

## SUBJECT INDEX

- 25% Al–Zn alloy coating  
 Study on growth factors of intermetallic layer within hot-dipped 25% Al–Zn alloy coating on steel 301
- 7475 Aluminium alloy  
 Study of fatigue behaviour of 7475 aluminium alloy 231
- ACRT  
 Experimental setup for rapid crystallization using favoured chemical potential and hydrodynamic conditions 455
- Acid rain  
 Investigation of surface modifications in ethylene propylene diene monomer (EPDM) rubber due to tracking under a.c. and d.c. voltages 587
- Activation energy  
 Electrical conductivity measurements on gel grown KDP crystals added with urea and thiourea 511
- Adenine  
 XRD and optical microscopic studies of Co(III) complexes containing 5-cyano-6-(4-pyridyl)-2-thiouracil, thymine and adenine bases 339
- Al–Cu–Mg alloy  
 Effect of zirconium addition on the recrystallization behaviour of a commercial Al–Cu–Mg alloy 643
- Al–Ti–B master alloy  
 Effects and mechanisms of grain refinement in aluminium alloys 345
- Al<sub>3</sub>Zr particles  
 Effect of zirconium addition on the recrystallization behaviour of a commercial Al–Cu–Mg alloy 643
- Alkali  
 Effect of alkali treated jute fibres on composite properties 129
- Aluminium alloy–SiC composite  
 Effect of stress ratio and frequency on fatigue crack growth rate of 2618 aluminium alloy silicon carbide metal matrix composite 169
- Ancient iron  
 Characterization of ancient Indian iron and entrapped slag inclusions using electron, photon and nuclear microprobes 317
- Angle of rotation  
 Cracking phenomena in lithium-di-silicate glass ceramics 157
- Anomalous diffusion  
 Critical fatigue behaviour in brittle glasses 161
- Antimonide crystals  
 Influence of crystal–melt interface shape on self-seeding and single crystalline quality 475
- Anti-resonant frequency  
 Effect of lanthanum doping on electrical and electromechanical properties of Ba<sub>1-x</sub>La<sub>x</sub>TiO<sub>3</sub> 497
- Atomization  
 Non-equilibrium solidification of undercooled droplets during atomization process 547
- Attenuation  
 A study of ultrasonic velocity and attenuation on polycrystalline Ni–Zn ferrites 611
- Austenite  
 Cellular automaton simulation of microstructure evolution during austenite decomposition under continuous cooling conditions 305
- b**-Si<sub>3</sub>N<sub>4</sub>  
 Fracture toughness and reliability in high-temperature structural ceramics and composites: Prospects and challenges for the 21st Century 117
- Ball-milling  
 Particle fracture and plastic deformation in vanadium pentoxide powders induced by high energy vibrational ball-mill 173  
 A new combustion route to **g**-Fe<sub>2</sub>O<sub>3</sub> synthesis 617
- Barium iodate  
 Growth and study of some gel grown group II single crystals of iodate 461
- Barium titanate  
 Studies on compensating valency substituted BaTi<sub>(1-x)</sub>Mn<sub>x/2</sub>Nb<sub>x/2</sub>O<sub>3</sub> ceramics 243
- Battery effect  
 Battery effect in ‘electric current arising from unpolarized polyvinyl formal’ 407
- Bending  
 Failure analysis of multiple delaminated composite plates due to bending and impact 143
- Bi-2223 tube conductor  
 Preparation and characterization of Ag-added Bi<sub>1.84</sub>Pb<sub>0.4</sub>Sr<sub>2</sub>Ca<sub>2.2</sub>Cu<sub>3</sub>O<sub>10+x</sub> bulk tube conductors for cryogen free superconducting magnet 603
- Biaxial flexural strength  
 Mechanical properties of very thin cover slip glass disk 151
- Biaxial flexure  
 Mechanical characteristics of microwave sintered silicon carbide 121  
 Mechanical properties of glass polymer multilayer composite 197
- Bimetallic alloy  
 Preparation of Sm–Ru bimetallic alloy films on Ru(0001) surface by vapour-deposition and annealing 583
- Bioceramic  
 Development of calcium phosphate based bioceramics 653
- Biocompatibility  
 Development of calcium phosphate based bioceramics 653
- Biocompatible  
 Studies on broad spectrum corrosion resistant oxide coatings 569
- Bismuth layered structure ferroelectromagnetic  
 Synthesis, impedance and dielectric properties of LaBi<sub>3</sub>Fe<sub>2</sub>Ti<sub>3</sub>O<sub>18</sub> 487  
 671

- Bitumen  
Effect of bitumen emulsion on setting, strength, soundness and moisture resistance of oxychloride cement 313
- Bond coat  
Crack propagation studies and bond coat properties in thermal barrier coatings under bending 203
- Bone graft  
A novel bio-inorganic bone implant containing deglued bone, chitosan and gelatin 415
- Breakdown voltage  
Non-linear  $I$ - $V$  characteristics of doped  $\text{Sn}_{1-x}\text{Ti}_x\text{O}_2$  ( $0.0 < x < 0.25$ ) system 483
- Bridgman growth  
Homogenization of zinc distribution in vertical Bridgman grown  $\text{Cd}_{0.96}\text{Zn}_{0.04}\text{Te}$  crystals 659
- (Bulk) amorphous alloys  
Study of oxidation behaviour of Zr-based bulk amorphous alloy  $\text{Zr}_{65}\text{Cu}_{17.5}\text{Ni}_{10}\text{Al}_{7.5}$  by thermogravimetric analyser 281
- CCT diagrams  
Cellular automaton simulation of microstructure evolution during austenite decomposition under continuous cooling conditions 305
- CFCC  
Fracture toughness and reliability in high-temperature structural ceramics and composites: Prospects and challenges for the 21st Century 117
- CVD  
SiC fibre by chemical vapour deposition on tungsten filament 273
- Calcium iodate  
Growth and study of some gel grown group II single crystals of iodate 461
- Calcium phosphate  
Development of calcium phosphate based bioceramics 653
- Carbon fibre  
Impact fatigue behaviour of carbon fibre-reinforced vinylester resin composites 79
- Carbon ions  
Physical and chemical response of 70 MeV carbon ion irradiated Kapton-H polymer 529
- Carboxylate  
Synthesis of ferrite grade  $\alpha\text{-Fe}_2\text{O}_3$  39
- Catalytic hydrogenation  
Catalytic activity of polymer-bound Ru(III)-EDTA complex 237
- Cathodic protection  
Corrosion behaviour of hot dip zinc and zinc-aluminium coatings on steel in seawater 355
- Cationic size  
Effect of cationic size in  $\text{Hg}(\text{Tl}/\text{Bi})\text{Ba}_2\text{Ca}_2\text{Cu}_3\text{O}_{8+d}$  on superconducting and microstructural characteristics 523
- CdZnTe  
Homogenization of zinc distribution in vertical Bridgman grown  $\text{Cd}_{0.96}\text{Zn}_{0.04}\text{Te}$  crystals 659
- Ceramic  
Some numerical approaches of creep, thermal shock damage and delayed failure of ceramics and refractories 97
- Characterization  
Characterization of ancient Indian iron and entrapped slag inclusions using electron, photon and nuclear microprobes 317
- Charging transient currents  
Charging transient in polyvinyl formal 401
- Chemical beneficiation  
Ferrite grade iron oxides from ore rejects 331
- Chemical etching  
Growth and characterization of indium antimonide and gallium antimonide crystals 445
- Chitosan  
A novel bio-inorganic bone implant containing deglued bone, chitosan and gelatin 415
- Cholesterol  
Growth and micro-topographical studies of gel grown cholesterol crystals 431
- Chromium doped  $\text{LiMn}_2\text{O}_4$   
Electrochemical behaviour of  $\text{LiM}_y\text{Mn}_{2-y}\text{O}_4$  ( $\text{M} = \text{Cu}, \text{Cr}; 0 \leq y \leq 0.4$ ) 51
- Co  
Submicron particles of Co, Ni and Co-Ni alloys 515
- Co-Ni alloys  
Submicron particles of Co, Ni and Co-Ni alloys 515
- Coating  
Crack propagation studies and bond coat properties in thermal barrier coatings under bending 203  
Studies on broad spectrum corrosion resistant oxide coatings 569
- Coating properties  
Glass and glass-ceramic coatings, versatile materials for industrial engineering applications 69
- Cold isostatic pressing  
Preparation and characterization of Ag-added  $\text{Bi}_{1.84}\text{Pb}_{0.4}\text{Sr}_2\text{Ca}_{2.2}\text{Cu}_3\text{O}_{10+x}$  bulk tube conductors for cryogen free superconducting magnet 603
- Cold working  
An X-ray diffraction study of defect parameters in a Ti-base alloy 649
- Combustion synthesis  
A new combustion route to  $\alpha\text{-Fe}_2\text{O}_3$  synthesis 617
- Composite  
SiC fibre by chemical vapour deposition on tungsten filament 273
- Compression  
High temperature flow behaviour of SiC reinforced lithium aluminosilicate composites 215
- Compression test  
Effect of filler addition on the compressive and impact properties of glass fibre reinforced epoxy 219
- Conducting polymer  
Synthesis and characterization of poly(2,5-dimethoxyaniline) and poly(aniline-Co-2,5-dimethoxyaniline): The processable conducting polymers 389
- Continuous casting  
Evaluation of solid-liquid interface profile during continuous casting by a spline based formalism 373
- Continuous fibre  
SiC fibre by chemical vapour deposition on tungsten filament 273
- Cooling rates  
Non-equilibrium solidification of undercooled droplets during atomization process 547

- Copper doped  $\text{LiMn}_2\text{O}_4$   
 Electrochemical behaviour of  $\text{LiM}_y\text{Mn}_{2-y}\text{O}_4$  ( $M = \text{Cu, Cr; } 0 \leq y \leq 0.4$ ) 51
- Corrosion  
 Analysis of corrosive environmental factors of seabed sediment 253
- Corrosion rate  
 Possibility of improvement of potentiodynamic method for monitoring corrosion rate of steel reinforcement in concrete 555
- Corrosion resistance  
 Studies on broad spectrum corrosion resistant oxide coatings 569
- Crack driving force  
 Cracking phenomena in lithium-di-silicate glass ceramics 157
- Crack propagation  
 Crack propagation studies and bond coat properties in thermal barrier coatings under bending 203
- Creep  
 Some numerical approaches of creep, thermal shock, damage and delayed failure of ceramics and refractories 97
- Critical behaviour  
 Critical fatigue behaviour in brittle glasses 161
- Critical hydrogen concentration  
 On critical hydrogen concentration for hydrogen embrittlement of  $\text{Fe}_3\text{Al}$  559
- Crystal growth  
 Crystallization of mixed rare earth (didymium) molybdates in silica gel 435  
 Surface studies on as-grown (111) faces of sodium bromate crystals 665
- Crystallization  
 Growth and characterization of indium antimonide and gallium antimonide crystals 445
- Crystallization kinetics  
 Effect of high-energy heavy ion irradiation on the crystallization kinetics of Co-based metallic glasses 27
- Crystals  
 Cracking phenomena in lithium-di-silicate glass ceramics 157
- Cube orientation  
 On the origin of recrystallization textures 23
- Curie molar constant  
 Structural and magnetic properties of  $\text{CaMg}_2\text{Fe}_{16}\text{O}_{27}$  47
- Cyclability  
 Electrochemical behaviour of  $\text{LiM}_y\text{Mn}_{2-y}\text{O}_4$  ( $M = \text{Cu, Cr; } 0 \leq y \leq 0.4$ ) 51
- Cyclic cleavage  
 Study of fatigue behaviour of 7475 aluminium alloy 231
- DSC  
 Investigation of surface modifications in ethylene propylene diene monomer (EPDM) rubber due to tracking under a.c. and d.c. voltages 587
- Debye relaxations  
 Synthesis, impedance and dielectric properties of  $\text{LaBi}_3\text{Fe}_2\text{Ti}_3\text{O}_{18}$  487
- Debye temperatures  
 Lattice variation and thermal parameters of  $\text{Ni}_x\text{Mg}_{1-x}\text{SO}_4 \cdot 7\text{H}_2\text{O}$  single crystals 441
- Debye-Waller factors  
 Lattice variation and thermal parameters of  $\text{Ni}_x\text{Mg}_{1-x}\text{SO}_4 \cdot 7\text{H}_2\text{O}$  single crystals 441
- Decohesion  
 On critical hydrogen concentration for hydrogen embrittlement of  $\text{Fe}_3\text{Al}$  559
- Decremental stress relaxation  
 Stress relaxation and estimation of activation volume in a commercial hard PZT piezoelectric ceramic 165
- Defect density  
 Growth and characterization of indium antimonide and gallium antimonide crystals 445
- Defects  
 A detailed model for defect concentration and dopant activation in GaAs 225
- Deformation  
 Stress relaxation and estimation of activation volume in a commercial hard PZT piezoelectric ceramic 165
- Deglued bone  
 A novel bio-inorganic bone implant containing deglued bone, chitosan and gelatin 415
- Degradation  
 Investigation of surface modifications in ethylene propylene diene monomer (EPDM) rubber due to tracking under a.c. and d.c. voltages 587
- Delaminated composite  
 Failure analysis of multiple delaminated composite plates due to bending and impact 143
- Delayed failure  
 Some numerical approaches of creep, thermal shock, damage and delayed failure of ceramics and refractories 97
- Deposition  
 SiC fibre by chemical vapour deposition on tungsten filament 273
- Derivatized TMA salts  
 Synthesis, characterization and application of an inorganic organic material: *p*-chlorophenol anchored onto zirconium tungstate 265
- Didymium molybdate  
 Crystallization of mixed rare earth (didymium) molybdates in silica gel 435
- Dielectric constant  
 Studies on compensating valency substituted  $\text{BaTi}_{(1-x)}\text{Mn}_{x/2}\text{Nb}_{x/2}\text{O}_3$  ceramics 243  
 Dielectric behaviour of  $\text{MgFe}_2\text{O}_4$  prepared from chemically beneficiated iron ore rejects 323  
 Dielectric behaviour of erbium substituted Mn–Zn ferrites 505
- Dielectric loss factor  
 Dielectric behaviour of  $\text{MgFe}_2\text{O}_4$  prepared from chemically beneficiated iron ore rejects 323
- Dielectric loss tangent  
 Dielectric behaviour of erbium substituted Mn–Zn ferrites 505
- Dielectric properties  
 Composition dependence of electrical properties of  $\text{ZnF}_2$ – $\text{MO}$ – $\text{TeO}_2$  glasses 421
- Dipolar mechanism  
 Charging transient in polyvinyl formal 401
- Dispersion  
 pH controlled dispersion and slip casting of  $\text{Si}_3\text{N}_4$  in aqueous media 57
- Doctor blade process  
 Observation of curious spiral growth features in Tl doped Hg bearing high temperature superconducting tapes 595

- Domain walls  
A study of ultrasonic velocity and attenuation on polycrystalline Ni–Zn ferrites 611
- Domains  
Stress relaxation and estimation of activation volume in a commercial hard PZT piezoelectric ceramic 165
- Dopant  
Thermal behaviour of strontium tartrate single crystals grown in gel 249
- Dopant activation  
A detailed model for defect concentration and dopant activation in GaAs 225
- Droplets  
Non-equilibrium solidification of undercooled droplets during atomization process 547
- Ductile striations  
Study of fatigue behaviour of 7475 aluminium alloy 231
- EDAX  
Crystallization of mixed rare earth (didymium) molybdates in silica gel 435
- EOT  
Metallo–organic compound-based plasma enhanced CVD of ZrO<sub>2</sub> films for microelectronic applications 579
- EPDM  
Investigation of surface modifications in ethylene propylene diene monomer (EPDM) rubber due to tracking under a.c. and d.c. voltages 587
- Effect of magnetic field  
Thermal behaviour of strontium tartrate single crystals grown in gel 249
- E*-glass fibre  
Behaviour of *E*-glass fibre reinforced vinylester resin composites under impact fatigue 137
- Elastic mismatch  
Stereological characterization of crack path transitions in ceramic matrix composites 185
- Elastic moduli  
Acoustic investigations on PbO–Al<sub>2</sub>O<sub>3</sub>–B<sub>2</sub>O<sub>3</sub> glasses doped with certain rare earth ions 63
- Electrical conductivity  
Structural and magnetic properties of CaMg<sub>2</sub>Fe<sub>16</sub>O<sub>27</sub> 47  
Electrical conductivity measurements on gel grown KDP crystals added with urea and thiourea 511
- Electrical resistance method  
Possibility of improvement of potentiodynamic method for monitoring corrosion rate of steel reinforcement in concrete 555
- Electrical resistivity  
Dielectric behaviour of erbium substituted Mn–Zn ferrites 505
- Electron, photon and nuclear microprobe techniques  
Characterization of ancient Indian iron and entrapped slag inclusions using electron, photon and nuclear microprobes 317
- Electron-transport properties  
Studies on compensating valency substituted BaTi<sub>(1-x)</sub>Mn<sub>x/2</sub>Nb<sub>x/2</sub>O<sub>3</sub> ceramics 243
- Emulsion  
Effect of bitumen emulsion on setting, strength, soundness and moisture resistance of oxychloride cement 313
- Enamelling  
Glass and glass–ceramic coatings, versatile materials for industrial and engineering applications 69
- Energy of activation  
Catalytic activity of polymer-bound Ru(III)–EDTA complex 237
- Environmental factors  
Analysis of corrosive environmental factors of seabed sediment 253
- FT–IR  
Growth and study of some gel grown group II single crystals of iodate 461
- Failure analysis  
Failure analysis of multiple delaminated composite plates due to bending and impact 143
- Fatigue  
Effect of zirconia addition on the fatigue behaviour of fine grained alumina 101
- Fatigue crack  
Effect of stress ratio and frequency on fatigue crack growth rate of 2618 aluminium alloy silicon carbide metal matrix composite 169
- Fatigue crack growth  
Study of fatigue behaviour of 7475 aluminium alloy 231
- Fatigue life  
Study of fatigue behaviour of 7475 aluminium alloy 231
- Fe<sub>3</sub>Al/Q235 dissimilar material joint  
Fine structure at the diffusion welded interface of Fe<sub>3</sub>Al/Q235 dissimilar materials 639
- Ferrite  
Synthesis of ferrite grade *g*-Fe<sub>2</sub>O<sub>3</sub> 39  
Cellular automaton simulation of microstructure evolution during austenite decomposition under continuous cooling conditions 305  
Dielectric behaviour of MgFe<sub>2</sub>O<sub>4</sub> prepared from chemically beneficiated iron ore rejects 323  
Ferrite grade iron oxides from ore rejects 331  
A study of ultrasonic velocity and attenuation on polycrystalline Ni–Zn ferrites 611
- Ferroelectric  
Effect of lanthanum doping on electrical and electromechanical properties of Ba<sub>1-x</sub>La<sub>x</sub>TiO<sub>3</sub> 497
- Ferroelectric/piezoelectric material  
Stress relaxation and estimation of activation volume in a commercial hard PZT piezoelectric ceramic 165
- Fibre pull out  
Effects of moisture on the mechanical properties of glass fibre reinforced vinylester resin composites 87  
Effect of alkali treated jute fibres on composite properties 129
- Fibre reinforced epoxies  
Effect of filler addition on the compressive and impact properties of glass fibre reinforced epoxy 219
- Fillers  
Effect of filler addition on the compressive and impact properties of glass fibre reinforced epoxy 219
- Fine structure  
Fine structure at the diffusion welded interface of Fe<sub>3</sub>Al/Q235 dissimilar materials 639
- Flow behaviour  
High temperature flow behaviour of SiC reinforced lithium aluminosilicate composites 215

- Flyash  
Effect of filler addition on the compressive and impact properties of glass fibre reinforced epoxy 219
- Foreword 95
- Fracture  
Effect of alkali treated jute fibres on composite properties 129
- Fracture dynamics  
Critical fatigue behaviour in brittle glasses 161
- Fracture energy  
Fracture resistance of 8 mol% yttria stabilized zirconia 111
- Fracture resistance  
Fracture resistance of 8 mol% yttria stabilized zirconia 111
- Fracture toughness  
Fracture resistance of 8 mol% yttria stabilized zirconia 111  
Fracture toughness and reliability in high-temperature structural ceramics and composites: Prospects and challenges for the 21st Century 117  
Mechanical properties of very thin cover slip glass disk 151  
Study of indentation induced cracks in MoSi<sub>2</sub>-reaction bonded SiC ceramics 181
- Front tracking algorithm  
Evaluation of solid–liquid interface profile during continuous casting by a spline based formalism 373
- g*-Fe<sub>2</sub>O<sub>3</sub>  
A new combustion route to *g*-Fe<sub>2</sub>O<sub>3</sub> synthesis 617
- GaAs  
A detailed model for defect concentration and dopant activation in GaAs 225
- Galvanization by hot-dipping  
Study on growth factors of intermetallic layer within hot-dipped 25% Al–Zn alloy coating on steel 301  
Corrosion behaviour of hot dip zinc and zinc–aluminium coatings on steel in seawater 355
- Gamma ferric oxide  
Dielectric behaviour of MgFe<sub>2</sub>O<sub>4</sub> prepared from chemically beneficiated iron ore rejects 323
- Gel method  
Growth and micro-topographical studies of gel grown cholesterol crystals 431  
Crystallization of mixed rare earth (didymium) molybdates in silica gel 435  
Electrical conductivity measurements on gel grown KDP crystals added with urea and thiourea 511
- Gelatin  
A novel bio-inorganic bone implant containing deglued bone, chitosan and gelatin 415
- Glass and glass–ceramic coatings  
Glass and glass–ceramic coatings, versatile materials for industrial and engineering applications 69
- Glass–ceramic  
Studies on broad spectrum corrosion resistant oxide coatings 569
- Glycerol modified castor oil polyurethane  
Interpenetrating polymer networks based on polyol modified castor oil polyurethane and poly(2-hydroxyethylmethacrylate): Synthesis, chemical, mechanical and thermal properties 535
- Grain refinement  
Effects and mechanisms of grain refinement in aluminium alloys 345
- Grain size  
Indentation fatigue in silicon nitride, alumina and silicon carbide ceramics 105
- Growth mechanism  
Surface studies on as-grown (111) faces of sodium bromate crystals 665
- HTSC  
Effect of cationic size in Hg(Tl/Bi)Ba<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>8+d</sub> on superconducting and microstructural characteristics 523
- Halides  
Grain size dependent optical band gap of CdI<sub>2</sub> films 297
- Hall measurements  
Growth and characterization of indium antimonide and gallium antimonide crystals 445
- Heat transfer  
Evaluation of solid–liquid interface profile during continuous casting by a spline based formalism 373
- High pressure  
Kinetics of pressure induced structural phase transitions—A review 1
- High temperature superconductors  
A sensitive magnetic field sensor using BPSCCO thick film 385
- High-energy heavy ion irradiation  
Effect of high-energy heavy ion irradiation on the crystallization kinetics of Co-based metallic glasses 27
- High-*k*  
Metallo–organic compound-based plasma enhanced CVD of ZrO<sub>2</sub> films for microelectronic applications 579
- Hybrid materials  
Synthesis, characterization and application of an inorganic organic material: *p*-chlorophenol anchored onto zirconium tungstate 265
- Hydrazine  
Synthesis of ferrite grade *g*-Fe<sub>2</sub>O<sub>3</sub> 39  
Dielectric behaviour of MgFe<sub>2</sub>O<sub>4</sub> prepared from chemically beneficiated iron ore rejects 323
- Hydrodynamics  
Experimental setup for rapid crystallization using favoured chemical potential and hydrodynamic conditions 455
- Hydrogen bonding  
XRD and optical microscopic studies of Co(III) complexes containing 5-cyano-6-(4-pyridyl)-2-thiouracil, thymine and adenine bases 339
- Hydrogen embrittlement  
On critical hydrogen concentration for hydrogen embrittlement of Fe<sub>3</sub>Al 559
- Hydroxyapatite  
Development of calcium phosphate based bioceramics 653
- IR spectra  
Composition dependence of electrical properties of ZnF<sub>2</sub>–MO–TeO<sub>2</sub> glasses 421
- Icosahedral and decagonal phases  
Role of Fe substitution and quenching rate on the formation of various quasicrystalline and related phases 257
- Impact  
Failure analysis of multiple delaminated composite plates due to bending and impact 143

- Impact energy  
 Impact fatigue behaviour of carbon fibre-reinforced vinyl ester resin composites 79
- Impact fatigue  
 Behaviour of *E*-glass fibre reinforced vinyl ester resin composites under impact fatigue 137
- Impact test  
 Effect of filler addition on the compressive and impact properties of glass fibre reinforced epoxy 219
- Implantation  
 Effect of 80 keV Ar<sup>+</sup> implantation on the properties of pulse laser deposited magnetite (Fe<sub>3</sub>O<sub>4</sub>) thin films 35
- Impurity added KDP crystals  
 Electrical conductivity measurements on gel grown KDP crystals added with urea and thiourea 511
- Indentation fatigue  
 Indentation fatigue in silicon nitride, alumina and silicon carbide ceramics 105
- Indentation hardness  
 Study of indentation induced cracks in MoSi<sub>2</sub>-reaction bonded SiC ceramics 181
- Inorgano-organic materials  
 Synthesis, characterization and application of an inorgano organic material: *p*-chlorophenol anchored onto zirconium tungstate 265
- Intensity parameters  
 Correlation of radiative properties of rare earth ions (Pr<sup>3+</sup> and Nd<sup>3+</sup>) in chlorophosphate glasses—0.1 and 0.5 mol% concentrations 539
- Interface shape  
 Influence of crystal-melt interface shape on self-seeding and single crystalline quality 475
- Intermetallic layer  
 Study on growth factors of intermetallic layer within hot-dipped 25% Al-Zn alloy coating on steel 301
- Ion beam modification  
 Mössbauer studies of iron doped poly(methyl methacrylate) before and after ion beam modification 397
- Iron aluminides  
 On critical hydrogen concentration for hydrogen embrittlement of Fe<sub>3</sub>Al 559
- Iron hydroxide  
 Ferrite grade iron oxides from ore rejects 331
- Iron oxide  
 Phase change induced by polypyrrole in iron-oxide polypyrrole nanocomposite 563
- Iron oxyhydroxide  
 Ferrite grade iron oxides from ore rejects 331
- Jute fibre composite  
 Effect of alkali treated jute fibres on composite properties 129
- Kapton-H polymer  
 Physical and chemical response of 70 MeV carbon ion irradiated Kapton-H polymer 529
- Kinetics  
 Kinetics of pressure induced structural phase transitions—A review 1
- Kinetics of hydrogenation of 1-hexene  
 Catalytic activity of polymer-bound Ru(III)-EDTA complex 237
- Lattice parameters  
 Lattice variation and thermal parameters of Ni<sub>x</sub>Mg<sub>1-x</sub>SO<sub>4</sub>·7H<sub>2</sub>O single crystals 441
- Layered growth  
 Growth and micro-topographical studies of gel grown cholesterol crystals 431
- Least squares fitting  
 Analysis of stainless steel samples by energy dispersive X-ray fluorescence (EDXRF) spectrometry 633
- Life cycle of polymer-bound catalyst  
 Catalytic activity of polymer-bound Ru(III)-EDTA complex 237
- Lithium aluminosilicate  
 High temperature flow behaviour of SiC reinforced lithium aluminosilicate composites 215
- Lithium-di-silicate  
 Cracking phenomena in lithium-di-silicate glass ceramics 157
- Low temperature sintering  
 Low temperature sintering of MgCuZn ferrite and its electrical and magnetic properties 379
- Macroporous materials  
 Macroporous silica-alumina composites with mesoporous walls 211
- Magnetic composites  
 Tailoring magnetic and dielectric properties of rubber ferrite composites containing mixed ferrites 623
- Magnetic hysteresis  
 A new combustion route to *g*-Fe<sub>2</sub>O<sub>3</sub> synthesis 617
- Magnetic materials  
 Tailoring magnetic and dielectric properties of rubber ferrite composites containing mixed ferrites 623
- Magnetic properties  
 A study of ultrasonic velocity and attenuation on polycrystalline Ni-Zn ferrites 611
- Magnetic sensor  
 A sensitive magnetic field sensor using BPSCCO thick film 385
- Magnetite  
 Effect of 80 keV Ar<sup>+</sup> implantation on the properties of pulse laser deposited magnetite (Fe<sub>3</sub>O<sub>4</sub>) thin films 35
- Mechanical properties  
 Effect of alkali treated jute fibres on composite properties 129
- Mechanism  
 On critical hydrogen concentration for hydrogen embrittlement of Fe<sub>3</sub>Al 559
- Mesoporous materials  
 Macroporous silica-alumina composites with mesoporous walls 211
- Metal doping  
 Mössbauer studies of iron doped poly (methyl methacrylate) before and after ion beam modification 397
- Metal-polymer-metal devices  
 Battery effect in 'electric current arising from unpolarized polyvinyl formal' 407
- Metastable oxide  
 Synthesis of ferrite grade *g*-Fe<sub>2</sub>O<sub>3</sub> 39
- MgCuZn ferrite  
 Low temperature sintering of MgCuZn ferrite and its electrical and magnetic properties 379

- Micro-topographical studies  
 Growth and micro-topographical studies of gel grown cholesterol crystals 431
- Microalloyed steel  
 Processing of low carbon steel plate and hot strip—an overview 361
- Microhardness  
 Mechanical characterization of microwave sintered zinc oxide 125  
 Systematic hardness measurements on some rare earth garnet crystals 469
- Microplasticity  
 Effect of zirconia addition on the fatigue behaviour of fine grained alumina 101
- Microstrain  
 Particle fracture and plastic deformation in vanadium pentoxide powders induced by high energy vibrational ball-mill 173
- Microstructural parameters  
 An X-ray diffraction study of defect parameters in a Ti-base alloy 649
- Microstructure  
 Densification and mechanical properties of mullite–SiC nanocomposites synthesized through sol–gel coated precursors 191
- Microstructure modeling  
 Cellular automaton simulation of microstructure evolution during austenite decomposition under continuous cooling conditions 305
- Microwave sintering  
 Mechanical characteristics of microwave sintered silicon carbide 121  
 Mechanical characterization of microwave sintered zinc oxide 125
- Mixed crystals  
 Lattice variation and thermal parameters of  $\text{Ni}_x\text{Mg}_{1-x}\text{SO}_4 \cdot 7\text{H}_2\text{O}$  single crystals 441
- Mixed ferrites  
 Tailoring magnetic and dielectric properties of rubber ferrite composites containing mixed ferrites 623
- Mn–Zn–Er ferrites  
 Dielectric behaviour of erbium substituted Mn–Zn ferrites 505
- Modelling of process parameters  
 Processing of low carbon steel plate and hot strip—an overview 361
- Modulus  
 Impact fatigue behaviour of carbon fibre-reinforced vinylester resin composites 79  
 Crack propagation studies and bond coat properties in thermal barrier coatings under bending 203
- Moisture proofing  
 Effect of bitumen emulsion on setting, strength, soundness and moisture resistance of oxychloride cement 313
- Morphology  
 Effect of high-energy heavy ion irradiation on the crystallization kinetics of Co-based metallic glasses 27  
 Crystallization of mixed rare earth (didymium) molybdates in silica gel 435
- Moisture effects  
 Effects of moisture on the mechanical properties of glass fibre reinforced vinylester resin composites 87
- Mössbauer  
 Mössbauer studies of iron doped poly (methyl methacrylate) before and after ion beam modification 397
- Mullite–SiC nanocomposites  
 Densification and mechanical properties of mullite–SiC nanocomposites synthesized through sol–gel coated precursors 191
- Multilayer glass–epoxy material  
 Mechanical properties of glass polymer multilayer composite 197
- n*-K characteristics  
 Stereological characterization of crack path transitions in ceramic matrix composites 185
- Nanocomposite  
 Phase change induced by polypyrrole in iron–oxide polypyrrole nanocomposite 563
- Nanocrystalline silicon  
 Optical properties of nano–silicon 285
- Nascent glass fibre  
 Effects of moisture on the mechanical properties of glass fibre reinforced vinylester resin composites 87
- Ni  
 Submicron particles of Co, Ni and Co–Ni alloys 515
- Nonlinear coefficient  
 Non-linear *I*–*V* characteristics of doped  $\text{Sn}_{1-x}\text{Ti}_x\text{O}_2$  ( $0.0 < x < 0.25$ ) system 483
- Nucleant effects  
 Effects and mechanisms of grain refinement in aluminium alloys 345
- Nucleation and growth  
 Cellular automaton simulation of microstructure evolution during austenite decomposition under continuous cooling conditions 305
- Numerical simulation  
 Some numerical approaches of creep, thermal shock, damage and delayed failure of ceramics and refractories 97
- Optical absorption  
 Two- and three-dimensional models for analysis of optical absorption in tungsten disulphide single crystals 291
- Optical band gap  
 Two- and three-dimensional models for analysis of optical absorption in tungsten disulphide single crystals 291  
 Correlation of radiative properties of rare earth ions ( $\text{Pr}^{3+}$  and  $\text{Nd}^{3+}$ ) in chlorophosphate glasses—0.1 and 0.5 mol% concentrations 539
- Optical properties  
 Grain size dependent optical band gap of  $\text{CdI}_2$  films 297
- Ore reject chemical beneficiation  
 Dielectric behaviour of  $\text{MgFe}_2\text{O}_4$  prepared from chemically beneficiated iron ore rejects 323
- Ore rejects  
 Ferrite grade iron oxides from ore rejects 331
- Organic solvents  
 Growth and micro-topographical studies of gel grown cholesterol crystals 431
- Orientation  
 Influence of crystal–melt interface shape on self-seeding and single crystalline quality 475
- Oriented growth  
 On the origin of recrystallization textures 23

- Oriented nucleation  
 On the origin of recrystallization textures 23
- Oxidation  
 Study of oxidation behaviour of Zr-based bulk amorphous alloy  $Zr_{65}Cu_{17.5}Ni_{10}Al_{7.5}$  by thermogravimetric analyser 281
- Oxychloride cement  
 Effect of bitumen emulsion on setting, strength, soundness and moisture resistance of oxychloride cement 313
- PECVD  
 Metallo-organic compound-based plasma enhanced CVD of  $ZrO_2$  films for microelectronic applications 579
- Paramagnetic susceptibility  
 Structural and magnetic properties of  $CaMg_2Fe_{16}O_{27}$  47
- $PbO-Al_2O_3-B_2O_3$  glasses  
 Acoustic investigations on  $PbO-Al_2O_3-B_2O_3$  glasses doped with certain rare earth ions 63
- Pearlite  
 Cellular automaton simulation of microstructure evolution during austenite decomposition under continuous cooling conditions 305
- Permeability  
 Low temperature sintering of  $MgCuZn$  ferrite and its electrical and magnetic properties 379
- Phase change  
 Evaluation of solid-liquid interface profile during continuous casting by a spline based formalism 373
- Photoluminescence  
 Optical properties of nano-silicon 285
- Photoluminescence (PL) spectra  
 Growth and characterization of indium antimonide and gallium antimonide crystals 445
- Photovoltage  
 Current-voltage characteristics of  $Ag, Al, Ni-(n)CdTe$  junctions 411
- Pitting corrosion  
 Corrosion behaviour of hot dip zinc and zinc-aluminium coatings on steel in seawater 355
- Plasma spraying  
 Crack propagation studies and bond coat properties in thermal barrier coatings under bending 203
- Plastic deformation  
 Particle fracture and plastic deformation in vanadium pentoxide powders induced by high energy vibrational ball-mill 173
- Poly (2-hydroxyethyl methacrylate)  
 Interpenetrating polymer networks based on polyol modified castor oil polyurethane and poly(2-hydroxyethylmethacrylate): Synthesis, chemical, mechanical and thermal properties 535
- Poly(2,5-dimethoxyaniline)  
 Synthesis and characterization of poly(2,5-dimethoxyaniline) and poly(aniline-Co-2,5-dimethoxyaniline): The processable conducting polymers 389
- Poly(aniline-Co-2,5-dimethoxyaniline)  
 Synthesis and characterization of poly(2,5-dimethoxyaniline) and poly(aniline-Co-2,5-dimethoxyaniline): The processable conducting polymers 389
- Poly(methyl methacrylate)  
 Mössbauer studies of iron doped poly(methyl methacrylate) before and after ion beam modification 397
- Polymer-bound Ru(III)-EDTA complex  
 Catalytic activity of polymer-bound Ru(III)-EDTA complex 237
- Polymer-bound catalyst  
 Catalytic activity of polymer-bound Ru(III)-EDTA complex 237
- Polypyrrole  
 Phase change induced by polypyrrole in iron-oxide polypyrrole nanocomposite 563
- Polyvinyl formal  
 Charging transient in polyvinyl formal 401
- Porous silicon  
 Optical properties of nano-silicon 285
- Potentiodynamic method  
 Possibility of improvement of potentiodynamic method for monitoring corrosion rate of steel reinforcement in concrete 555
- Pulsed laser ablation  
 Effect of 80 keV  $Ar^+$  implantation on the properties of pulse laser deposited magnetite ( $Fe_3O_4$ ) thin films 35
- Pyroelectric  
 Synthesis, impedance and dielectric properties of  $LaBi_5Fe_2Ti_3O_{18}$  487
- Quality factor  
 Low temperature sintering of  $MgCuZn$  ferrite and its electrical and magnetic properties 379
- Quasicrystals  
 Role of Fe substitution and quenching rate on the formation of various quasicrystalline and related phases 257
- Quenching rate  
 Role of Fe substitution and quenching rate on the formation of various quasicrystalline and related phases 257
- Radiation effects  
 Physical and chemical response of 70 MeV carbon ion irradiated Kapton-H polymer 529
- Radiative lifetimes  
 Correlation of radiative properties of rare earth ions ( $Pr^{3+}$  and  $Nd^{3+}$ ) in chlorophosphate glasses—0.1 and 0.5 mol% concentrations 539
- Raman scattering  
 Optical properties of nano-silicon 285
- Rapid crystallization  
 Experimental setup for rapid crystallization using favoured chemical potential and hydrodynamic conditions 455
- Rare earth  
 Preparation of Sm-Ru bimetallic alloy films on Ru(0001) surface by vapour-deposition and annealing 583
- Rare earth garnets  
 Systematic hardness measurements on some rare earth garnet crystals 469
- Rare earth ions  
 Acoustic investigations on  $PbO-Al_2O_3-B_2O_3$  glasses doped with certain rare earth ions 63
- Reaction bonded SiC  
 Study of indentation induced cracks in  $MoSi_2$ -reaction bonded SiC ceramics 181
- Recalescence  
 Non-equilibrium solidification of undercooled droplets during atomization process 547

- Recrystallization  
 On the origin of recrystallization textures 23  
 Effect of zirconium addition on the recrystallization behaviour of a commercial Al–Cu–Mg alloy 643
- Refractories  
 Some numerical approaches of creep, thermal shock, damage and delayed failure of ceramics and refractories 97
- Reinforcement  
 Mechanical properties of glass polymer multilayer composite 197
- Relaxor ferroelectric  
 Synthesis, impedance and dielectric properties of  $\text{LaBi}_3\text{Fe}_2\text{Ti}_3\text{O}_{18}$  487
- Repeated impact  
 Impact fatigue behaviour of carbon fibre-reinforced vinylester resin composites 79
- Residual stress  
 Impact fatigue behaviour of carbon fibre-reinforced vinylester resin composites 79  
 Behaviour of *E*-glass fibre reinforced vinylester resin composites under impact fatigue 137
- Resistivity  
 Low temperature sintering of MgCuZn ferrite and its electrical and magnetic properties 379
- Resonant frequency  
 Effect of lanthanum doping on electrical and electromechanical properties of  $\text{Ba}_{1-x}\text{La}_x\text{TiO}_3$  497
- Reversible capacity  
 Electrochemical behaviour of  $\text{LiM}_y\text{Mn}_{2-y}\text{O}_4$  ( $\text{M} = \text{Cu}, \text{Cr}; 0 \leq y \leq 0.4$ ) 51
- Rubber ferrite composites  
 Tailoring magnetic and dielectric properties of rubber ferrite composites containing mixed ferrites 623
- Rubber magnets  
 Tailoring magnetic and dielectric properties of rubber ferrite composites containing mixed ferrites 623
- Ruthenium  
 Preparation of Sm–Ru bimetallic alloy films on Ru(0001) surface by vapour-deposition and annealing 583
- SOFC stacks  
 Fracture resistance of 8 mol% yttria stabilized zirconia 111
- Saturation polarization  
 Studies on compensating valency substituted  $\text{BaTi}_{(1-x)}\text{Mn}_{x/2}\text{Nb}_{x/2}\text{O}_3$  ceramics 243
- Schottky barrier junction  
 Current–voltage characteristics of Ag, Al, Ni–(*n*)CdTe junctions 411
- Seabed sediment  
 Analysis of corrosive environmental factors of seabed sediment 253
- Seawater corrosion  
 Corrosion behaviour of hot dip zinc and zinc–aluminium coatings on steel in seawater 355
- Self-seeding  
 Influence of crystal–melt interface shape on self-seeding and single crystalline quality 475
- Semi-insulating  
 A detailed model for defect concentration and dopant activation in GaAs 225
- Series resistance  
 Current–voltage characteristics of Ag, Al, Ni–(*n*)CdTe junctions 411
- Shrinkage  
 Low temperature sintering of MgCuZn ferrite and its electrical and magnetic properties 379
- $\text{Si}_3\text{N}_4$  slips  
 pH controlled dispersion and slip casting of  $\text{Si}_3\text{N}_4$  in aqueous media 57
- SiC  
 SiC fibre by chemical vapour deposition on tungsten filament 273
- SiC particulates  
 High temperature flow behaviour of SiC reinforced lithium aluminosilicate composites 215
- Silica–alumina composites  
 Macroporous silica–alumina composites with mesoporous walls 211
- Silica gel  
 Growth and study of some gel grown group II single crystals of iodate 461
- Silicon carbide  
 Indentation fatigue in silicon nitride, alumina and silicon carbide ceramics 105  
 Mechanical characteristics of microwave sintered silicon carbide 121
- Silicon nitride  
 Indentation fatigue in silicon nitride, alumina and silicon carbide ceramics 105
- Slag inclusions  
 Characterization of ancient Indian iron and entrapped slag inclusions using electron, photon and nuclear microprobes 317
- Slip casting  
 pH controlled dispersion and slip casting of  $\text{Si}_3\text{N}_4$  in aqueous media 57
- $\text{SnO}_2$   
 Non-linear *I*–*V* characteristics of doped  $\text{Sn}_{1-x}\text{Ti}_x\text{O}_2$  ( $0.0 < x < 0.25$ ) system 483
- Sodium bromate  
 Surface studies on as-grown (111) faces of sodium bromate crystals 665
- Sol-gel  
 Densification and mechanical properties of mullite–SiC nanocomposites synthesized through sol–gel coated precursors 191  
 Phase change induced by polypyrrole in iron–oxide polypyrrole nanocomposite 563
- Solid state diffusion  
 Homogenization of zinc distribution in vertical Bridgman grown  $\text{Cd}_{0.96}\text{Zn}_{0.04}\text{Te}$  crystals 659
- Solid-liquid interface  
 Evaluation of solid–liquid interface profile during continuous casting by a spline based formalism 373
- Solidification  
 Evaluation of solid–liquid interface profile during continuous casting by a spline based formalism 373  
 Non-equilibrium solidification of undercooled droplets during atomization process 547

- Solute effects  
Effects and mechanisms of grain refinement in aluminium alloys 345
- Soundness  
Effect of bitumen emulsion on setting, strength, soundness and moisture resistance of oxychloride cement 313
- Space charge relaxations  
Charging transient in polyvinyl formal 401
- Spectrometry  
Analysis of stainless steel samples by energy dispersive X-ray fluorescence(EDXRF) spectrometry 633
- Spectroscopic parameters  
Correlation of radiative properties of rare earth ions ( $\text{Pr}^{3+}$  and  $\text{Nd}^{3+}$ ) in chlorophosphate glasses—0.1 and 0.5 mol% concentrations 539
- Spinel structure  
Electrochemical behaviour of  $\text{LiM}_y\text{Mn}_{2-y}\text{O}_4$  ( $\text{M} = \text{Cu}, \text{Cr}; 0 \leq y \leq 0.4$ ) 51
- Spiral growth  
Observation of curious spiral growth features in Tl doped Hg bearing high temperature superconducting tapes 595
- Spray drying  
Preparation and characterization of Ag-added  $\text{Bi}_{1.84}\text{Pb}_{0.4}\text{Sr}_2\text{Ca}_{2.2}\text{Cu}_3\text{O}_{10+x}$  bulk tube conductors for cryogen free superconducting magnet 603
- Stainless steel  
Analysis of stainless steel samples by energy dispersive X-ray fluorescence (EDXRF) spectrometry 633
- Static fatigue  
Behaviour of *E*-glass fibre reinforced vinylester resin composites under impact fatigue 137
- Static/cyclic loading  
Effect of zirconia addition on the fatigue behaviour of fine grained alumina 101
- Steel reinforcement  
Possibility of improvement of potentiodynamic method for monitoring corrosion rate of steel reinforcement in concrete 555
- Strain  
Crack propagation studies and bond coat properties in thermal barrier coatings under bending 203
- Stress  
Crack propagation studies and bond coat properties in thermal barrier coatings under bending 203
- Stress ratio  
Effect of stress ratio and frequency on fatigue crack growth rate of 2618 aluminium alloy silicon carbide metal matrix composite 169
- Strontium tartrate  
Thermal behaviour of strontium tartrate single crystals grown in gel 249
- Structural transitions  
Kinetics of pressure induced structural phase transitions—A review 1
- Subcritical stress intensity  
Stereological characterization of crack path transitions in ceramic matrix composites 185
- Submicron particles  
Submicron particles of Co, Ni and Co–Ni alloys 515
- Superalloy  
Crack propagation studies and bond coat properties in thermal barrier coatings under bending 203
- Superconductivity  
Preparation and characterization of Ag-added  $\text{Bi}_{1.84}\text{Pb}_{0.4}\text{Sr}_2\text{Ca}_{2.2}\text{Cu}_3\text{O}_{10+x}$  bulk tube conductors for cryogen free superconducting magnet 603
- Supramolecular  
XRD and optical microscopic studies of Co(III) complexes containing 5-cyano-6-(4-pyridyl)-2-thiouracil, thymine and adenine bases 339
- Surface film  
Preparation of Sm–Ru bimetallic alloy films on Ru(0001) surface by vapour-deposition and annealing 583
- Surface studies  
Surface studies on as-grown (111) faces of sodium bromate crystals 665
- Synthesis  
Growth and characterization of indium antimonide and gallium antimonide crystals 445
- TG-DTA  
Investigation of surface modifications in ethylene propylene diene monomer (EPDM) rubber due to tracking under a.c. and d.c. voltages 587
- TGA  
Study of oxidation behaviour of Zr-based bulk amorphous alloy  $\text{Zr}_{65}\text{Cu}_{17.5}\text{Ni}_{10}\text{Al}_{7.5}$  by thermogravimetric analyser 281
- TGA/DTA  
Growth and study of some gel grown group II single crystals of iodate 461
- TSC  
Battery effect in 'electric current arising from unpolarized polyvinyl formal' 407
- Tapes  
Observation of curious spiral growth features in Tl doped Hg bearing high temperature superconducting tapes 595
- $T_c$   
Effect of cationic size in  $\text{Hg}(\text{Tl}/\text{Bi})\text{Ba}_2\text{Ca}_2\text{Cu}_3\text{O}_{8+d}$  on superconducting and microstructural characteristics 523
- Tellurite glasses  
Composition dependence of electrical properties of  $\text{ZnF}_2$ – $\text{MO}$ – $\text{TeO}_2$  glasses 421
- Tetravalent metal acid salts  
Synthesis, characterization and application of an inorganic organic material: *p*-chlorophenol anchored onto zirconium tungstate 265
- Thermal  
A new combustion route to  $\alpha\text{-Fe}_2\text{O}_3$  synthesis 617
- Thermal barrier  
Crack propagation studies and bond coat properties in thermal barrier coatings under bending 203
- Thermal behaviour  
Thermal behaviour of strontium tartrate single crystals grown in gel 249
- Thermal shock  
Some numerical approaches of creep, thermal shock, damage and delayed failure of ceramics and refractories 97
- Thermomechanical processing  
Processing of low carbon steel plate and hot strip—an overview 361
- Thick film  
A sensitive magnetic field sensor using BPSCCO thick film 385

- Thin films  
 Effect of 80 keV Ar<sup>+</sup> implantation on the properties of pulse laser deposited magnetite (Fe<sub>3</sub>O<sub>4</sub>) thin films 35  
 Grain size dependent optical band gap of CdI<sub>2</sub> films 297
- Thymine  
 XRD and optical microscopic studies of Co(III) complexes containing 5-cyano-6-(4-pyridyl)-2-thiouracil, thymine and adenine bases 339
- TiO<sub>2</sub>  
 Non-linear *I*-*V* characteristics of doped Sn<sub>1-x</sub>Ti<sub>x</sub>O<sub>2</sub> (0.0 < *x* < 0.25) system 483
- Titanium alloy  
 An X-ray diffraction study of defect parameters in a Ti-base alloy 649
- Toughening  
 Fracture toughness and reliability in high-temperature structural ceramics and composites: Prospects and challenges for the 21st Century 117
- Toughness  
 Impact fatigue behaviour of carbon fibre-reinforced vinylester resin composites 79
- Tracking surface  
 Investigation of surface modifications in ethylene propylene diene monomer (EPDM) rubber due to tracking under a.c. and d.c. voltages 587
- Transesterification  
 Interpenetrating polymer networks based on polyol modified castor oil polyurethane and poly(2-hydroxyethylmethacrylate): Synthesis, chemical, mechanical and thermal properties 535
- Two- and three-dimensional  
 Two- and three-dimensional models for analysis of optical absorption in tungsten disulphide single crystals 291
- UV and FT-IR spectroscopy  
 Physical and chemical response of 70 MeV carbon ion irradiated Kapton-H polymer 529
- Ultrasonic velocity  
 A study of ultrasonic velocity and attenuation on polycrystalline Ni-Zn ferrites 611
- Undercooling  
 Non-equilibrium solidification of undercooled droplets during atomization process 547
- VDS technique  
 Influence of crystal-melt interface shape on self-seeding and single crystalline quality 475
- Vacuum diffusion welding  
 Fine structure at the diffusion welded interface of Fe<sub>3</sub>Al/Q235 dissimilar materials 639
- Valence compensating ceramic  
 Studies on compensating valency substituted BaTi<sub>(1-x)</sub>Mn<sub>(x/2)</sub>Nb<sub>(x/2)</sub>O<sub>3</sub> ceramics 243
- Varistors  
 Non-linear *I*-*V* characteristics of doped Sn<sub>1-x</sub>Ti<sub>x</sub>O<sub>2</sub> (0.0 < *x* < 0.25) system 483
- Vector admittance plots  
 Effect of lanthanum doping on electrical and electromechanical properties of Ba<sub>1-x</sub>La<sub>x</sub>TiO<sub>3</sub> 497
- Verwey transition  
 Effect of 80 keV Ar<sup>+</sup> implantation on the properties of pulse laser deposited magnetite (Fe<sub>3</sub>O<sub>4</sub>) thin films 35
- Vicker's indenter  
 Stereological characterization of crack path transitions in ceramic matrix composites 185
- Vicker's microhardness  
 Densification and mechanical properties of mullite-SiC nanocomposites synthesized through sol-gel coated precursors 191
- Vinylester resin  
 Impact fatigue behaviour of carbon fibre-reinforced vinylester resin composites 79  
 Effects of moisture on the mechanical properties of glass fibre reinforced vinylester resin composites 87  
 Effect of alkali treated jute fibres on composite properties 129  
 Behaviour of *E*-glass fibre reinforced vinylester resin composites under impact fatigue 137
- Vitreous enamelling  
 Studies on broad spectrum corrosion resistant oxide coatings 569
- W-type ferrite  
 Structural and magnetic properties of CaMg<sub>2</sub>Fe<sub>16</sub>O<sub>27</sub> 47
- WAXD  
 Investigation of surface modifications in ethylene propylene diene monomer (EPDM) rubber due to tracking under a.c. and d.c. voltages 587
- Warm rolling  
 Processing of low carbon steel plate and hot strip—an overview 361
- Wear  
 Glass and glass-ceramic coatings, versatile materials for industrial and engineering applications 69
- Weibull modulus  
 Mechanical properties of very thin cover slip glass disk 151
- Wollastonite  
 Development of calcium phosphate based bioceramics 653
- X-ray diffraction  
 Particle fracture and plastic deformation in vanadium pentoxide powders induced by high energy vibrational ball-mill 173  
 Physical and chemical response of 70 MeV carbon ion irradiated Kapton-H polymer 529
- X-ray diffraction analysis  
 Lattice variation and thermal parameters of Ni<sub>x</sub>Mg<sub>1-x</sub>SO<sub>4</sub>·7H<sub>2</sub>O single crystals 441
- XPS  
 Preparation of Sm-Ru bimetallic alloy films on Ru(0001) surface by vapour-deposition and annealing 583
- XRD  
 Growth and study of some gel grown group II single crystals of iodate 461  
 Effect of cationic size in Hg(Tl/Bi)Ba<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>8+d</sub> on superconducting and microstructural characteristics 523  
 An X-ray diffraction study of defect parameters in a Ti-base alloy 649
- XRF  
 Analysis of stainless steel samples by energy dispersive X-ray fluorescence (EDXRF) spectrometry 633
- YSZ  
 Fracture resistance of 8 mol% yttria stabilized zirconia 111

- Young's modulus  
 Mechanical properties of very thin cover slip glass disk 151
- Zinc oxide  
 Mechanical characterization of microwave sintered zinc oxide 125
- Zirconia  
 Crack propagation studies and bond coat properties in thermal barrier coatings under bending 203
- Zirconium dioxide  
 Metallo-organic compound-based plasma enhanced CVD of  $ZrO_2$  films for microelectronic applications 579
- Zn distribution  
 Homogenization of zinc distribution in vertical Bridgman grown  $Cd_{0.96}Zn_{0.04}Te$  crystals 659
- Zn-Al alloy coating  
 Corrosion behaviour of hot dip zinc and zinc-aluminium coatings on steel in seawater 355
- Zr addition  
 Effect of zirconium addition on the recrystallization behaviour of a commercial Al-Cu-Mg alloy 643