

Cumulative Keyword Index for Volume 177

A

A21am, 2685
AAO template, 1292
Ab initio HF and DFT methods, 4482
Ab initio structure solution, 4013
 $A_nB_nO_{3n+2}$ layered perovskites, 2039
 A_2BX_4 compounds, 1127
Ac conductivity, 2223
Acetone, 772
Acid diphosphates, 2129
Acid sites, 2432
 $A_3CoNb_2O_9$ complex perovskites, 4428
Acrylic acid, 4501
Actinide, 1346
Actinide iodate, 4413
Actinide phosphate, 4755
Actinide (IV) phosphate, 4743
Activation energy, 596, 605, 4119, 4785
AEM, 3301
Afterglow, 1333
 Ag^+ diffusion, 3156
 $AgAlO_2$, 889
Aldol condensation, 772
Alkali metal uranates, 2231
Alkali thioferrate, 1867
Alkali uranyl tungstates, 1681
Alkaline earth oxalate, 4269
Alkane oxidation, 609
Alkoxyaminesilane, 2316
Alluaudite, 55
 ^{27}Al MAS NMR, 648
 $AlMgB_{14}$, 471
 ^{27}Al MQMAS NMR, 648
Alternative chain, 4501
Aluminides, 2600
Aluminophosphate, 2484
Aluminum, 2663, 2951
Aluminum diboride, 389
Aluminum hydroxide, 3603
Amine, 1235
Amine complex, 2073
Amino acid complexes, 4482
Amino acids, 3987
p-Aminobenzoic acid, 3735
Aminoguanidinium(1+) dihydrogen phosphate, 4655
4-Aminopyridine, 194
Ammonia, 909
Ammonium gallium monophosphate, 3581
Ammonium ion, 1173
Ammonolysis, 2423
Amorphous boron, 616
Amorphous boron films, 529
Amorphous boron wafer, 537
Amorphous $SrTiO_3$, 670
Amplitude-modulated magnetic structure, 507

Anion substitution, 3245
Anion-exchange, 1624
Anionic clays, 3058
Anisotropic charge distribution of B_6 , 461
Anisotropic nanoparticles, 3891
Anode, 3981
Anodic electrodeposition, 3682
Antiferroelectric, 3254
Anti-ferromagnetic, 1117
Antiferromagnetic transition, 739
Antiferromagnetism, 2404, 2998, 4251
Antimonide, 293
Antimony, 2249, 4136
Antimony orthophosphate, 2920
Antimony sulfide, 202
Antisite disorder, 2749
Apatite, 3536
Apatite structure type, 4451
Aqueous solution, 3460
Aqueous solution deposition, 2144
Arrays, 4386
As dimerization, 701
 $AsNMg_3$, 61
Atmospheric pressure, 3944
Atomistic simulation, 4359
Aurivillius, 1965
Aurivillius phase, 2632, 3359, 3660, 4188
Auto-combustion, 4119
Azide/nitrate route, 2550
Azo pigment, 4597

B

B_2O_3 -healing phase, 449
 B_4C -Cu cermets, 400
 B_4C - MoB_2 system, 523
 B_4C - NbB_2 system, 523
 B_4C/SiC multilayered matrices, 449
 B_{12} icosahedra, 444
 B_{12} icosahedron compound, 476
 $B_{12}As_2$, 1619
 $B_{12}P_2$, 1619
 $B_{12}Sb_2$ film, 533
 B_{32} , 227
 Ba_3BPO_7 , 3454
 $Ba_3Ti_3B_2O_{12}$, 159
 $Ba_3Ti_3O_6(BO_3)_2$, 159
 β - $Ba_3YB_3O_9$, 216
 $Ba_4Bi_3F_{17}$, 312
 $BaBi_4Ti_5O_{18}$, 4188
Band calculation, 332
Band gap energy, 4785
Band structure analysis, 4605
Band structure calculations: LMTO, COHP and ICOHP, 4516
Band structures, 61, 2523, 2833, 4136
Band-structure calculations, 3245

- Barium, 3263
 Barium cerium titanates, 3995
 Barium ferrites, 1146
 Barium iron tantalum oxide, 1695
 Barium lithium fluoride, 1032
 Barium magnesium tantalate, 4031
 Barium titanate, 262, 3849
 BaTiO₃, 3650
 BaY(Cu_{0.5}Fe_{0.5})₂O_{5+δ}, 1958
 BEDT-HBDST, 332
 1,3,5-Benzenetricarboxylate, 2494
 BF₃·nitromethane adduct, 466
 Bi₂O₃–ZnO–Nb₂O₅, 4546
 Bi₂Se₃, 1704
 Bi₂Sr₃Fe₂O₉, 3187
 Bi³⁺, 3536
 Bi₃B₅O₁₂, 515
 Bi₁₄Sr₂₁Fe₁₂O₆₁, 3187
 Bilayered perovskites, 3776
 Bimetallic, 1771
 Bimetallic open framework, 839
 Bimetals, 592
 BiMgOVO₄, 4175
 Biological probe, 1179
 Biomimetic apatite, 1179
 Biomimetic synthesis, 681
 Bio-organoceramic, 245
 Biopolymer, 245
 2,2'-Bipyridine, 2014
 4,4'-Bipyridine, 2494, 3433
 Bismuth, 3610, 4136
 Bismuth borate, 515
 Bismuth niobium oxide, 1838
 Bismuth oxide, 2632
 Bismuth oxide phosphate, 4149
 Bismuth selenide, 4001
 Bismuth titanate, 139
 Bismuth vanadates, 4535
 Bismuth–transition metal phosphates, 1412
 Bis(3-trimethoxysilyl)propylamine, 3439
 Bithiophene, 2827
 Bivalent metals, 2158
 Black SiC, 580
 B–Nb–Si phase diagram, 493
 Bond valence, 979, 2470
 Bond valence methods, 3156
 Bond valence sum study, 4404
 Bonding analysis, 2115
 Bone, 3174
 Borates, 3028, 3183, 3700, 4648
 Boride, 425, 439
 Boron, 466, 498, 556, 586, 619, 4167
 Boron carbide, 400, 410, 487, 566, 569, 575, 596
 Boron clusters, 431
 Boron isotope, 600
 Boron nitride, 609, 1803, 2670
 Boron steel, 382
 Boron subarsenide, 1619
 Boron suboxide, 596
 Boron subphosphide, 1619
 Boron-rich alloy, 592
 Boron-rich compounds, 3070
 Borophosphate, 3454
 Borophosphate glasses, 1723
 BPO₄ glass, 1723
 5-Bromonicotinic acid, 3805
 Brookite rich samples, 2456
 Brookite's stability, 2456
 Brownmillerite structure, 1592
 Brownmillerites, 4251
 B site ordering, 2295
- C
- Ca₂Co_{1.6}Ga_{0.4}O₅, 4251
 Ca₂Pr₂Cu₅O₁₀ solid solution, 2394
 Ca₃Al₂O₆, 866
 Ca₃NiMnO₆, 3270
 Ca₁₀Pr₄Cu₂₄O₄₁, 2394
 CaB₆, 461
 CaBi₄Ti₅O₁₈, 4188
 CaCO₃, 681
 CaCu₃Ti₄O₁₂, 4494
 Cadmium hydroxyapatite, 4379
 Cadmium selenides, 4386
 Cadmium sulfides, 3675, 4386
 Cadmium tungstate, 4588
 Cage like structure, 1905
 Calcination, 1585
 Calcination–rehydration reaction, 3987
 Calcium cobalt copper oxide, 73
 Calcium oxalate, 3368
 Calcium phosphate, 793, 1179
 Calcium titanate, 4420
 Calcium vanadium oxide, 3099
 CAp, 3174
 Ca/P molar ratio, 3092
 Capacitance, 856
 Capping, 4286
 Carbon, 619
 Carbon nanotubes, 4394
 Carbonate apatite, 3174
 Carbonated fluorhydroxyapatite, 2565
 Carboxylate complexes, 2841
 Carboxylate bridge mode, 4501
 Carrier scattering, 1704
 Catalysis, 1717
 Cation deficient perovskite, 1188
 Cation disorder, 2158
 Cation distribution, 3499
 Cation doping, 4494
 Cation order, 119, 3469, 4305
 Cation ordering, 1651, 3610, 4031
 Cation radical salts, 332
 Cation size, 2387
 Cation-deficient perovskite, 4007
 Cationic conductivity, 1567, 1681, 2058
 Cationic substitution, 3581
 Cation/vacancy ordering, 2726
 C(B) and BN interphases, 449
 Cd(II) complex, 2271
 CdSb₄ tetrahedra, 3418
 CdSiO₃:Sm³⁺, 1333
 Ce₂PdGa₁₀, 4695
 CeB₃Rh₃, 457
 CeNiSb₃, 4228
 CeO₂ surface segregation, 1873
 CeO₂-inhibited TiO₂ sintering, 1873
 CePdGa₆, 4695
 Ceramic fiber, 1803
 Ceramic matrix composites (CMC), 449
 Ceramic sintering, 1501
 Ceramics, 619, 3575
 Ceramization, 1803

- Ceria–zirconia, 1268
Cerium, 293, 4687
Cerium borates, 89
Cerium compounds, 752
Cerium dispersion in titania, 1873
Cesium, 1817, 2079
Cesium ion, 2903
Cesium silicate, 2499
CE structure, 987
CeTaO₄, 2685
Chain structure, 2714
Chalcogenides, 3640
Chalcogenides, 709, 1388, 3896
Channel, 3263
Characterization, 696, 721, 2575, 4073, 4800
Charge and spin ordering, 3351
Charge density wave, 701, 1598
Charge distribution, 4605
Charge of atoms on A-site, 457
Charge/orbital ordering, 987
Charge-ordering superstructure, 281
Chemical bonding, 61, 389, 628, 3616
Chemical delithiation, 4244
Chemical method, 4546
Chemical stability, 4112
Chemical syntheses, 3830
Chemical synthesis, 721, 1388, 1520, 3448
Chemisorption, 2763
Chiral structure, 2499
Chloroantimonates(III), 3202
Chlorophosphate, 2198
Chromites, 3784
Chromium, 439, 670, 2523, 4136
Chromium chalcogenide, 3245
Chromium tellurides, 951
Chromium–gold telluride, 2998
Churchite, 1302, 1312
Citrate method, 2339
Closed-cycle variable temperature cryostat for Mössbauer, 4443
Cluster compound, 1811
Cluster model, 2763
Cluster solids, 498
Cluster-glass, 3245
Clusters, 1672
CMD, 165
CO oxidation, 1268
Co(II) complex, 2271
Co_{1-x}O.MgO, 3301
Co_{3-δ}O₄, 101
Coating, 3197
Cobalt, 2311
Cobalt ferrite, 3843
Cobalt molybdate, 2339
Cobalt oxide, 3682
Cobalt valence, 3149
Cobalt(II), 1352, 2841
Cobaltites, 3339, 3693
COHP, 2977
Cole–Cole plots, 1508
Collapsed structure, 3187
Colloid, 3743
Colquiriite, 3505
Combustion, 619
Combustion synthesis, 251
Compensation effect, 2663
Competitively trapping model, 895
Complex, 909
3d–4f complex, 3835
Complex boride, 551
Complex cobalt oxides, 1592
Complex oxides, 3949
Complex perovskite, 4031
Complex Ti–Cr oxide, 4576
Composite, 619, 3675
Composite crystal, 73, 2644
Composition dependence of Curie-temperature, 951
Composition-dependent optical spectra, 569
Conductivity, 856, 960, 4104, 4508
Conductivity and dielectric property, 1695
Conductivity measurements, 4494
Constant phase element, 856
Controlled oxidation, 3568
Convergent-beam electron diffraction, 1958
CoO₂ layer, 1137
Cooperative Jahn–Teller distortions, 1651
Coordination analysis, 4420
Coordination framework, 1896
Coordination polymer, 1352, 2841, 3423, 4701
Copper, 1919, 2305, 2889, 3743, 3853, 4258, 4557, 4701
Copper diphosphonate, 1297
Copper oxides, 4258
Copper phosphate, 883
Copper phthalocyanine, 1987
Copper(II), 2841
Core–shell structure, 3568
Correlated electron system, 2053
Corundum-like titania phase synthesis, 2456
Crack deflection, 487
Cr^{III}-based sulfates, 4351
Cristobalite, 3918
Cryolite, 654
Crystal and magnetic structure from neutron diffraction, 3086
Crystal electric field, 507
Crystal field, 1437
Crystal growth, 1405, 1493, 3560, 3709, 3839, 4093, 4228, 4379
Crystal morphology, 781, 2281
Crystal structure determination, 1235
Crystal structure investigation, 3963
Crystal structure of a Ti–Cr oxide, 4576
Crystal structure refinement, 1567, 1681, 2058, 2675, 3909, 4269
Crystal structures, 17, 159, 194, 257, 268, 274, 293, 312, 415, 425, 431, 439, 515, 642, 709, 760, 806, 839, 889, 916, 922, 936, 1017, 1023, 1053, 1072, 1078, 1219, 1244, 1252, 1276, 1321, 1346, 1352, 1359, 1393, 1401, 1449, 1456, 1493, 1646, 1667, 1672, 1738, 1758, 1771, 1796, 1817, 1867, 1919, 2053, 2073, 2115, 2150, 2158, 2249, 2265, 2311, 2358, 2373, 2394, 2449, 2464, 2470, 2477, 2494, 2523, 2542, 2550, 2557, 2600, 2610, 2699, 2783, 2810, 2841, 2855, 2889, 2896, 2951, 2973, 3021, 3080, 3202, 3263, 3310, 3411, 3423, 3433, 3448, 3499, 3529, 3545, 3595, 3610, 3700, 3735, 3752, 3784, 3805, 3873, 3896, 3927, 3939, 4023, 4058, 4081, 4136, 4149, 4167, 4175, 4316, 4341, 4372, 4482, 4501, 4535, 4632, 4648, 4655, 4680, 4687, 4701
Crystalline oxides, 3575
Crystallinity, 3092
Crystallization, 134, 202, 1803
Crystallization β-boron, 616
Crystallized film, 1639
CsHSO₄, 274
CT transition, 2242
CTAB, 4640
CTAB-assisted sol–gel, 3075
Cu (100) surface, 2763
Cu⁺ diffusion, 3156
Cu dope, 2916
Cu-1223 high-T_c superconductor, 1037

Cu₂O, 4640
Cu₂Se, 3886
Cu₃Se₂, 3886
Cubic, 681, 3650
Cubic bismuth zinc niobate, 4546
Cubic boron nitride, 395
Cuboctahedral clusters, 312
Cu-hydroxalcalite, 319
Curium crystal structure, 4413
CuSe, 3886
CVD-processing, 449
Cyanate, 2763
Cyanide, 1896
Cyano-bridge, 3835
Cyclodextrin, 2827, 3479
 Δ^1 -Cyclohexenephosphonic acid, 4557
Cyclopolymine, 4300
Czocharlski method, 3183

D

Dawsonite, 849
DC reactive magnetron sputtering, 1480
de Wolff disorder, 165
Debye temperature, 3484
Decomposition, 1032
Decomposition MgB₁₂, 616
Defect chemistry, 4359
Defect clusters, 101, 3301
Defect crystal structure, 389
Defect models, 4494
Defect structure, 1758, 4706
Defects, 895
Dehydration, 2663
Deintercalation, 3197
Delta-Bi₂O₃, 1838
Dendrites, 202
deNO_x, 3235
Densification, 410
Density, 389, 2265
Density functional theory, 2763
Density of electron states, 395
Density of states of the conduction bands, 2916
Depression of charge-freezing point by non-stoichiometry, 281
DFT, 3879
DFT-calculations, 3545
Dicarboxylic acid, 2841
Dielectric constants, 2833
Dielectric function, 89
Dielectric materials, 4007
Dielectric properties, 2023, 2881, 3873, 4031, 4428
Dielectric relaxation, 1508
Dielectric resonators, 3995, 4031
Differential dissolution, 3131
Diffraction, 3187
Diffraction pattern, 600
Diffraction profile refinement, 4494
Diffuse reflectance, 89
Diffuse scattering, 6, 2177
Diffusion, 824
Diffusion coefficient, 2094
Diffusion zone, 4258
1,4-Dimethylpiperazine, 3721
Dion–Jacobson phases, 3119
Diphosphonate, 2951, 4626
Directionally crystallization, 523
Discharge, 3743

Dislocations, 600, 605
Disorder, 139, 936, 2928, 2943
Disordered structure, 2168
Dispersed metallic particles, 2691
Disproportionation, 1952
Dissociation, 3715
Dissymmetrization, 4732
Distorted perovskites, 1285
Distortion, 4605
Distribution constant, 2903
Dithalliumselenate, 1127
Doped lanthanum gallate, 126
Doped SiC, 580
Doping, 3650, 4205
Double exchange mechanism, 966
Double oxides, 2749
Double pentagonal tubes, 3418
Double perovskites, 979, 2655, 3560
Double-four ring, 2198
DSC, 2733, 3795
Dy₄B₆O₁₄(OH)₂, 3700
Dynamical EFG, 109
Dysprosium, 2237

E

Edge-sharing octahedra, 2951
ED/HREM, 4149
EDTA, 4569
EELS, 89, 2833
Effective mass approximation, 4785
EIS, 2094, 4508
Elastic properties, 61
Elasticity, 592
Electric conductivity, 1401
Electric permittivity, 1011
Electrical conductivity, 207, 332, 471, 529, 533, 537, 556, 586, 596, 745, 1011, 1098, 1987, 2378, 3784, 3977, 4126, 4282, 4475, 4516
Electrical properties, 134, 1388, 2323, 3021, 4542
Electrical resistivity, 389, 547, 2115
Electrical transport, 2350
Electrocatalysis, 3682
Electrochemical doping, 189
Electrochemical intercalation, 2896
Electrochemical property, 2373
Electrochemical synthesis, 407
Electrode material, 2790, 2803
Electrolysis, 3839
Electron deformation density, 628
Electron diffraction, 731, 979, 1188, 1592, 1598, 1886, 3499, 3776, 4251, 4706
Electron diffraction and bond valence sum study, 2295
Electron diffraction investigation, 4404
Electron energy-loss spectroscopy, 2916
Electron hopping, 207
Electron localization function, 2115
Electron microscopy, 415, 2044, 2855, 3776
Electron trapping, 1098
Electron-density distribution, 1258
Electron–hole transport, 26
Electronic structure, 1000, 2249, 2591, 3879, 4605, 4724
Electronic transitions, 575, 3595
Electronic transport, 575
Electron-phonon coupling, 2415
Electro-optical properties, 1480
Electrospinning, 2628
Electrosynthesis, 1416

EMD, 165
Enamel, 3174
Encapsulation synthesis, 2122
Energy band, 2610, 3927
Energy transfer, 2777
Energy transition, 2242
Enthalpy, 1858
Enthalpy of formation, 126
Epitaxial films, 1165
EPMA, 3886
EPR, 1437, 3052, 4119, 4494
EPR of gadolinium as probe, 4104
Epsom salt, 3460
EPVPC, 3007
Equation of state, 1276
ER effect, 3650
Erbium, 425
ESR, 1365
ESR study, 1987
Ettringite, 1944
Eu³⁺, 3536
EuGe₂, 3545
Eulytite, 901
Eu-magnet, 3545
Europium, 1179, 2237, 3075, 3853, 4569, 4687
Europium doped, 4213
Europium silicide, 2115
Eutectic, 592
Eutectic composition, 523
EXAFS, 2101
Excited complex, 2827
Excited properties, 146
Explosion welding, 592
Extended Hückel, 4605
Extended Hückel calculations, 1672
Extremely low reactional concentration, 696

F

Factorial design, 675
Fast breeder reactors, 3460
Fault, 3301
Fe–Co alloys, 3843
⁵⁷Fe Mössbauer spectroscopy, 1607, 2655
γ-Fe₂O₃, 1213, 4286
Fe₃O₂BO₃, 4605
FEFF8 simulation, 1000
FeO oxygen getter, 2122
Fe-phosphates, 207
Fermi edge, 2916
Ferric iron, 262
Ferrihydrite, 2440
Ferrimagnetism, 4300
Ferrites, 3052, 4368
Ferritin, 2440
Ferroelastic, 1575
Ferroelectricity, 1501
Ferroelectrics, 1508, 2639, 3021, 3660
Ferro-ferroelectric phase transition, 3202
Ferromagnet, 257
Ferromagnetic coupling, 1297
Ferromagnetic ordering, 3934
Ferromagnetism, 461, 2977
Ferromagnetism, in rare earth manganates, 3633
Films, 542, 1471, 3333, 3944
First order crystallographic phase transition, 1098
First principles calculations, 4058

Flexible ligands, 2358
Flexible multidentate ligands, 2271
Fluorapatite, 2565
Fluorescence, 1060, 3127
Fluorescence spectra, 2827
Fluoride ion conducting electrolyte, 1146
Fluorides, 312, 1017, 1087, 1746, 3505, 3721, 4023
Fluorination, 731
Fluorine substitution, 134
Fluorite structure, 1758
Fluorite-like, 312
Fluorogallophosphate, 2183, 3721
Fluoroindium phosphates, 4073
Flux crystal growth, 3971
Flux growth, 4695
Forging, 592
Fourier transform far- and middle-infrared spectroscopy, 2733
Fractal growth, 202
Frame melting, 3640
Framework, 2506, 2675
Free exciton recombination, 566
Freeze dried, 2423
Freeze-dried precursor, 2378, 3219, 4213
Freezing, 1529
Frequency factor, 605
Frequency upconversion, 3127
Frozen RUM mode, 3316
Frustrated magnetism, 2053
FT-IR, 3795
FTIR spectra, 4482
FT-IR spectroscopy, 319
FT-RS, 3795
Fuels, 619
Fullerenes, 2255
Fullerides, 2255
Functional solids, 4013
Functionalization, 4394

G

Ga₂O₃, 3568
Gallides, 4695
Gallium, 2951
Gallium and indium selenite hexahydrates, 2663
Gallium nitride, 4213
Gallium phosphate, 2511
Gamma manganese dioxide, 4706
GaN, 3568
Ga/P ratio, 2183
Gas–solid reactions, 1219, 2542
Gd₂(WO₄)₃, 2237
GdAlO₃, 3768
GdFeO₃, 3768
Germanate compound, 2714
Germanium, 2249, 2903
Giant permittivity, 4494
Gibbs energy, 1933
Glaserite, 1127
Glass addition, 4031
Gold, 3891
Grain boundary, 4494
Grain growth, 1768
Grain size, 4528
Green SiC, 580
Group whiskers, 176
Growth from melt, 3028, 3183
Growth mechanism, 1639

H

^1H and ^{19}F NMR, 3795
Hafnium, 3939
Haldane-gap, 2404
Halfmetal, 2655
Halide, 1017
Hall-coefficient, 389
Halogenobismuthate(III) and halogenoantimonate(III), 1575
Hardness, 575, 1488
Heat capacity, 507, 1011, 2550, 3270, 3484
Heisenberg antiferromagnet, 883
Helical chains, 2699, 2841
Heterogeneous catalysis, 1045
Heterogeneous ceramics, 856
Heterometallic bonds, 3616
Heteropolymolybdate, 2210
Hexaaminenickel(II) chlorate(VII) deuterated, 2733
Hexaaquacadmium(II) tetrafluoroborate, 3795
Hexaboride, 471
Hexacyanoferrate, 1382
Hexagonal boron nitride, 721, 1768
Hexagonal perovskite-intergrowth, 65
Hexagonal perovskites, 806, 817, 1023, 1416, 3499
Hexagonal structure, 476, 3666
Hexamethylenetetramine, 4701
Hexatungstate, 3433
 HfO_2 , 3944
High frequency magnetic permeability, 3903
High pressure and high temperature, 1631
High pressures, 1087, 1276, 1488, 2002, 3700, 3715, 3768, 4087, 4724
High spin band, 4605
High temperature neutron diffraction, 1157, 4665
High-field conductivity, 586
High-pressure heat-treatment, 1958
High-pressure modifications, 3590
High-pressure phosphates, 3174
High-pressure synthesis, 1072, 4576
High-rate discharge, 2373
High-resolution electron microscopy, 2617, 3383
High-resolution neutron powder diffraction, 1667, 4081
High-resolution powder diffraction, 227
High-resolution transmission electron microscopy, 6
High- T_c superconductor, 1925
High-temperature experiments, 4451
High-temperature XRD, 3514
 $\text{Ho}_4\text{B}_6\text{O}_{14}(\text{OH})_2$, 3700
Hole concentration, 1037
Hole distribution, 1925
Hollandite-type structure, 1258
Holmium, 38
HOMO-LUMO gaps, 4528
Host-guest systems, 2511, 2518, 3392
Howardevansite structure type, 1607
HREM, 714, 834
HRTEM, 1592, 2039, 3105
HT-XRD, 3918
Hybrid material, 786
Hybrid mesoporous materials, 3439
Hybrid organic-inorganic material, 2951
Hybrid perovskite, 1067
Hybridization, 1137
Hydration, 1944
Hydrazidocarbonate complexes, 4482
Hydrazidocarbonic acid, 4482
Hydrazinium cation, 4482

Hydrogen absorbing material, 824
Hydrogen bonding, 2862, 3202, 4501, 4768
Hydrogen bonds, 1067, 2129, 3224, 3581, 4655
Hydrogen fluoride, 3224
Hydrogen storage, 648, 3626
Hydrogen storage alloy, 2373
Hydrogen storage materials, 1219, 2542
Hydrogenation, 752
Hydrosodalite, 1513
Hydrotalcite, 1382, 3954, 4569, 4597
Hydrotalcite-like compounds, 3058
Hydrothermal, 1346, 1444, 1717, 1944, 3346, 3843, 3868, 4399
Hydrothermal coating, 1535
Hydrothermal co-reduction, 4001
Hydrothermal crystal growth, 781, 3824
Hydrothermal method, 4379
Hydrothermal reactions, 633, 2205
Hydrothermal syntheses, 849, 4626
Hydrothermal synthesis, 80, 181, 194, 343, 642, 690, 725, 765, 793, 839, 916, 922, 946, 1117, 1431, 1585, 1771, 1811, 2210, 2449, 2494, 2499, 2511, 2518, 2557, 2675, 2699, 2705, 2777, 3038, 3080, 3114, 3229, 3411, 3423, 3433, 3529, 3581, 3729, 3963, 4073, 4183, 4316, 4346, 4372, 4413, 4459, 4648, 4680
Hydrous sodium cobalt oxide, 372
Hydroxide flux, 3560
Hydroxyacetates, 3392
Hydroxyapatites, 134, 793, 2565, 3092
Hydroxycarbonate, 3709
1-Hydroxycyclohexanephosphonic acid, 4557
Hyperfine interactions, 3324
Hypervalent compound, 3752

I

Icosahedral-boride, 1619
Image simulation, 6, 3105
Imaging technique, 1789
 $I4/mmm$, 45
 $Immm$, 45
Impedance spectroscopy, 856, 1388, 2378, 3156, 4475, 4494
In situ, 4332
In situ FT-IR, 2534
In situ HT-XRD, 2534
In situ NMR, 648
In situ powder diffraction, 1944
In situ powder X-ray diffraction, 319
In situ X-ray diffraction, 2790, 2803
In situ XRD, 1268
 $\text{In}_2(\text{WO}_4)_3$, 2740
 $\text{In}_6\text{WO}_{12}$, 2740
Incommensurate structures, 1197, 2644
Incommensurately modulated, 701
 $\text{InCr}_{1-x}\text{Ti}_x\text{O}_{3+x/2}$, 2644
Indium, 1053, 1359, 1646
Indium compounds, 17
Indium (III), 2494
Indium phosphate, 3032
Indium tin antimonates, 3748
Indium tungstate, 2740
Indium tungsten oxides, 2740
Indium-antimony ordering, 3748
Inert diluent, 251
Infiltrated cermets, 400
Infrared, 3963
Infrared emissivity, 3849
Infrared spectroscopy, 1520

Initiator, 3007
 Inorganic, 3229
 Inorganic compounds, 274, 1388
 Inorganic nitride-fluoride, 2772
 Inorganic–organic hybrid polymer, 1060
 Inorganic–organic hybrids, 922, 2316, 4372, 4459
 Insulator, 1011
 Insulator–metal transition, 4564
 Intercalation, 366, 633, 675, 909, 1173, 1624, 2014, 2534, 2675, 2691, 2818, 3981, 3987, 4300, 4542, 4597
 Intercalation compounds, 194, 1768, 3954
 Interconnector, 4112
 Interfacial properties, 1529
 Interlayer magnetic interactions, 1078
 Interlaying spacing, 1768
 Intermediate valence, 752
 Intermetallics, 936
 Intermetallic alloy, 3014
 Intermetallic bonding, 3896
 Intermetallic compounds, 1359, 1646
 Intermetallic perovskite, 1244
 Intermetallic rare-earth compounds, 17
 Intermetallic superconductor, 1244
 Intermetallics, 1219, 1919, 2542
 Internal friction, 596, 600, 605
 Interpenetrating polymer networks, 960
 Interplay theory experiment, 3879
 Interstitial diffusion, 556
 Iodate, 1346
 Iodide, 1017
 Iodoplumbate, 1067
 Ion exchange, 189, 1173, 1513, 2079, 2499, 2903, 4542
 Ion exchange reaction, 2790, 2803
 Ionic conduction, 4126
 Ionic conductivity, 262, 274, 2366, 4535
 Ionic conductors, 1157
 Ionic exchange, 2366
 Ionic liquid, 3757
 IR, 765, 2705
 IR spectra, 2073
 IR spectral, 1987
 IR spectroscopy, 515
 IR spectrum, 575
 Iridium, 38, 739, 3239
 Iridium and platinum complexes, 2691
 Iron, 3058, 3187
 Iron group, 251
 Iron oxide, 1713
 Iron oxide nanoparticles, 2440
 Iron oxides, 1535, 3324
 Iron phosphates, 1117, 1607, 4459
 Iron (III)-oxyhydroxy-phosphate, 2440
 Isoconversion method, 3281
 Isocyanate group, 4394
 Isolated boron–oxygen anion, 515
 Isolated molecule, 2827
 Isomers, 2449
 Isonicotinate, 1252, 2305
 Isopolyoxomolybdate chains, 839
 Isotope, 466
 Isotope-dependent optical spectra, 569
 Isovalent substitution, 1925, 2655

J

Jahn–Teller distortion, 3633

K

Keggin, 3411
 Keggin cluster, 2210
 Kinetic phase transition, 4732
 Kinetics, 4258
 Kinetics in solid, 3281
 Kinetics oxidation, 3281
 KMgF_3 , 2205
 $\text{K}_2\text{Mo}_4\text{O}_{13}$, 916
 K_2NiF_4 , 1078
 K_2NiF_4 -type structure, 26, 4067
 $\text{K}_3\text{P}(\text{Mo}_{1-x}\text{W}_x)_{12}\text{O}_{40}$ ($0 \leq x \leq 1$), 4528
 K_3SbTe_3 , 361
 β - K_2SO_4 , 1127
 $\text{K}_4\text{LiH}_3(\text{SO}_4)_4$, 2150
 Kondo effect, 701
 KTaO_3 , 2985
 Ktenasite, 1624

L

LaCoO_3 , 745, 1000
 LaCuO_3 , 745
 Ladder-like chains, 4459
 La doping, 3375
 Lamellar structure, 2129
 $\text{LaMg}_{1/2}\text{Ti}_{1/2}\text{O}_3$ – CaTiO_3 – La_2O_3 , 2023
 $\text{La}_2\text{MgTiO}_6$, 2023
 Laminar materials, 487
 LaMnO_3 , 745
 $\text{La}_2\text{Mo}_2\text{O}_9$, 2378
 $\text{La}_2\text{NaRuO}_6$, 3560
 LaNi_5 , 1219
 La_2O_3 – CaO – MgO – TiO_2 , 2023
 La_2O_3 – MgO – TiO_2 , 2023
 Lanthanide, 739, 901, 2188, 3239
 Lanthanide complexes, 3805, 4501
 Lanthanide dopants, 3490
 Lanthanide orthovanadate, 4399
 Lanthanide polymolybdate, 4372
 Lanthanide series, 2129
 Lanthanide sulfides, 4142
 Lanthanide thiofluoride, 2833
 Lanthanum, 1053
 Lanthanum bismuth chromite, 1501
 Lanthanum cobalt orthoferrites, 2101
 Lanthanum lithium titanate, 1157, 4665
 Lanthanum magnesium titanates, 2023
 Lanthanum new phase, 2530
 Lanthanum nickelate, 26
 Lanthanum U-phase, 2928
 Large-scale array, 3603
 Laser, 3505
 Laser ablation, 1639
 Laser irradiation, 377
 $\text{La}_{1-x}\text{Sr}_x\text{CrO}_3$, 4112
 $\text{La}_x\text{Sr}_{2-x}\text{Fe}_y\text{Ru}_{1-y}\text{O}_{4\pm\delta}$, 45
 Lattice constant, 395
 Lattice location, 109
 Lattice parameters, 600
 Lattice topology, 2404
 Lauric acid, 1213
 Layer, 2511, 2518, 3032, 3080
 Layer compounds, 633
 Layer-by-layer, 1776
 Layer-by-layer self-assembly, 3333

- Layered, 2484
Layered compounds, 922, 1078, 1520, 1567, 3392, 3423, 3729, 4013
Layered double hydroxides, 245, 366, 2534, 3058, 3197, 3954, 4569
Layered gallophosphate, 696
Layered magnetic structure, 2977
Layered materials, 372, 2449
Layered oxides, 2790, 2803, 4244, 4542
Layered perovskite, 2068, 2635, 3660
Layered silicate, 2499
Layered structure, 194, 946, 1431, 2632, 3119, 3212, 4768
Layered uranyl compound, 3971
Layers stacking, 1416
Lazulite-type structure, 207
LDH, 2691
Lead chloride tellurite glasses, 3127
Lead oxysalts, 1321
Lead titanate, 1994, 3553
Lead uranyl vanadate, 3909
Lead volatilization, 3553
Lead(II) iodide, 909
Lead(II) sulfonates, 922
Lewis acid–base complex, 466
Li intercalation, 109
Li₄CaB₂O₆, 1847
Li₄Ti₅O₁₂, 2094
LiAl, 227
LiCaAlF₆, 3505
LiCaBO₃, 1111
LiCoO₂, 2790, 2803
LiF, 4582
LiFePO₄, 4582
Light-induced, 3835
LiLa₆I₁₂Os, 4465
Li–Mn–O system, 1
Line broadening, 2415
Line shifts, 2415
Li-precursor, 4582
Liquid-phase sintering, 551, 4031
LiSrAlF₆, 3505
Lithium, 498
Lithium batteries, 3981
Lithium battery material, 2896
Lithium ion, 4332
Lithium ion batteries, 2920
Lithium tetrahydroaluminate, 648
Lithium–antimony alloys, 2920
Lithium-ion battery, 4244
Ln₂GaO₆, 1796
LnNiSb₃, 4228
Local atomic arrangements, 936
Local mutation ordering, 231
Local structure, 3324
Lone pair, 3536
Lone-pair localization, 3909
Low dimensional structures, 781
Low field magnetization, 3245
Low temperature, 2714
Low-dimensional, 2404, 3640
Low-dimensional compound, 73
Low-loss materials, 3995, 4031
Low-stability-limit line, 3274
Low-temperature average structure refinement, 3316
Low-temperature co-fired ceramics, 4031
Low-temperature incommensurate phase transition, 3316
Low-temperature phase, 1127
Low-temperature sintering, 3553
Ludwigite, 4605
Luminescence, 566, 875, 901, 1179, 1292, 1333, 2649, 3333, 3536, 3735, 4213, 4687
Luminescence in the NIR, 3346
Luminescent, 3114
- M
- Macrocyclic ligand, 350
Macroporous, 3675
Magnesium, 498, 793
Magnesium oxide, 1165
Magnesium tantalate, 4359
Magnetic and electrical properties, 17
Magnetic anions, 332
Magnetic behavior, 2115, 2705
Magnetic clusters, 1285
Magnetic core, 772
Magnetic frustration, 4058
Magnetic irreversibility, 1925
Magnetic measurements, 3545
Magnetic ordering, 4341
Magnetic properties, 38, 146, 633, 642, 709, 817, 951, 1078, 1213, 1388, 1493, 1811, 1958, 2311, 2550, 2600, 2841, 2881, 3038, 3080, 3853, 4542, 4557, 4701
Magnetic properties of Cr^{III}-based sulfates, 4351
Magnetic structure, 38, 1456, 2068, 2231, 3310, 4058
Magnetic structure of Cr₂(SO₄)₃, 4351
Magnetic susceptibility, 55, 73, 739, 883, 1011, 1098, 1437, 3131, 3239, 3351, 3853, 4346, 4516, 4695
Magnetic susceptibility measurements, 1987
Magnetic transformation, 4443
Magnetism, 834, 1405, 2323, 2749, 2977, 3310, 3835
Magnetocrystalline anisotropy, 3934
Magnetoresistance, 1338, 3310, 3693, 3949, 4695
Magnetoresistive, 2749
Malonate, 2358
Manganate, 65
Manganates, rare earth, 3633
Manganese, 642, 2862, 3939, 4136
γ Manganese dioxide, 4706
Manganese oxides, 1416, 3383, 4093
Manganese perovskites, 1285, 4564
Manganese–iridium germanide, 4058
Manganese–iridium silicide, 4058
Manganese–vanadium–antimony oxide, 268
Manganites, 714, 1338, 2387, 3310, 3949
MAS NMR, 786, 2530, 2928
Materials, 2423
Maximum entropy method, 1137, 1258
MCM-41, 4800
Mechanical activation, 3903
Mechanical alloying, 221, 382, 3553
Mechanical property, 551
Mechanism, 2014
Mechanism of substitution, 1045
Mechanochemical synthesis, 793, 866, 2565
Mechanosynthesis, 1559
Melting temperature, 3484
Memory Effect, 3058
Mesoporous materials, 844, 3815
Mesoporous molecular sieve, 4800
Mesoporous organosilicas, 3439
Mesoporous silica sphere, 844
Metal complexes, 350, 3032
Metal hydride, 824
Metal oxides, 3290
Metal phosphites, 3038

- Metal phosphonates, 633, 2449, 2557, 4346, 4768
Metal selenite, 2699
Metal transition, 2916
Metallic nitrides, 3219
Metal-ordered perovskite, 987
Metalorganic chemical vapor deposition, 4616
Metal-organic frameworks, 350, 3423
Metamagnetism, 3086
Metastable In_2O_3 , 1230
Metastable intermediate, 1994
Metathesis, 2635
1-Methylpiperazine, 4073
Mg dope, 2916
 $\text{Mg}_2\text{LaTaO}_6$, 3873
 $\text{Mg}_2\text{NdTaO}_6$, 3873
 $\text{MgAl-OH-LDH/MgFe}_2\text{O}_4$, 772
Mg–Co–H system, 3626
Mg-doped $\text{Co}_{3-\delta}\text{O}_4$ spinel, 3301
 MgF_2 , 2205
 Mg(OH)_2 , 2329
Mg-substitution, 966
Microdomains, 3105
Microelectrode, 189
Microemulsion, 2205
Microhardness, 523, 600
Micro-octahedra, 3824
Microprobe analysis, 4167
Microstructure, 377, 551, 2670, 3007, 3830
Microstructure control, 1372
Micro-structure study and resistivity measurements, 4067
Microtwinning, 165, 4706
Microwave, 3843
Microwave ceramics, 3995
Microwave dielectric, 4031
Microwave irradiation, 361
Microwave radiation, 3014
Mid-infrared spectroscopy, 1382
Milling atmosphere, 4098
Misfit-layer compounds, 2818
Misfit-layered cobalt oxides, 3149
Mixed alkali glass, 189
Mixed carboxylate, 1444
Mixed carboxylate ligands, 1060
Mixed chalcogenides, 3616
Mixed conductors, 26, 2350
Mixed organic–inorganic, 2675
Mixed oxides, 960, 3058, 3682
Mixed reverse micelles, 3891
Mixed solvents, 2985
Mixed valence, 2464
Mixed valence compound, 1607
Mixed-valence classes, 281
M-MCM-41, 4800
Mn, 551
 Mn_2O_3 nanofibers, 2628
 Mn_3O_4 nanofibers, 2628
Mn-based double-perovskite, 2122
 $\alpha\text{-MnO}_2$, 1258
 $\gamma\text{-MnO}_2$, 165
 MnPS_3 , 2014, 4300
 Mo(VI) , 2470
 Mo_2NiB_2 base hard alloy, 551
Mo/B atomic ratio, 551
MOCVD, 542
Modification, 3815
Modulated structures, 1197, 1598, 2644, 3383
Molecular beam epitaxy, 1165
Molecular dynamics, 3590
Molecular flow region PVD process, 533
Molecular ionic solids, 4672
Molecular modeling, 165
Molecular precursors, 609
Molecular reorientations, 2733
Molten salt electrodeposition, 537
Molten salts, 407
Molybdates, 916, 2158
Molybdenum, 1672, 2423, 3219
Molybdenum oxide, 2862
Molybdenum oxycarbide, 3281
 MoN , 1488
Monazite, 1312
Monodisperse, 681
Monosulfate, 1944
Monte Carlo modelling, 231
 MoO_3 , 3281
Morphological control, 3368
Morphology control, 721
Morphologies, 202, 681, 1471, 4379
Mössbauer, 2101, 2705
Mössbauer spectroscopy, 55, 262, 3058, 3105, 3324, 3853, 4332
Multianvil, 3700
Multi-branched compound, 4293
Multilayer, 1776
- N
- Na, 3411
 ^{23}Na NMR, 2255
 Na_3SbTe_3 , 361
 NaCu_2O_2 , 3274
 NaCuO , 3274
Na–Cu–O phase diagram, 3274
Nanocomposites, 2285, 3843, 3849
Nanocrystalline, 2649
Nanocrystalline TiO_2 , 2584, 4098
Nanocrystalline yttrium iron oxide, 3666
Nanocrystallites, 1425, 4093
Nanocrystals, 1230, 3075, 3092
Nano-crystals of CuI , 1789
Nanofiber, 4588
Nanomaterials, 3021
Nanoparticles, 793, 1372, 3346, 3375, 3568, 3743, 4221, 4286
Nanopowders, 4104, 4546
Nanoribbons, 690
Nanorods, 2144, 2329, 4399, 4588
Nano-scale, 772
Nanosized powders, 1781
Nanostructures, 1585, 3626, 3949, 4640
Nanotube, 4001
Nanotubed titanate acid, 1365
Nanotubes, 2329, 2670
Nanowires, 1292
Naproxen, 2534
 NaSbTe_2 , 361
 NaSiCON , 4475
 NaTaO_3 , 3868
Natural superlattices, 2818
 Na_xCoO_2 , 1137
 ^{93}Nb NMR, 1549
 Nb_6 cluster, 1017
NBO analysis, 4482
NBO–BO switching and tetrahedral boron, 1723
Nd, 1444

- Nd₂NaRuO₆, 3560
Nd₂NiO_{4+δ}, 3351
Nd³⁺ ions, 3346
Negative electrodes, 2920, 4332
Negative thermal expansion, 3575
Negatively charged materials, 1660
Neodymium cerium dioxides, 856
Neodymium silicate, 4451
Neodymium strontium manganese oxide (Nd_{0.7}Sr_{0.3}MnO₃), 966
Neptamyl iodol actinides, 725
Neptunium phosphate, 4743, 4755
Neutron absorption, 592
Neutron and X-ray Rietveld refinements, 3359
Neutron diffraction, 65, 139, 274, 889, 1219, 1244, 1488, 1758, 2044, 2068, 2138, 2168, 2404, 2470, 2542, 2685, 2749, 2896, 2977, 3156, 3224, 3290, 3499, 3575, 4058, 4251
Neutron powder diffraction, 966, 1258, 1456, 1651, 2231, 2726, 3099, 3383, 4188, 4516
Neutron thermodiffraction, 866
New phase, 1631
Ni, 3411
Nickel, 293, 2311
Nickel hydroxide, 1535
Nickel molybdate, 2339
Nickel oxide, 1535, 3682
Nickel/cobalt–vanadium phosphate, 3080
Nickel–tin alloys, 936
Niobates, 1549, 3469, 4305
Niobia supported in silica, 2432
Niobium, 1781, 2903, 3119
Niobium phosphate, 194
Niobium silicon boride, 493
Nitride, 2423, 2756
Nitridoosmate, 2073
Nitrogen atmosphere, 410
Nitrogen isotherms, 3439
Nitrogen-doped titania, 3235
Nitrosamines, 3815
NiZn ferrite, 4119
NLO properties, 159
NMR, 3439, 4282
NMR measurements, 389
Non-aqueous medium, 1213
Non-crossing mono-dimensional channels, 2058
Non-isothermal kinetic, 2663
Non-linear dynamical property, 2223
Nonlinear optical properties, 3007
Non-steroidal drugs, 3954
Non-stoichiometric phases, 936
Non-stoichiometry, 1471, 3469, 4305
Non-stoichiometry on *B*-site, 457
Nuclear magnetic resonance (NMR), 824, 1520
Nuclear waste, 1858
- O
- Octahedral cluster, 1896
Octahedral deformation, 3202
Octahedral field, 4605
Octahedral tilting, 987, 1651, 4305
Octahedral tilts, 2323
Octamolybdate, 3263
One-dimensional chain, 4501
One-dimensional nanostructures, 2205, 4640
One-dimensional structure, 714, 2862
One-dimensional system, 883
O–O network, 1137
Open framework, 2557, 4183
Open-framework structure, 1235
OPM route, 1994
Optical absorption, 580, 1437
Optical absorption spectra, 3479
Optical anomalies, 4732
Optical microscopy, 3028, 3183
Optical properties, 89, 569, 1053, 1388, 2810, 2833, 3448, 3927, 4175, 4528
Optical reflectivity, 580
Optics properties, 2610
OPVPC, 3007
Orbital ordering, 1651, 3339
Order–disorder, 3254, 4197
Order–disorder phase transitions, 1197
Ordered defect Scheelite, 2617
Ordering variants, 2591
Organic capped Keggin structures, 4325
Organically templated, 80, 3529
Organically templated-lanthanum sulfate, 1235
Organic–inorganic hybrid, 1771
Organic–inorganic hybrid materials, 1660, 3080, 3433
Orthophosphate, 2991
Orthorhombic, 551
Orthorhombic structure, 3666
Orthoscatate, 2188
Orthovanadate, 3927
Os oxide, 3086
Oswald ripening, 4399
Over-stoichiometry, 1219
Oxalate, 1912
Oxidation, 4258
Oxidation resistance, 547
Oxidation states, 817
Oxide films, 4205
Oxide ion conducting electrolyte, 1146
Oxide ion conduction, 3660
Oxide nitrates, 3610
Oxide photocatalyst, 4205
Oxide sulfate, 1738
Oxide-ion-conductor, 4451
Oxides, 1087, 1471, 1493, 1549, 2281, 2881, 3448
Oxoanion, 1717
Oxoborate, 515
Oxocentered polyhedra, 515
Oxocentered tetrahedra, 1321
Oxyborate, 4605
Oxychloride, 1023
Oxyfluoride, 3119
Oxygen annealing, 1
Oxygen content, 1037, 3149, 4067
Oxygen evolution, 3682
Oxygen fluorine ordering, 2177
Oxygen nonstoichiometry, 3351
Oxygen ordering, 2122
Oxygen partial pressure, 3274
Oxygen permeability, 26
Oxygen stoichiometry, 2122, 3784
Oxygen vacancies, 126, 262
Oxygen vacancies ordering, 2068
Oxygen-deficient fluorite type, 3748
Oxygen-deficient perovskites, 3339
Oxyhalide, 2635
Oxynitride, 2423
Oxysulfate, 1738
Oxysulfide, 1053, 2464, 2810
Oxyvanadate, 4175

P

- Palladium, 3219
Paracrystal, 101, 3301
Partial V–V bond formation, 1098
Pauli paramagnetism, 3099
 ^{207}Pb , 1549
 $\text{PbBi}_4\text{Ti}_5\text{O}_{18}$, 4188
PbO-related structures, 1321
 $\text{Pb}_3\text{Sb}_2\text{MnO}_{11}$, 2855
 PbTiO_3 , 1542, 3553
Pd, 4221
 PdPtMo_3N , 3219
Pechini, 4546
Pechini method, 1542
Pechini sol–gel process, 2237
PEG, 690, 4640
Percolation, 556
Periodic calculation, 3879
Permittivity value, 3944
Perovskite, 2985
6H-Perovskite, 3239
Perovskite manganites, 966
Perovskite oxide, 4552
2H-Perovskite related structure, 1405
Perovskite structure, 1157, 3099, 4665
Perovskite superstructure, 1886
Perovskite type structure borides, 457
Perovskite-related phases therein, 3140
Perovskites, 26, 38, 126, 262, 654, 745, 1338, 1456, 1501, 1542, 1559, 1651, 1695, 1952, 2188, 2323, 2387, 2639, 2726, 2749, 2881, 2973, 3469, 3484, 3693, 3768, 3784, 3879, 3977, 4112, 4420, 4305
Peroxo complex, 3045
Perturbed angular correlation (PAC), 109
pH, 4379
pH control, 3460
Pharmacosiderite, 2903
Phase diagram, 415, 439, 1886, 2350, 2933
Phase equilibria, 1746, 1933, 4142, 4197
Phase relations, 2158, 2394
Phase stability, 26
Phase transformation, 4098
Phase transformation and photocatalytic property, 3490
Phase transitions, 654, 1087, 1127, 1575, 1667, 2002, 2150, 2158, 2378, 2733, 2850, 2961, 3254, 3514, 3590, 3640, 3795, 4081, 4552, 4655, 4724
Phase-compositional control, 3235
1,10-Phenanthroline, 3080
Phenol, 3375
Phenylarsonate, 675
1,4-Phenylenebisphosphonic acid, 2311
Phenylphosphonate, 675
5-Phenyl-2-(4-pyridinyl)pyridine, 4325
Phonon properties, 3595
Phonons, 569
Phosphor, 4687
Phosphates, 55, 781, 901, 1912, 2305, 2610, 2896, 3536, 3918
Phosphates of tetravalent cations, 4743, 4755
Phosphinate, 786
Phosphonates, 642, 2311, 4557
Phosphor, 1333
Photocatalysis, 3375, 3666, 3868, 4221
Photocatalyst, 3235
Photocatalytic activity, 2584
Photochemistry, 4205
Photoconductivity, 556
Photoluminescence, 670, 1032, 3075, 3830, 3879
Photon polymerization, 3007
Photophysical properties, 3805
Photostability, 4597
Phthalate compounds, 2841
Phyllosilicate, 2316
Physical properties, 3616, 4136
 π -d system, 332
 π -extended donor, 332
Piezoelectricity, 2850
Pillared layered, 1852
Pillared perovskites, 3086
Piperazine, 3038
N,N'-Piperazinebis(methylenephosphonate), 1297
PITT, 2094
PL, 3375
Planar faults, 1188
Platinum, 609, 3219
Platinum chalcogenide semiconductors, 2591
Platinum metals, 2600
Plutonium phosphate, 4743, 4755
Plutonyl remarks, 1346
Point defects, 165
Polar intermetallics, 3752
Polaron, 1952
Polyacrylamide gel method, 2649
Polyacrylic acid (PAA), 681
Polycations, 4149
Polycrystalline boron phosphide films, 529
Polymer assisted, 3824
Polymer-to-ceramic conversion, 1803
Polymorphism, 2783, 3640
Polymorphs, 1987
Polyoxometalates, 1776, 3263, 3333, 3392, 3411, 4528
Polystyrene, 3603
Polysulfide, 2756
Polythiophenes, 2285
Polytrioxophosphate, 1302, 1312
Polytypic structures, 6
Porous structure, 4640
Porous TiO_2 films, 1789
Positive magnetoresistance, 3099
Potassium copper hexacyanoferrate, 1817
Powder, 609
Powder diffraction, 2188
Powder metallurgy, 382
Powder neutron diffraction, 2632
Powder synthesis, 1302
Powder X-ray diffraction, 1987, 4420
Power factor, 471
Pr–Ca–Cu–O system, 2394
 $\text{PrCo}_{1-x}\text{Mg}_x\text{O}_3$, 3977
Pre-ceramic polymer, 1803
Precipitation, 1302
Precipitation reaction, 3368
Precursor, 2423, 2756, 4368
Precursor-dehydration route, 1230
Preparation, 2855, 3743
Pressure, 4672
Prevention, 3368
 $\text{Pr}_2\text{NaRuO}_6$, 3560
 PrNiSb_3 , 4228
Probe atoms, 3324
Processing, 866
Propane ODH, 2339
Propane oxidation and ammoxidation catalyst, 1045
Properties, 1352, 4346
Protactinium phosphate, 4743

Proton conductivity, 274
 Proton dynamics, 4282
 Proton exchange, 2366
 Proton insertion, 4244
 Protonated arsenate, 3963
 Protonic conductor, 2150
 Pseudobinary eutectic, 493
 Pseudo-pyramids, 3038
 PSMA (poly-(styrene-alt-maleic acid)), 3368
 $\text{Pt}_2\text{Mo}_3\text{N}$, 3219
 PVA, 2628
 PVA/manganese acetate composite, 2628
 Pyrene, 3479
 Pyrite structure, 2591
 Pyroarsenate, 3963
 Pyroaurite, 3058
 Pyrochlore to “defect fluorite” phase transition, 4404
 Pyrochlores, 139, 1549, 1858, 2943, 2985, 3075, 3873, 4546
 Pyrolusite, 4706

Q

Quantum confinement effect, 3568
 Quantum cutting effect, 2777
 Quantum dots, 4785
 Quantum size effects, 4785
 Quantum well, 3568
 Quasi-classical approximation, 395
 Quaternary ammonium bromide, 3757
 Quaternary thiogermanate, 2506

R

Radiation damage, 4413
 Radioactive wastes, 1817
 Raman, 377, 569, 3963, 4175, 4672
 Raman laser degradation, 4286
 Raman scattering, 461, 1905, 4087
 Raman scattering spectroscopy, 2733
 Raman spectra, 2002, 4142, 4482
 Raman spectroscopy, 1382, 2323
 Raman spectrum, 575
 Ramsdellite, 3981, 4706
 Rare earth, 901, 1542, 2464, 2810, 3127, 3650, 3709, 3735, 4569, 4632
 Rare earth borides, 431
 Rare earth boron-rich borides, 444
 Rare earth dodecaborides, 507
 Rare earth phosphate, 1302, 1312
 Rare earth sulfides, 4142
 Rare-earth antimonides, 4228
 Rare-earth barium iron oxides, 281
 Rare-earth complex oxides, 714
 Rare-earth compounds, 2600
 Rare-earth copper selenide, 760
 Rare-earth element, 709
 Rare-earth element inter-metallics, 4695
 Rare-earth intermetallics, 3545
 Rare-earth molybdates, 2470
 Rare-earth polyselenides, 1598
 Rare-earth silicon nitride, 4687
 Rare-earth telluride, 3896
 Rasvumite, 1867
 $\text{Rb}_3[\text{Ta}(\text{O}_2)_4]$, 3045
 $\text{Rb}_2\text{V}_3\text{O}_8$ fresnoite, 3316

Reaction diffusion, 4258
 Reactive mechanism, 2265
 Reactivity, 4394
 Real structure, 523
 Red long-lasting phosphorescence, 895
 Reduction, 1032
 Reflectivity spectra, 3859
 Rehydration, 3058
 Relative humidity, 134
 Relaxation, 3245
 Relaxor, 1695
 Reorientational motions, 3795
 Residual organic template, 377
 Resistivity, 293, 4228
 Resistivity insulator to semiconductor phase transitions, 4428
 Reverse Monte Carlo modelling, 2168
 Reverse reactions, 4205
 Rhabdophane, 1302, 1312
 Rhenium, 1896
 Rhombohedral, 4465
 β -Rhombohedral boron, 1639, 2916
 Rhombohedral-cubic transition, 4665
 Rietveld, 2188
 Rietveld analysis, 1258, 1401, 2404, 2903, 3553
 Rietveld method, 3514, 4058
 Rietveld refinement, 1197, 1738, 1796, 1838, 1867, 2231, 3245, 3469, 4067, 4305, 4420, 4428, 4535, 4687
 Rietveld study, 1758
 Rods, 4386
 Room temperature reaction, 3886
 Ru-1212, 1072
 Rubidium chloride clusters, 1529
 Rubidium rare-earth fluorides, 2777
 Ruddlesden–Popper, 119, 1471, 1559
 Ruddlesden–Popper oxide, 4616
 Ruddlesden–Popper phases, 2044, 2635
 Rupture, 487
 Ruthenates, 146, 817, 4542
 Ruthenium, 38, 1393, 3333
 Ruthenium oxides, 3499
 Ruthenium oxychloride, 806
 Ruthenocuprate, 834
 Rutile-type structure, 1045

S

SAED, 714
 Sb^{3+} , 3114
 SBA-15, 3815
 SbNMg_3 , 61
 Sb_2O_3 , 3824
 Sc_2AlB_6 , 547
 Scale inhibitors, 4768
 Scandium, 439, 3693, 4316
 Scandium borocarbide, 431
 Scandium borocarbosilicide, 476
 $\text{Sc}_{3.67-x}\text{B}_{41.4-y-z}\text{C}_{0.67+z}\text{Si}_{0.33-w}$, 476
 ScB_xRh_3 , 457
 ScFe_6Ga_6 -type structure, 4341
 SDS, 4640
 Second harmonic generation, 3709
 Seebeck coefficients, 26, 471, 4516
 Seeded polymerization, 3197
 Selectivity, 2079, 2903
 Selenates, 4632
 Selenites, 4632, 4680

- Selenium, 2249, 4316
Selenostannates, 3640
Self-assembly, 1585, 3675, 3743, 4588
Self-limiting growth, 3944
Self-propagating combustion, 3666
Semiconducting clathrates, 1905
Semiconductors, 1388, 2249, 3448, 4465
Semiconductor/solution interface, 4205
SeO₂, 1631
Separation, 466
Shape and morphology control, 4640
Shear modulus, 596, 605
Shearing phenomena, 3187
SHG, 1444
Short range ferrimagnetism, 3086
Si clathrates, 1905
Sialons, 2530, 2928
SiBN, 542
SiC, 400, 580
Silica, 960, 3052, 3197, 3675
Silicates, 2783
Silicide, 2523, 3939
Silicon, 4167
Silicon carbide, 487, 580, 4163
Silicon-containing polyimide, 3849
Silicotitanate, 2079
Sillén phases, 3610
Silver, 2073, 2158, 4626
Silver aluminum oxide, 889
Silver mercury iodide, 3715
Silver sulfide, 1165
Simulation, 3660
Single crystal growth, 3183
Single crystal Raman spectroscopy, 4413
Single crystal SiC, 580
Single crystal structure, 817
Single crystal structure analysis, 476, 4451
Single crystal structure elucidation, 3721
Single crystals, 181, 1276, 1388, 1672, 2129, 3070, 3131, 3229, 3479, 3581, 3934, 4228, 4626
Single molecule, 3479
Single-crystal diffraction, 1111
Single-crystal X-ray crystallography, 4293
Single-crystal X-ray diffraction, 3729, 4516, 4695
Sintered SiC, 580
Sintering, 410, 616
Sintering behavior, 745
Site mixing, 1965
Site occupancy wave, 1598
Size-disorder, in rare earth manganates, 3633
Skutterudite, 2138
Small polaron hopping, 1098
Small polarons, 4104
¹¹⁹Sn, 1549, 4332
Sn-based layer, 800
Sodium, 2889
Sodium bismuth titanate, 2850
Sodium bromate, 4732
Sodium calcium vanadium phosphate, 2875
Sodium chlorate, 4732
Sodium cleanup, 3460
Sodium cobalt diphosphate, 1437
Sodium cobalt oxide, 2550
Sodium content, 1137
Sodium disposal, 3460
Sodium fire fighting, 3460
Sodium gallium monophosphate, 181
Sodium strontium vanadium phosphate, 2875
Sodium tantalate, 4420
Sodium titanates, 4508
Soft chemistry, 1672
Soft mechanochemical route, 3903
Solid base, 772
Solid electrolytes, 126, 189, 2366, 3839
Solid film, 3709
Solid oxide fuel cells, 126, 1501, 4112
Solid solutions, 1501, 2933, 3301, 4732
Solid-state chemistry, 2255
Solid-state compound, 257, 709, 760
Solid-state electrochemical cell, 1146
Solid-state laser materials, 3028, 3183
Solid-state NMR, 1252, 2079, 2255
Solid-state reaction, 866, 2265, 3014, 3752, 3886, 4126
Solid-state structures, 65
Solid-state synthesis, 361, 1017, 1393, 1501, 1567, 1681, 2058, 3909, 4197
Sol-gel, 960, 1372, 1425, 1660, 2316, 2339, 3052, 3092, 4119
Sol-gel method, 2094, 4475
Sol-gel process, 4632
Sol-gel processing method, 2432
Sol-gel synthesis, 1471
Solubility limit, 4112
Solution in aluminum melt, 547
Solvent-free method, 3815
Solvothermal, 2198, 2329, 4093
Solvothermal process, 3235
Solvothermal reaction, 1230
Solvothermal synthesis, 800, 2477, 2506
Sorption, 1817
Space group, 1958
Space group P3m1, 1695
Specific heat, 38, 739, 883, 3239, 3853
Sphene, 3254
Sphere, 1585
Spin glass, 444
Spin state, 2068
Spin-chain compounds, 3131, 3270
Spinel, 1, 101, 3058
Spinel LiMnO, 1585
Spin-glass behavior, 146
Spin-orbit splitting, 4785
Spin-state transitions, 3339
SPR-KKR, 3245
Squarate, 2575
Square net, 4228
SQUID, 2977, 3052
Sr₂MnGaO_{5-x}F_{1+x}, 731
Sr₃Ir₂O₇, 3776
Sr₃(PO₄)₂, 3114
Sr₃ZnRhO₆, 3270
Sr₅(As₂O₇)₂(AsO₃OH), 3963
SrBi₄Ti₅O₁₈, 4188
SrHfO₃, 3484
SrO–CuO–Nb₂O₅ system, 3140
SrO–Fe₂O₃, 2933
SrRuO₃, 3484
SrTiO₃, 3879
Stability, 1585, 2933, 4672
Stacking faults, 119, 600, 605, 2790, 2803, 3212
Stacking variants, 2600
Starburst pore canal, 844
Static disorder, 1965
Static displacements, 936
Stoichiometry, 3131

- Stripes, 3351
 Strontium carbonate, thermodynamic stability, 2007
 Strontium cerate, thermodynamic stability, 2007
 Strontium doped cobaltate, 1886
 Strontium iron cobalt oxide, 2350
 Strontium zirconium diorthophosphate, 3514
 Strontium–titanium oxides, 1559
 Structural characterization, 80, 2039, 4508
 Structural determination, 2617
 Structural distortions, 3776
 Structural phase transition, 739
 Structural properties, 1480
 Structural reconstruction, 3058
 Structural systematics, 4672
 Structure analysis, 3045
 Structure and diffraction, 45
 Structure comparison of $\text{Bi}_5\text{ANb}_4\text{O}_{18}$ ($A = \text{K}, \text{Ag}, \text{Na}$), 3359
 Structure determination, 181, 216, 1111, 1488, 1607, 1847, 2714, 3454, 3581
 Structure of a new phosphate, 2991
 Structure of $\text{Bi}_5\text{AgNb}_4\text{O}_{18}$, 3359
 Structure of $\text{Bi}_6\text{TiP}_2\text{O}_{16}$, 1412
 Structure of diffusion zone, 4258
 Structure probe, 3536
 Structure template, 343
 Structure validation, 1838
 Structured diffuse scattering, 231
 Structure-direct assembly, 176
 Structures, 366, 714, 731, 1471, 1575, 1695, 1912, 2183, 2188, 2484, 2511, 2518, 2575, 2685, 2749, 2903, 3032, 3105, 3290, 3505, 3768, 4251, 4346, 4557
 Struvite analog, 2991
 Substitution effects, 73
 Substitution of manganese, 1285
 Substoichiometric compounds, 1244
 Sulfate, 2889
 Sulfated β -cyclodextrin, 366
 Sulfide, 3853
 Sulfonates, 2557
 Sulfonation, 1660
 Superconductivity, 372, 498, 834, 1244
 Superionic conduction, 3156, 3715
 Superionic conductor, 4282
 Superstructure, 1838, 3499
 Supported Ni catalysts, 4368
 Supramolecular compound, 4325
 Surface modification, 4221
 Surface passivation, 3568
 Surfactant, 3743
 Susceptibility measurements, 4058
 Symmetry lowering, 2943
 Synchrotron, 3505
 Synchrotron diffraction, 2896
 Synchrotron radiation, 1268, 1944
 Synchrotron X-ray diffraction, 281, 2726, 4188
 Synthesis, 257, 696, 709, 760, 2183, 2484, 2575, 3007, 3032, 3843, 4800
 Synthesis in concentrated sulfuric acid, 4351
 Synthesis methods, 3949
 Synthesis temperature and time, 1585
 Synthesis under hydrothermal conditions, 2456
 System Ba–Fe–O, 1146
- T
- Tantalum, 1781, 4023
 Tape casting, 487
 $\text{Tb}_{16}\text{O}_{30}$, 3839
 Tellurium, 4724
 TEM, 101, 1188
 Temperature, 681
 Temperature-dependent electron diffraction study, 3316
 Temperature-stable dielectrics, 2023
 Template, 2484
 Templated synthesis, 4648
 Tensimetric studies, strontium cerate, 2007
 Ternary antimonide, 3418
 Ternary nitrides, 61
 Ternary phase, 493
 Ternary phase diagram, 2053
 Ternary rare earth borosilicides, 415
 Terthiophene, 2827
 Tetraethylenepentamine, 696
 Tetragonal, 551
 Tetragonal tungsten-bronze, 875, 2366
 Tetragonal-to-cubic transformation, 4443
 Tetrahedral compounds, 889
 1,2,4,5-Tetrakis(4-pyridylvinyl)benzene, 4293
 Tetrameric building units, 181
 TG/DTA, strontium cerate, 2007
 TG-FTIR, 4368
 ThCr_2Si_2 type, 2977
 Thermal analysis, 221, 786, 883, 2366, 3281, 3757
 Thermal barrier coating, 3484
 Thermal behavior, 319, 1235, 1312, 4269, 4655
 Thermal conductivity, 537, 3484
 Thermal decomposition, 366, 2534, 3058, 4368
 Thermal decomposition of LiAlH_4 , 648
 Thermal diffusivity, 533
 Thermal expansion, 507, 515, 745, 1713, 2150, 2378, 3918
 Thermal expansion coefficient, 600, 3484
 Thermal expansion of the structures, 951
 Thermal vibration, 4451
 Thermoanalysis, 2477
 Thermoanalytical measurements, 3423
 Thermochemistry, SrCeO_3 , 2007
 Thermochromism, 1776
 Thermo-decomposition, 1535
 Thermodynamic prediction, 410
 Thermodynamic properties, 1146
 Thermodynamics, 126, 849, 1858
 Thermoelectric, 2998
 Thermoelectric figure-of-merit, 529, 533, 537
 Thermoelectric material, 4001
 Thermoelectric power, 529, 533, 537, 1098
 Thermoelectricity, 221
 Thermogravimetric analysis (TGA), 1520
 Thermogravimetry, 1037, 1933, 2122, 3149, 3274
 Thermoluminescence, 895
 Thermopower, 207
 Thermostability, 4597
 Thin film phosphors, 2237
 Thin films, 2094, 3879, 4785
 Thioantimonate, 2477
 Thiophene, 1067
 Thiospinel, 109
 Thorium manganese selenide, 257
 Thorium phosphate, 4743, 4755
 Three-dimensional, 3229
 Three-dimensional host lattice, 3581
 Three-dimensional open-framework, 4183
 Three-dimensional tunnel structure, 181
 Thulium nitrate crystal, 2223
 TiCl_3 as titania precursor, 2456

Time series data, 2223
 Tin, 1549, 1919
 Tin dioxide, 4332
 Tin fluoride, 800
 Tin fluorophosphate, 800
 Tin oxide, 1425
 TiO₂, 3375, 4205
 TiO₂-CeO₂ materials, 1873
 TiO₂/dye/CuI cells, 1789
 Ti-Si-B, 407
 Titanates, 3105, 3784
 Titania, 1372, 1781, 3490
 Titanite, 3254
 Titanium, 675, 2464
 Titanium diboride, TiB₂, 628
 Titanium oxo cluster, 2584
 Titanosilicate, 2903
 Ti₃H(SO₄)₂, 4282
 TiCo₂S₂, 2977
 Tolerance factor, 126
 Topotactic reaction, 1672
 Total conductivity, 26
 Transformation, 2685
 Transient nucleation, 1529
 Transition metal nitrides, phase transformation, 1976
 Transition metal phosphide, 1449
 Transition metals, 1811, 1896
 Transmission electron micrographs, 4163
 Transmission electron microscope (TEM), 3439
 Transmission electron microscopy, 701, 987, 2670, 4616
 Transparent conducting oxide, 1480
 Transparent conductors, 3748
 Transport properties, 1704
 Traps, 556
 Triethylboron, 542
 Triethylenediamine, 4073
 Triethylsilane, 542
 Trifluoroacetates, 1032
 Trilithium hexahydroaluminate, 648
 Trimetallic clusters, 1060
 Trimethylammonium, 2961
 Triple bonded Os dimeric unit, 3086
 Triple perovskites, 2295
 Tubes, 4386
 Tungstates, 2740, 3411, 3469, 4305
 Tungsten, 2423
 Tunnel structures, 3383, 3581
 TWC, 1268
 Twinning, 605, 1165, 3212
 Two-band model, 1704
 Two-dimensional arrays, 2144
 Two-dimensional framework, 3263
 Two-Fe polaron, 1952
 Two-photon absorption, 3007, 4293
 Type B (phosphate) carbonate ion, 3174

U

U³⁺ doped RbY₂Cl₇, 2415
 U⁴⁺ doped RbY₂Cl₇, 2415
 Ultraviolet absorbent, 3197
 Uranium alloy, 2053
 Uranium manganese selenide, 257
 Uranium oxide, 1758
 Uranium phosphate, 4743, 4755
 Uranium (VI) tellurite, 3971

Uranyl, 1717
 Uranyl arsenate, 2675
 Uranyl chromate, 1431
 Uranyl divanadate, 1567
 Uranyl iodate, 725
 Uranyl phosphate, 2675
 Uranyl tellurite, 3971
 Uranyl tungstate, 3729
 Uranyl vanadate, 2058
 Urolithiasis, 3368
 UV absorbers, 89
 UV/vis, 2705
 UV/vis and ESR spectroscopies, 765

V

V, 551
 V₂O₅, 2285
 V²⁺/V³⁺ mixed valence oxide, 1098
 Vacuum ultraviolet (VUV), 2777
 Valence mixing, 2655
 Valence transition, 3290
 van der Pauw method, 529, 533
 Vanadium, 1912, 2305, 2423, 2575
 Vanadium antimonate, 1045
 Vanadium oxides, 377, 690, 946
 Vanadium pentoxide, 960
 Vanadium phosphite, 4183
 Vanadylphosphate, 1173, 2875
 Variable range hopping, 1098, 4516
 Verwey-transition thermodynamics, 281
 Vibrational analysis, 4482
 Vibrational spectra, 3045, 4655
 Vibrational spectrum, 2943
 Vickers microhardness, 547
 Visible light induced, 3235

W

(W_{1-x}Al_x)C solid solution, 2265
 Water photolysis, 4205
 Water splitting, 4205
 Water-soluble, 2285
 Weak interactions, 3757
 Wet chemical method, 1425
 Wet-chemical analysis, 1037, 3149
 Wet-chemical synthesis, 19940

X

X-ray, 2188, 3977
 X-ray absorption, 2542
 X-ray absorption spectroscopy, 1000
 X-ray and neutron diffraction, 987, 2617
 X-ray diffraction, 55, 165, 181, 221, 415, 731, 765, 936, 1023, 1072, 1087, 1165, 1276, 1388, 1449, 1520, 1746, 1796, 2150, 2705, 2961, 3581, 3715, 3768, 4087, 4149, 4163, 4167, 4197, 4228, 4451, 4616
 X-ray powder diffraction, 216, 1111, 1258, 1713, 1847, 2231, 2973, 3119, 3423, 3454, 3757, 4007, 4013, 4067
 X-ray reference diffraction pattern, 3359
 X-ray single crystal diffraction, 3757
 X-ray structure, 786
 X-ray structure analysis, 332
 XANES, 109, 817, 834, 2101, 2639
 XANES spectroscopy, 1037

XAS, 1781, 2432
Xenotime, 1312
Xerogel fractal analysis, 1873
Xerogel pore-size distribution, 1873
XPS, 1480, 2432, 2977, 3131, 3439
XRD, 2039, 3070

Y

^{89}Y MAS-NMR spectroscopy, 2783
 $\text{Y}_2\text{O}_3:\text{Eu}^{3+}$, 1292
 $\text{Y}_2(\text{WO}_4)_3$, 4087
 $\text{Y}_2(\text{Zr}_y\text{Ti}_{1-y})_2\text{O}_7$ system, 4404
 YAlO_3 perovskite, 1276
 YBaMn_2O_6 , 987
 YbB_6 , 461
Yellow emission, 3568
Y-phase hexagonal ferrite, 3903
Ytterbium, 1919
Yttrium, 2783
Yttrium gadolinium orthoborate phosphor, 2242
Yttrium stannate, 3075
Yttrium-iron oxide, 1933
 $\text{YVO}_4:\text{Eu}$, 2649

Z

Zeolite-like, 4626
Zinc, 786, 2198, 2316, 4701
Zinc hydroxide, 1852
Zinc orthophosphate, 895
Zinc oxide, 2144
Zinc phosphate, 1252
Zinc phosphate–phosphite, 2518
Zinc selenates, 3529
Zinc selenide, 4785
Zinc(II) complexes, 2358
Zincophosphites, 80, 343, 3229
Zintl phase compounds, 361
Zintl phases, 227, 3418, 3545
Zirconium, 2523, 3939, 4023, 4136
Zirconium diphosphonates, 4013
Zirconium oxalate, 4269
Zn–Al-layered double hydroxide, 3987
 $\text{Zn}(\text{C}_3\text{H}_3\text{N}_2)_2$, 1011
 ZnGeP_2 , 3859
 ZnO , 176, 4221
 ZnO film, 3830
 ZnSiP_2 , 3859
 ZnSnP_2 semiconductors, 3859