nanocrystals, 989, 1786
Nanodendrites, 2390
Nanodiamond, 688
Nanofibers, 3110
Nanomaterials, 950
Nanonail, 2804
Nanoparticles, 279, 1395, 1488, 2980, 3183
Nanophase, 511
Nanoporous shell, 3522
Nanoporous structures, 3342
Nanopowders, 128
Nanorods, 2152, 2368, 3130
Nanosaddle, 3090
Nanosized, 224
Nanospheres, 3522
Nanostructure, 819, 908, 950, 1139, 2211, 3090
Nanotube-like silver titanate, 638
Nanotubes, 1539
Nanowires, 376, 819, 2152, 2163, 2332, 2680, 2804
Natural rutile sand, 3110
 NaZn_{13} structure type, 3494
 NbO_6 octahedra, 1959
 Nd^{3+} ion, 2643
 $\text{Nd}[\text{Fe}(\text{CN})_6] \cdot 4\text{H}_2\text{O}$, 847
 NdFeO_3 , 847
 $\text{Nd}_2\text{LiIrO}_6$, 200
Near-infrared luminescence, 584
Negative thermal expansion, 270, 285
Neodymium, 976, 3323
Neodymium sulfate, 1003
Nephelauxetic effect, 2663
Neptunium, 1898
Neptunium compounds, 545
Neptunyl, 545, 584
Neptunyl crystal chemistry, 3445
Neptunyl lifetime, 584
Neptunyl luminescence, 584
Neptunyl sulfate, 3445
Neptunyl tetrachloride, 584
Nets, 2480
Network topology, 2452
Networks, 2475
Neutral framework, 3359
Neutron and synchrotron powder diffraction, 1376
Neutron diffraction, 153, 180, 356, 800, 976, 1292, 1356, 1620, 2042, 2197, 2998, 3315
Neutron powder diffraction, 1203, 1495, 2363, 3207, 3256, 3453
Neutron power different, 1601
Neutron scattering, 3605
Ni nanoparticles and wires, 3595
NiAs-type structure, 2001
 $\text{Ni}_7\text{Se}_{8-x}\text{S}_x$, 1508
Nickel, 2818
Nickel ferrite, 2394
Nickel monovalent, 1326
Nickel selenite chloride, 2942
Nickel sulfide, 2001
Nickel(II) phosphate, 2626
Ni–Ge–P ternary system, 742
19L Ta_2O_5 superstructure, 3308
Niobium, 253, 2635
Niobium glasses, 1888
Nitrates, 382
Nitridation, 218, 2390
Nitride boron, 3090
Nitrides, 1023, 1807
Nitridoborate, 1478
Nitrogen sorption, 3405
NMR spectra, 1837
NMR spectroscopy, 1851
Non-hydrolytic sol–gel, 1464
Nonlinear optical crystals, 2067
Nonlinear optical materials, 831
Nonlinear optics, 2987
Nonstoichiometry, 868
NTE, 8
Nuclear magnetic resonance (NMR), 1262
Nuclear magnetic resonance and relaxation, 3095
- O
- Octahedra tilting, 2934
Octamolybdate, 608
Olefin hydrogenation, 2555
1D chain, 1929
One-dimensional, 1349
One-dimensional bimetallic oxide, 3145
One-dimensional system, 3461
Open framework, 2673, 2942, 3703
Open metal organic frameworks, 2436
Optical absorption spectrum, 212
Optical anomalies, 2608
Optical basicity, 831
Optical nonlinearity, 1888
Optical properties, 957
Optical spectroscopy, 483
Ordering, 2575
Order–disorder, 3476, 3541
Order–disorder transitions, 2191
Organic templates, 1738
Organically templated, 1825, 2030, 2256
Organic–inorganic, 2292
Organic–inorganic hybrid material, 2237, 3145
Orientational relationships, 1367
Oxalate, 1094
Oxidation, 295, 1367
Oxidation number, 370
Oxidation states, 370
Oxide, 1221, 1670, 1753, 2015, 2186, 3206
Oxide glasses, 831
Oxide hydrate, 2791
Oxide ionic conduction, 2247
Oxide melt, 106
Oxobromide, 2024
Oxohalogenide, 3471
Oxonitridosilicate, 976, 3323
Oxychalcogenide, 957, 1503
Oxygen, 2818
Oxygen balance, 382
Oxygen content, 3464
Oxygen diffusion, 3027
Oxygen insertion, 3679
Oxygen intercalation, 1254
Oxygen ionic conductivity, 2050
Oxygen *K*-edge, 1008
Oxygen migration, 1959
Oxygen nonstoichiometry, 185, 921

Oxygen vacancies, 234
 Oxygen vapor pressure, 1644
 Oxyhalide tellurite glasses, 2159
 Oxynitride, 218, 2313
 Oxysulfide, 1637, 2759
 Ozone, 295

P

Palladium nanoparticles, 1996
 PAMAM dendrimer, 1038
 Paramagnetic susceptibility, 435
 Partial molar properties, 2715
 Pb₂BiVO₆, 2247
 PDP green phosphors, 3004
 PdTe₂, 2008
 Pechini method, 1915, 1978
 Pentaborate, 729
 Perovskite, 120, 234, 270, 279, 629, 882, 1008, 1104, 1312, 1376, 1683, 1915, 2042, 2282, 2313, 2363, 2586, 2811, 2846, 2934, 3389, 3431, 3453, 3589, 3615, 3679
 (Perovskite) manganites, 1203
 Perovskite structure, 3381
 Perovskite-related oxides, 961
 Peroxo complexes, 2635
 Perturbed function approach, 470
 Phase change, 253
 Phase diagram, 2818, 2825, 3476, 3631
 Phase equilibria, 339
 Phase relations, 1165, 1580, 2973
 Phase stability, 2602
 Phase stabilization, 2247
 Phase transformation, 578, 694, 1230, 1254, 1818
 Phase transition, 8, 207, 270, 715, 882, 998, 1292, 1376, 1478, 2144, 2218, 2225, 2237, 2282, 2436, 2846, 2867, 2880, 2927, 3095, 3541
 Phenanthroline, 3722
 1,10-Phenanthroline, 2613
 Phosphate, 912, 1054, 3581, 3722
 Phosphate glasses, 1533
 Phosphide, 970
 Phosphonate, 1049
 Phosphor, 441, 2205
 Phosphor film, 2734
 Phosphorous, 1753, 2015
 Phosphorus nitrides, 135
 Photo-induced magnetization, 36
 Photocatalysis, 329, 2313, 3293, 3500, 3522
 Photocatalyst, 2953
 Photocatalytic, 224, 1395
 Photocatalytic activity, 321, 1968
 Photocatalytic sequence, 761
 Photochromic effect, 1145
 Photochromism, 1145
 Photoconductivity, 1786
 Photoconductivity spectra, 1786
 Photoelectrochemical, 1044
 Photoelectrochemical properties, 3210
 Photographic chemistry, 3074
 Photoluminescence, 477, 505, 702, 902, 917, 1284, 1925, 2036, 2346, 3152, 3284, 3507
 Physics of crystal growth, 3095
 π - π interaction, 2306
 Pigment coatings, 1145
 Plutonia, 521
 Plutonium, 589
 Plutonium oxide, 563

Pnictide, 970
 Point defects, 1301, 2907
 Poly (styrene-alt-maleic acid), 861
 Polyacrylamide gel method, 603
 Polyaminocarboxylate, 2635
 Polyaniline, 2163
 Polychalcogenide, 1087
 Polycrystal, 1670
 Polygons, 2409
 Polyhedra, 2409
 Polyimide, 650
 Polymeric precursor method, 1452, 2346
 Polymorphism, 1, 1580
 Polymorphs, 861, 1125, 2475
 Polyol process, 989, 1488
 Polyoxometalate, 608, 1386, 1988, 3563, 3735, 3740
 Polyoxomolybdate, 702, 1349
 Pore windows, 2491
 Porous materials, 2491
 Positron and electron charge densities, 2117
 Positron annihilation spectroscopy, 2062
 Potassium, 1241
 Potassium compounds, 3494
 Potassium hexacyanoferrate(II), 1940
 Potassium metal molybdenum bronze, 158
 Powder, 688, 1452
 Powder diffraction, 135, 166, 2301
 Powder diffractometry, 72
 Powder neutron diffraction, 285, 1807
 Powder X-ray diffraction, 314, 1080, 1526, 1807, 2586, 2846, 3284
 Powders-solid state reaction, 3207
 PPO, 2292
 Praseodymium, 589, 976
 Precipitation, 1367
 Precipitation reaction, 861
 Precursors, 2635
 Preparation, 1968
 Pressure induced amorphization, 8
 PrGaO₃, 270
 Pr₂LiIrO₆, 200
 Propylene, 638
 Proton, 64
 Proton conduction, 1959
 Pseudo-merohedral twinning, 2594, 2934
 Pseudosymmetry, 1165
 PtTe₂, 2008
 PuBr₃ structure type, 72
 Pulsed laser deposition, 892
 Purple bronze, 1471
 PVP, 1038
 Pyrochlore, 800
 Pyrochlore structure, 1254
 Pyrolusite, 2368

Q

Quantum mechanical calculations, 1269
 Quantum size effects, 1786
 Quaternary ammonium bromide, 1722
 Quaternary ammonium iodide, 1722

R

R₄MgGa₁₂, 52
 Racah-Slater theory, 589

- Racemic complexes, 608
Radiation damage, 511
Radiation stability, 578
Raman, 1533
Raman microscopy, 1940
Raman scattering, 998
Raman scattering spectra, 2067, 3507
Raman spectra, 1569, 1837, 2832, 2846
Raman spectroscopy, 1978
Rare earth, 41, 435, 554, 1503, 2159, 2167, 2734
Rare earth compounds, 454, 1874
Rare earth silicates, 3275
Rare earth-doped materials, 470
Rare-earth and alkaline-earth borates, 3698
Rare-earth elements, 72, 1580
Rare-earth intermetallics, 52, 1071, 2091, 3639
Rare-earth ions, 825
Rare-earth metal silicide boride, 1851
Rare-earth molybdate, 702
Re-entrant spin-glass, 2778
Reactivity of vanadium oxides, 1551
Reconstructive transformation, 715
Reconstructive transitions, 2191
Red phosphor, 917
Reduction phases, 961
Reflectance spectroscopy, 1145
Refractive index, 245, 831
Refractory ceramics, 755
Relaxation, 2778
Relaxation dynamics, 1786
Relaxation time, 1786
Relay effect of dye molecules, 3010
Remanence, 2798
Resistance, 1367
RHEED, 2001
Rhodium oxide, 769
Rietveld, 166
Rietveld analysis, 253, 2741, 2973
Rietveld method, 1495, 2144, 2709, 2867, 3662
Rietveld refinement, 172, 1165, 1376, 1513, 1526, 2301, 2511, 2586, 2778, 3389, 3655
Rock-salt, 1230
Room temperature synthesis, 1308
Rubidium salts, 454
Rubidium uranate, 3218
Rubidium vanadium diselenide, 3251
Ruddlesden–Popper phases, 811, 1559, 2715, 3315
RuSr₂GdCu₂O₈, 2274
Ruthenates, 2104
Ruthenium, 3206
Rutile, 15, 2953
- S
- Satellite lines, 370
Saturation magnetization, 3183
(Sb_{1-x}Ti_x)₂Te₃, 1301
Sb_{2-x}Mn_xTe₃, 2907
Sb₄O₆ cages, 3471
SBN crystals, 3507
SBU, 3396
Scandium, 2620
Scandium phosphates, 1738
Scintillator, 3698
S···S contacts, 1445
Second harmonic generation, 1888, 2880
Seebeck coefficient, 2050, 3639
Segregation, 245
Selected-area electron diffraction, 3662
Selectivity, 3648
Selenide, 1087
Self-assembled, 1030
Self-assembly, 2383, 2409, 2555
SEM, 1080
SEM image, 245
Semiconducting materials, 819
Semiconducting oxide, 2804
Semiconductor, 399, 755, 1087, 1773, 1786
Semicrystalline systems, 1526
Sensitized emission, 505
Separation, 3648
Shearing phenomena, 1133
SHS, 1595
²⁹Si MAS-NMR, 1
Si-MCM 41 support, 3405
Silica, 1395
Silicate, 1, 1017, 2332, 3284
Silicides, 1773, 3233
Silicon phosphates, 2594
Silver, 2858, 3581
Silver compounds, 3494
Silver halide, 3074
Silver nanoparticle, 1038
Silver–antimony sulphide, 3414
Silver–copper oxides, 295
Simple model, 2643
Single crystal, 262, 270, 1212, 3547
Single crystal growth, 1440
Single crystal structure, 2247
Single crystalline, 399
Single-crystal and powder, 3686
Single-crystal X-ray diffraction, 52, 2987, 3494, 3639, 3667
SiO₂/TiO₂ composite microspheres, 1818
Site occupancy, 1620
Site occupancy determination, 370
Site symmetry, 429
Sitinakite, 253
6H perovskite-type structure, 3066
Six-coordinated silicon, 2594
Sm₂LiIrO₆, 200
Small polaron, 2715
Sn–Sn metallic bonding, 2133
SnO₂, 3027
SnO₂ thin film, 892
SnO₂:Eu, 603
Sodium, 1241, 3581
Sodium borate, 671
Sodium copper antimony oxide, 1165
Sodium copper oxide, 3708
Sodium niobate, 2586
Sodium tungsten bronzes, 58
Soft materials, 2519
Soft phonon modes, 655
Sol-solvothermal synthesis, 321
Solid electrolyte, 2873
Solid films, 2036
Solid oxide electrolyte, 2050
Solid oxide fuel cell, 234, 1844
Solid solution range, 1903
Solid solution, 1, 800, 1471, 1644, 2247, 2608, 2973
Solid state structures, 3206
Solid state synthesis, 3117, 3218
Solid-state metathesis, 755

- Solid-state NMR, 135, 621, 1017, 1738, 2575, 3722
 Solid-state reaction, 363, 1670, 1692, 2942, 3500, 3624
 Solid-to-solid reaction, 2436
 Solid–gas sorption, 2436
 Solid–liquid sorption, 2436
 Sol–gel, 1157, 1395, 1978, 2292, 2734, 3197
 Sol–gel process, 329
 Sol–gel synthesis, 1526
 Solubility isotherm, 1414
 Solution-phase synthesis, 1609
 Solutions, 429
 Solvent effects, 464
 Solvent extraction, 2383
 Solvent-free synthesis, 755
 Solvent-thermal, 3130
 Solvothermal, 970, 1609
 Solvothermal synthesis, 874, 1171, 2030, 2267, 2680, 3152, 3342, 3414, 3554
 Sonochemistry, 399
 Sorption, 2491
 SP-SR KKR, 2778
 Space group $R3c$, 3703
 Speciation, 521, 521
 Specific heat, 709, 1221, 2626
 Specific surface area, 1080
 Spectroscopic parameter modelling, 3655
 Spectroscopy, 429, 448, 567
 Spectroscopy of f -electron systems, 470
 Spin gap, 100
 Spin glass, 1495, 2274, 2778
 Spin ladders, 28
 Spin state, 868
 Spin-glass behavior, 2339
 Spinel, 661, 897, 1182
 Spinel structure, 370
 Spinel-type double oxide, 370
 Spinodal decomposition, 613
 Split sites, 715
 Spray pyrolysis, 441
 $Sr_{2-x}La_xMnWO_6$, 1356
 $Sr_3Fe_{2-x}Ni_xO_{7-\delta}$ oxides, 1559
 Sr_3FeMoO_7 , 3315
 $(Sr,Ca)CoO_3$, 3431
 Stability, 3090
 Stabilized films, 2001
 Stacking faulting, 3389
 Stacking faults, 2262, 2575
 Stannate, 1087
 Steady-state conditions, 2766
 Stearic acid method, 761
 Stereochemically active lone pair, 3471
 Stereochemically active lone-pair of electrons, 2922
 Strains, 882
 Strontium, 2818
 Strontium aluminate, 2709
 Strontium ion, 253
 Strontium nitrate, 2608
 Structural characterization, 2692
 Structural instability, 2959
 Structural phase transition, 1221
 Structural phase transitions, 3366
 Structural properties, 629
 Structure, 22, 376, 567, 782, 1094, 1197, 1356, 1807, 2109, 2231, 2267, 2322, 2620, 2658, 2686, 3703
 Structure conversion, 1589
 Structure determination, 1212, 2998
 Structure maps, 1269
 Structure refinement, 847
 Structured diffuse scattering, 655, 3159
 Structure–spectra correlation, 2880
 Stuffed tridymite derivative, 2709
 Subnitrides, 1023
 Sulfide, 194, 376, 2759
 Sulfur precursor, 2680
 Sulfur-tolerant anode, 1844
 Superconductivity, 2274
 Superlattice, 120
 Supermolecular template, 2798
 Superstructure, 742, 1165, 1478, 2001, 2709, 3715
 Supramolecular chemistry, 2436
 Supramolecular compounds, 1445
 Surface diffusion, 47
 Surface modification, 688
 Surface potential, 688
 Surfactant-assisted method, 1044
 Surfactant-assisted template, 329
 Susceptibility, 2626
 Susceptibility measurements, 1495
 Synchrotron, 1595
 Synchrotron diffraction, 2197
 Synchrotron powder diffraction, 1652, 1697, 1949
 Synchrotron radiation, 270, 370, 1773, 1799
 Synchrotron X-ray diffraction, 847
 Synthesis, 41, 194, 376, 567, 782, 1503, 1807, 2128, 2322, 2686, 3251, 3265, 3453
 Synthesis of new compound, 1935
 Synthesis of La_5Ge_4 and derivatives, 1112
- T
- T_θ , 120
 Ta_2O_5 , 224
 Taguchi sensor, 3027
 Tantalate, 1915
 Tantalum, 2635
 Tantalum oxide, 1254
 Tartrates, 2880
 Tb-doped Y_2O_3 , 989
 Tb_4PdGa_{12} , 52
 Tb_4PtGa_{12} , 52
 β -TCP, 3190
 Tellurate, 153, 2109
 Tellurides, 41
 Temperature-dependent magnetic susceptibilities, 3729
 Template, 782, 1197, 2322, 2409
 Template synthesis, 1157
 Ternary antimonides, 1874
 Ternary compounds, 2818
 Ternary derivatives of $1T-TaS_2$, 3159
 Ternary tantalum sulfide, 1569
 Tetrazinc units, 3396
 Thermal analysis, 1580, 1722
 Thermal behavior, 1675, 2987, 3554
 Thermal decomposition, 142, 702, 2658
 Thermal expansion, 1575, 2050, 2144, 2225, 3541
 Thermal poling, 1888
 Thermal properties, 2368
 Thermal stability, 356, 1171, 1614, 2511, 2818, 3207, 3729
 Thermal treatment, 688
 Thermoanalysis, 874
 Thermodynamic properties, 2715, 3207
 Thermodynamics, 234, 1182

Thermoelectric compound, 1670, 2973
Thermoelectric power, 868, 2751
Thermoelectric properties, 792, 2186
Thermogravimetry, 185, 2301
Thermopower, 769, 921
Thin films, 1786, 2346
Thin layers, 1284
Thioantimonates(III), 1171
Thiocyanate, 1445
Thiogermanates, 874
Thiophosphates, 454
Third-order non-linear optical properties, 363
3*d*–4*f* mixed metal sulfates, 2030
Three-dimensional, 1825
Three-dimensional host lattice, 1212
3DOM, 2838
Ti-doped MgO, 661
Tight binding calculations, 3159
Tin, 1017, 3420
Tin dioxide, 3500
Tin oxide, 613, 1254
Tin(II) oxides, 3014
Tin sulfide, 245
TiO₂, 15, 1837, 2953, 3293, 3500
TiO₂ (B), 3110
TiO₂ nanoparticle, 15
TiO₂ nanotubes, 1996
TiO₂(B) nanowire, 2179
TiO_{2- δ} , 185
TiO₂–CeO₂, 128
Titanate, 1614, 3110
Titania, 613, 1395
Titanium, 1637
Titanium dioxide, 15, 1837, 2953, 3293, 3500
Titanium *L*-edge, 1008
Titanium nitride nanorods, 755
Titanosilicate, 253
*T*_{M1}, 120
Tm³⁺-doped Y₃GaO₆, 1064
Tolerance factor, 629
Topology, 2475
TPPTS, 2701
Trace analysis, 1145
trans-RhCl(CO)(TPPTS)₂, 2701
Transformation, 3152
Transition metal carboxylate polymer complex, 2555
Transition metal intermetallics, 1269
Transition metal oxide, 1008, 3426
Transition metal phosphide, 970
Transition temperature, 1203
Transmission electron microscopy, 376, 792, 1133
Transport, 1104
Transport properties, 1301, 2907
Trapping reaction, 3027
Trifluoroacetate, 3197
Trilithium hexahydroaluminate, 3672
Trimer system, 709
Triple molybdates, 1580
Triple perovskite, 2274
Trivalent lanthanides, 412
TRLFS, 567
Tube-like, 1589
Tungstate, 825
Tungsten, 1533
Tunnel structure, 1212, 1406
Turbostratic boron nitride, 1925
2D IR correlation spectroscopy, 3563

U

U(3+)–doped single crystals, 536
Upconversion, 2663
Urania, 521
Uranium, 567
Uranium(3+), 536
Uranium (IV), 1054
Uranium (IV) oxalates, 3046, 3055
Uranium (IV)–lanthanide (III) mixed site, 3046, 3055
Uranium (IV)–lanthanide (III) oxalates, 3046, 3055
Uranium tribromide, 536
Uranyl compound, 499, 2922
Uranyl oxalate, 3437
Uranyl tellurite, 2922
UV/Vis, 3554
UV-Vis-NIR, 2663
UV/Vis and luminescent spectroscopies, 2913

V

⁵¹V and ⁸⁹Y MAS-NMR, 1692
Vacancy associates, 2062
Valence electron concentration, 2825
Valence state, 2282
Vanadium, 218, 1753, 2015, 3563, 3740
Vanadium fluorides, 2191
Vanadium oxides, 22, 2152, 3014
Vanadium phosphite, 3040
Vanadium tellurite, 1825
Vanadium triad, 194
Vanadyl phosphate, 314
Vapor–liquid–solid growth, 819
Vibrational spectra, 3581
Vibrational spectroscopy, 314
Visible wavelength, 128
Visible-light, 1968
Visible–UV, 3686
(VO)₂P₂O₇, 2225
VON, 218
VUV, 448

W

W₅Si₃ structure, 2959
Water absorption, 172
Water–ethanol, 2332
Wavelength-dispersive spectrometer, 370
Weak ferromagnetism, 928
Well-aligned nanorod arrays, 1864
Wide range non-stoichiometric solid solution, 2133
William Carnall, 408
WO₆ cluster, 1533
Wüstite-type phase, 3243
Wybourne–Downer mechanism, 419

X

X-ray absorption spectroscopy (EXAFS), 93
X-ray and neutron diffraction, 2811
X-ray crystal structure, 306
X-ray diffraction, 172, 245, 339, 356, 578, 1133, 1165, 1212, 1292, 1580, 1595, 2001, 2008, 2218, 2575, 2913, 2934, 2947, 3183, 3342, 3366, 3485, 3554, 3672, 3686

X-ray excited luminescence, 3698
X-ray fluorescence spectra, 370
X-ray lines, 554
X-ray phosphors, 3698
X-ray photoelectron spectroscopy, 3405
X-ray powder diffraction, 742, 1312, 1722, 1874, 2225, 2363, 2741, 3662
X-ray single crystal diffraction, 1722
X-ray spectroscopy, 976
X-ray structure, 100, 194, 3336
XAFS, 521
XANES, 1452, 1533
XANES spectroscopy, 1705, 3464
XAS, 961
XPS, 262, 563, 567
XPS spectra, 831
XRD, 1, 114, 376
XRD crystal structure, 621
XRD of vanadium oxides, 1551
XRD Rietveld method, 1030

Y

$(Y_{1-x}Tm_x)_3Ga_5O_{12}$ solid solution, 1064
 $Y_2O_3:Eu$, 1647
 $Y_2O_3-Ga_2O_3-Tm_2O_3$ system, 1064
 $Y_2Si_2O_7$, 1
Yb mixed valency, 262
 $Yb_{11}GaSb_9$, 1071
Yttrium doping, 1367

Z

Zeolite HZSM-5, 1030
Zeolite precursors, 1630
Zigzag chain, 2306
Zinc, 621, 729, 1830
Zinc coordination polymers, 3396
Zinc ferrite, 3243
Zinc insertion, 2998
Zinc oxide, 819, 855, 1139, 1589, 1765, 1864, 3500
Zinc phosphates, 1880
Zinc phosphite, 2613, 2673
Zinc tungsten bronzes, 2998
Zincophosphate, 694
Zintl, 2825
Zintl compound, 1935
Zintl phase, 262, 1071, 3303
Zircon, 1898
Zircon-type materials, 1692
Zirconium, 1637
Zirconium pyrochlore, 578
 $Zn_2Ti_{0.5}Sn_{0.5}O_4$, 3500
Zn(II) complex, 3336
Zn-doping, 28
ZnO, 819, 855, 1139, 1589, 1765, 1864, 3500
ZnO nanorod arrays, 3210
ZnS, 1589, 3522
ZnSe/CuInSe₂ alloys, 3631