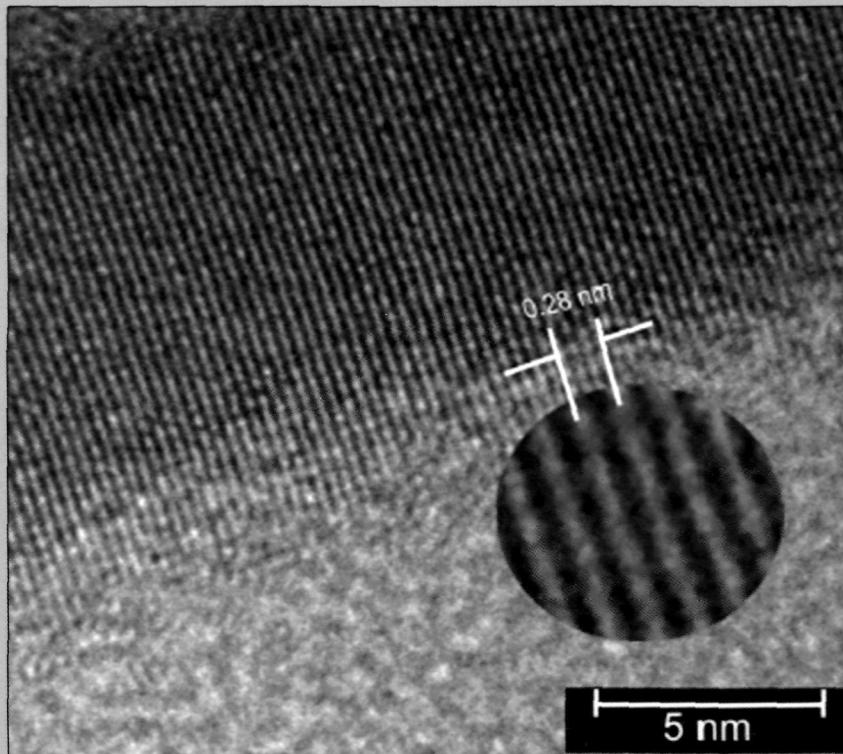


CERAMICS INTERNATIONAL



PIETRO VINCENZINI

GENERAL EDITOR

EDITORS-IN-CHIEF

L. GAUCKLER
SWITZERLAND

J. F. BAUMARD
FRANCE

J.-K. GUO
CHINA

K. KOUMOTO
JAPAN

R. K. BORDIA
USA

R. PAMPUCH
POLAND

<http://www.elsevier.com/locate/ceramint>





(Abstracted/indexed in: *Applied Mechanics Reviews*; *Br. Ceram Abstr.*; *Ceramic Abstracts*; *Chemical Abstracts*; *Current Contents/Engineering, Computing & Technology*; *Current Contents/Physical, Chemical and Earth Sciences*; *Materials Science Citation Index*; *Met. Abstr.*; *Sci. Abstr.*; *Science Citation Index*; *SciSearch*; *World Alum. Abstr.*. Also covered in the abstract and citation database SciVerse SCOPUS®. Full text available on SciVerse ScienceDirect®.)

CONTENTS

Volume 39 Issue 7 2013

Review

- 7291 Syntheses of bismuth titanate templates obtained by the molten salt method
M.G.A. RANIERI, E.C. AGUIAR, M. CILENSE, A.Z. SIMÕES & J.A. VARELA (Brazil)

Original Articles

- 7297 Synthesis of $\text{LiNi}_{0.9}\text{Co}_{0.1}\text{O}_2$ from Li_2CO_3 , NiO or NiCO_3 , and CoCO_3 or Co_3O_4 and their electrochemical properties
H. RIM, H. RYOUNG PARK & M. YOUP SONG (Republic of Korea)
- 7305 Microstructure and ionic conductivity properties of gadolinia doped ceria ($\text{Gd}_x\text{Ce}_{1-x}\text{O}_{2-x/2}$) electrolytes for intermediate temperature SOFCs prepared by the polyol method
M.A.F. ÖKSÜZÖMER, G. DÖNMEZ, V. SARIBOĞA & T.G. ALTINÇEKİÇ (Turkey)
- 7317 Role of Pr in Eu-123 high T_c nanometer-sized superconductors
V.R. HUSE, V.D. MOTE & B.N. DOLE (India)
- 7323 Influence of Fe_2O_3 content on the dielectric behavior of aluminous porcelain insulators
R.H. PIVA (Brazil), P. VILARINHO (Portugal), M.R. MORELLI, M.A. FIORI & O.R.K. MONTEDO (Brazil)
- 7331 Effect of zirconia content on the mechanosynthesis and structural features of fluorapatite-based composite nanopowders
B. NASIRI-TABRIZI & A. FAHAM (Iran)
- 7343 The improvement of electron transport rate of TiO_2 dye-sensitized solar cells using mixed nanostructures with different phase compositions
A.M. BAKHSHAYESH & M.R. MOHAMMADI (Iran)
- 7355 Substrate heating and post-annealing effect on tungsten/tungsten carbide bilayers grown by non-reactive DC magnetron sputtering
L.C. AGUDELO-MORIMITSU, J. DE LA ROCHE, D. ESCOBAR, R. OSPINA & E. RESTREPO-PARRA (Colombia)
- 7367 Effect of preparation parameters on the morphologically induced photocatalytic activities of hierarchical zinc oxide nanostructures
P.V. ADHYAPAK, S.P. MESHRAM, V. TOMAR, D.P. AMALNERKAR & I.S. MULLA (India)
- 7379 Porous ZnAl_2O_4 spinel nanorods: High sensitivity humidity sensors
B. CHENG, Z. OUYANG, B. TIAN, Y. XIAO & S. LEI (PR China)

Continued on inside back cover



ELSEVIER

Available online at www.sciencedirect.com

SciVerse ScienceDirect

CONTENTS—Continued from outside back cover

- 7387 In vitro hydroxiapatite formation on the Ca doped surface of ZSM-5[Ga] type zeolite
M.J. SÁNCHEZ-ROBLES, P. GAMERO-MELO & D.A. CORTÉS-HERNÁNDEZ (México)
- 7391 Microwave hydrothermal synthesis and optical properties of flower-like Bi_2MoO_6 crystallites
T. ZHANG, J. HUANG, S. ZHOU, H. OUYANG, L. CAO & A. LI (PR China)
- 7395 Effects of V and Zn codoping on the microstructures and photocatalytic activities of nanocrystalline TiO_2 films
F. LI, L.-X. GUAN, M.-L. DAI, J.-J. FENG & M.-M. YAO (China)
- 7401 Preparation and properties of MoSi_2 based composites reinforced by carbon nanotubes
H. ZHANG, H. WU & S. GU (PR China)
- 7407 Effect of amine and carboxyl functionalization of sub-micrometric MCM-41 spheres on controlled release of cisplatin
C.O. AREAN, M.J. VESGA, J.B. PARRA & M.R. DELGADO (Spain)
- 7415 Effect of lanthanide doping on crystal phase and near-infrared to near-infrared upconversion emission of Tm^{3+} doped $\text{KF}-\text{YbF}_3$ nanocrystals
Y.C. LI, L.W. YANG, S.X. YU, Y. LI, P. YANG, X.L. WEI & J.X. ZHONG (China)
- 7425 Sol-gel derived undoped and boron-doped ZnO semiconductor thin films: Preparation and characterization
C.-Y. TSAY & W.-T. HSU (Taiwan)
- 7433 Electrophoretic deposition of TiO_2 nanoparticles in viscous alcoholic media
A.A. SADEGHI, T. EBADZADEH, B. RAISSI & S. GHASHGHIAIE (Iran)
- 7439 One-dimensional ZnO nanostructure growth prepared by thermal evaporation on different substrates: Ultraviolet emission as a function of size and dimensionality
N.K. HASSAN (Malaysia, Iraq), M.R. HASHIM (Malaysia) & M. BOUOUDINA (Bahrain)
- 7445 Microstructure refinement approaches of melt-grown $\text{Al}_2\text{O}_3/\text{YAG}/\text{ZrO}_2$ eutectic bulk
X.-S. FU, G.-Q. CHEN, Y.-F. ZU, J.-T. LUO & W.-L. ZHOU (PR China)
- 7453 Interaction of the chromium–iron black pigment with porcelanised stoneware
S. MESTRE, M.P. GÓMEZ-TENA, M.F. GAZULLA & A. GOZALBO (Spain)
- 7461 Synthesis and photocatalytic behavior of BiVO_4 with decahedral structure
Z. ZHU, L. ZHANG, J. LI, J. DU, Y. ZHANG & J. ZHOU (PR China)
- 7467 Structural studies of porous Ni/YSZ cermets fabricated by the solid-state reaction method
J. KIM, K.H. CHO (Republic of Korea), I. KAGOMIYA (Japan) & K. PARK (Republic of Korea)
- 7475 Oxidation behavior and ablation properties of MDF-based biomorphic SiC composites
D. LEE, Y.C. KIM, M. ADEEL UMER, K.H. LIM, S.B. PARK & S.H. HONG (Republic of Korea)
- 7483 Efficient optimum solution for high strength Al alloys matrix composites
A.A. TOFIGH & M.O. SHABANI (Iran)
- 7491 Rapid deposition of YBCO films by laser CVD and effect of lattice mismatch on their epitaxial growth and critical temperature
P. ZHAO, A. ITO & T. GOTO (Japan)
- 7499 Combustion joining of carbon/carbon composites by a reactive mixture of titanium and mechanically activated nickel/aluminum powders
Y.-C. LIN (USA), A.A. NEPAPUSHEV (Russia), P.J. MCGINN (USA), A.S. ROGACHEV (Russia) & A.S. MUKASYAN (USA)
- 7507 Slag conditioning effects on $\text{MgO}-\text{C}$ refractory corrosion performance
A.P. LUZ, F.C. LEITE, M.A.M. BRITO & V.C. PANDOLFELLI (Brazil)

(contents continued from Inside back cover)

- 7517 Bioglass®-based scaffolds incorporating polycaprolactone and chitosan coatings for controlled vancomycin delivery
Q. YAO (PR China, Germany), P. NOOEAI, J.A. ROETHER (Germany), Y. DONG, Q. ZHANG (PR China)
& A.R. BOCCACCINI (Germany)
- 7523 Synthesis, structural and luminescence properties of near white light emitting Dy³⁺-doped Y₂CaZnO₅ nanophosphor for solid state lighting
R. RAJESWARI, C.K. JAYASANKAR, D. RAMACHARI & S. SURENDRA BABU (India)
- 7531 Photocatalytic activity of TiO₂ supported on multi-walled carbon nanotubes under simulated solar irradiation
K. OUYANG, S. XIE & X. MA (PR China)
- 7537 Formation of MAX solid solutions (Ti,V)₂AIC and (Cr,V)₂AIC with Al₂O₃ addition by SHS involving aluminothermic reduction
C.L. YEH & W.J. YANG (Taiwan)
- 7545 A novel synthesis route to Sn_{1-x}RE_xO_{2-x/2} nanorods via microwave-induced salt-assisted solution combustion process
W. CHEN, M. LIU, Y. LIN, Y. LIU, L. YU, T. LI & J. HONG (PR China)
- 7551 Effect of the addition of polyvinylpyrrolidone as a pore-former on microstructure and mechanical strength of porous alumina ceramics
Y. FENG, K. WANG, J. YAO, P.A. WEBLEY, S. SMART & H. WANG (Australia)
- 7557 Effects of Ni doping on structural, optical and dielectric properties of ZnO
G. SRINET, R. KUMAR & V. SAJAL (India)
- 7563 Ternary phase relations in CeO₂–DyO_{1.5}–ZrO₂ system
V. GROVER & A.K. TYAGI (India)
- 7571 Dielectric properties of Bi-doped Ba_{0.8}Sr_{0.2}TiO₃ ceramic solid solutions
F. BAHRI & H. KHEMAKHEM (Tunisie)
- 7577 Effect of annealing process on the growth and surface properties of Au–ZnO nanowire films grown by chemical routes
F. JAMALI-SHEINI, R. YOUSEFI & M.R. MAHMOUDIAN (Iran)
- 7583 Effects of a non-magnetic CuZn ferrite layer on cofiring and electrical properties of a low-fire, multilayer NiCuZn ferrite inductor
Y.-L. TUNG, J.-H. JEAN & Y.-H. CHENG (Taiwan)
- 7589 Effect of the Nb₂O₅ content on electrical properties of lead-free BaTiO₃–Bi_{0.5}Na_{0.5}TiO₃ ceramics
H. LI, J. KANG, F. GUO, Y. QU & D. YANG (PR China)
- 7595 Mechanical properties of zirconia composite ceramics
Y. ZHANG (Germany, China), J. MALZBENDER, D.E. MACK, M.O. JARLIGO (Germany), X. CAO, Q. LI (China), R. VASSEN & D. STÖVER (Germany)
- 7605 Synthesis of high magnetization hydrophilic magnetite (Fe₃O₄) nanoparticles in single reaction—Surfactantless polyol process
M. ABBAS (Republic of Korea, Egypt), B. PARVATHEESWARA RAO (India), S.M. NAGA (Egypt), M. TAKAHASHI (Republic of Korea, Japan) & C. KIM (Republic of Korea)
- 7613 Preparation and dielectric properties of dense and amorphous alumina film by sol–gel technology
B. HU, M. YAO, P. YANG, W. SHAN & X. YAO (China)
- 7619 Synergistic effect of silane modified nanocomposites for active corrosion protection
K. JEEVA JOTHI & K. PALANIVELU (India)
- 7627 Microstructure and anisotropic mechanical properties of graphene nanoplatelet toughened biphasic calcium phosphate composite
Y. ZHAO, K.-N. SUN, W.-L. WANG, Y.-X. WANG, X.-L. SUN, Y.-J. LIANG, X.-N. SUN & P.-F. CHUI (PR China)

- 7635 The PZT system ($\text{PbTi}_x\text{Zr}_{1-x}\text{O}_3$, $0 \leq x \leq 1.0$): The dependences of electrophysical properties of solid solutions on the electric field strength and component concentration (Part 5)
I.N. ANDRYUSHINA, L.A. REZNICHENKO, L.A. SHILKINA, K.P. ANDRYUSHIN, YU.I. YURASOV & S.I. DUDKINA (Russia)
- 7641 The fabrication and characterization of sintered diatomite for potential microfiltration applications
J.-H. HA, E. OH & I.-H. SONG (Republic of Korea)
- 7649 Experimental investigation of thermo-physical properties of platelet mesoporous SBA-15 silica particles dispersed in ethylene glycol and water mixture
A. TADJARODI, F. ZABIHI & S. AFSHAR (Iran)
- 7657 Effect of metallic Si addition on polymerization degree of *in situ* foamed alkali-aluminosilicates
V. MEDRI, E. PAPA (Italy), J. DEDECEK, H. JIRGLOVA (Czech Republic), P. BENITO, A. VACCARI & E. LANDI (Italy)
- 7669 Effect of donor dopants cerium and tungsten on the dielectric and electrical properties of high Curie point ferroelectric strontium niobate
H. NING, H. YAN, Z. GAO, X. WEI & M.J. REECE (UK)
- 7677 The optical properties of hydrophilic Hf-doped HfO_2 nanoceramic films
S.-S. LIN & H.-R. LI (ROC)
- 7685 Effect of annealing on the properties of nanostructured CuO thin films for enhanced ethanol sensitivity
D. GOPALAKRISHNA, K. VIJAYALAKSHMI & C. RAVIDHAS (India)
- 7693 Ion induced modification of bandgap and CIE parameters in $\text{Y}_2\text{O}_3:\text{Dy}^{3+}$ phosphor
S. SOM, S.K. SHARMA & S.P. LOCHAB (India)
- 7703 Internal bias field relaxation in poled Mn-doped $\text{Pb}(\text{Mn}_{1/3}\text{Sb}_{2/3})\text{O}_3-\text{Pb}(\text{Zr},\text{Ti})\text{O}_3$ ceramics
G. DU, R. LIANG, L. WANG, K. LI, W. ZHANG, G. WANG & X. DONG (China)
- 7709 Preparation, optimization and characterization of low cost ceramics for the fabrication of dense nickel composite membranes
A. AGARWAL, M. PUJARI, R. UPPALURI & A. VERMA (India)
- 7717 Microwave-induced small size effect of $(\text{Ba}, \text{Sr})_3\text{MgSi}_2\text{O}_8:0.06\text{Eu}^{2+}, 0.1\text{Mn}^{2+}$ phosphor for 660 nm-featured bio-lighting
L.-S. CAO, Q.-F. LU, L.-C. WANG, J. LI, J. SONG & D.-J. WANG (PR China)
- 7721 One-step synthesis of $\text{Ni}_{0.5}\text{Zn}_{0.5}\text{Fe}_2\text{O}_4$ fine-patterned films via photosensitive sol-gel route
F. YAN, G. ZHAO, Y. CHEN, N. SONG, N. ZHAO & C. YOU (China)
- 7727 Characterization by Fourier transform infrared spectroscopy of hydroxyapatite co-doped with zinc and fluoride
I. UYSAL, F. SEVERCAN & Z. EVIS (Turkey)
- 7735 Influence of initial pH on the microstructure of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ superconducting thin films derived from DEA-aqueous sol-gel method
X. TANG, Y. ZHAO & J.-C. GRIVEL (Denmark)
- 7743 Crystallization behavior and properties of $\text{K}_2\text{O}-\text{CaO}-\text{Al}_2\text{O}_3-\text{SiO}_2$ glass-ceramics
J. WU, Z. LI, Y. HUANG & F. LI (PR China)
- 7751 Filamentous alumina-chitosan porous structures produced by gelcasting
R. SALOMÃO & J. BRANDI (Brazil)
- 7759 Deposition and characterization of nanocrystalline and amorphous Ni-W coatings with embedded alumina nanoparticles
S. YARI & C. DEHGHANIAN (Iran)

- 7767 Structural investigation of boron undoped and doped indium stabilized bismuth oxide nanoceramic powders
S. KOÇYİĞİT, Ö. GÖKMEN, S. TEMEL, A. AYTİMUR, İ. USLU & S. HAMAN BAYARI (Turkey)
- 7773 MnO nanoparticles with textured porosity supported on mesoporous carbons
P. LI, Y. SONG, Z. TANG, G. YANG, Q. GUO, L. LIU & J. YANG (China)
- 7779 Synthesis and characterization of lithium calcium phosphate ceramics
O. KAYGILI, S. KESER, T. ATES (Turkey) & F. YAKUPHANOGLU (Turkey, Saudi Arabia)
- 7787 Excess conductivity in $\text{Cu}_{0.5}\text{Ti}_{0.5}\text{Ba}_2(\text{Ca}_{2-y}\text{Mg}_y)(\text{Cu}_{0.5}\text{Zn}_{2.5})\text{O}_{10-\delta}$ superconductor
M. MUMTAZ & N.A. KHAN (Pakistan)
- 7793 How bone marrow-derived human mesenchymal stem cells respond to poorly crystalline apatite coated orthopedic and dental titanium implants
M. GHAFFARI, F. MOZTARZADEH, A. SEPAHVANDI, M. MOZAFARI & S. FAGHIHI (Iran)
- 7803 Preparation and characterization of V_2O_3 micro-crystals via a one-step hydrothermal process
Y. BAI (China), P. JIN (China, Japan), S. JI, H. LUO & Y. GAO (China)
- 7809 The effect of EEMAO processing on surface mechanical properties of the TiO_2 - ZrO_2 nanostructured composite coatings
K. YOUSEFIPOUR, A. AKBARI (Iran) & M.R. BAYATI (USA)
- 7817 Large scale synthesis of non-transformable tetragonal Sc_2O_3 , Y_2O_3 doped ZrO_2 nanopowders via the citric acid based gel method to obtain plasma sprayed coating
M.R. LOGHMAN-ESTARKI, H. EDRIS & R. SHOJA RAZAVI (Iran)
- 7831 Improved pseudo-capacitive performance of manganese oxide films synthesized by the facile sol-gel method with iron acetate addition
C.C. CHEN, C.-Y. YANG & C.-K. LIN (Taiwan)
- 7839 Influence of synthesis methods and calcination temperature on electrical properties of $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ ($x=0.33$ and 0.28) ceramics
J. MA (China), M. THEINGI (China, Myanmar), Q. CHEN, W. WANG, X. LIU & H. ZHANG (China)
- 7845 Dielectric, ferroelectric, magnetic and magnetoelectric properties of $0.1\text{Ni}_{0.8}\text{Zn}_{0.2}\text{Fe}_2\text{O}_4$ - $0.9\text{Pb}_{1-3x/2}\text{Sm}_x\text{Zr}_{0.65}\text{Ti}_{0.35}\text{O}_3$ magnetoelectric composites
R. RANI, J.K. JUNEJA, S. SINGH, K.K. RAINA & C. PRAKASH (India)
- 7853 Effect of zinc concentration on the microstructure and relaxation frequency of Mn-Zn ferrites synthesized by solid state reaction
A. ZAPATA (México) & G. HERRERA (Spain)
- 7861 Multivariate optimization of the synthesis of titania biomorphic ceramics and development of a FT-IR method for quantification synthesis yield
M.M. LÓPEZ GUERRERO, E. VEREDA ALONSO, A. GARCÍADE TORRES, M. LÓPEZ CLAROS & J.M. CANO PAVÓN (Spain)
- 7869 Effect of YF_3 on the phase stability and sinterability of hydroxyapatite—Partially stabilized zirconia composites
A. AYKUL, I. KUTBAY, Z. EVIS & M. USTA (Turkey)
- 7879 Preparation of $\text{CaCu}_3\text{Ti}_4\text{O}_{12}$ ceramics with low dielectric loss and giant dielectric constant by the sol-gel technique
Y. LI, P. LIANG, X. CHAO & Z. YANG (PR China)
- 7891 Low temperature synthesis of nanocrystalline magnesium aluminate spinel by a soft chemical method
P.V.M. KUTTY & S. DASGUPTA (India)
- 7895 The enhanced bactericidal effect of plasma sprayed zinc-modified calcium silicate coating by the addition of silver
K. LI, Y. XIE, H. AO, L. HUANG, H. JI & X. ZHENG (PR China)

- 7903 Pyrolysis synthesis of Si–B–C–N ceramics and their thermal stability
L. LUO, M. GE & W. ZHANG (China)
- 7911 Drying of clay slabs: Experimental determination and prediction by two-dimensional diffusion models
W.P. DA SILVA, C.M.D.P. DA SILVA E SILVA, L.D. DA SILVA & V.S.D.O. FARIAS (Brazil)
- 7921 Fabrication of transparent neodymium-doped yttrium aluminum garnet ceramics by high solid loading suspensions
X. JI, J. DENG, B. KANG, H. HUANG, X. WANG, W. JING & T. XU (China)
- 7927 Reaction synthesis of several titanium oxides through electrical wire explosion in air and in water
N. WADA, K. AKIYOSHI, K. MORITA & K. HOKAMOTO (Japan)
- 7935 Nanocomposite synthesis and characterization of Kesterite, Cu₂ZnSnS₄ (CZTS) for photovoltaic applications
E.K. MICHAEL, D. NORCINI, S. KOMARNENI & J.R.S. BROWNSON (USA)
- 7943 Effect of microstructure on cutting processability of porcelain tile subjected to different firing cycles
S. KE, X. CHENG, Y. WANG, Q. WANG & Z. PAN (China)
- 7951 Influence of the heat treatment on mechanical properties and oxidation resistance of SiC–Si₃N₄ composites
A. KOVALČÍKOVÁ, J. DUSZA & P. ŠAJGALÍK (Slovak Republic)
- 7959 Synthesis and properties of core–shell structured BaCe_{0.9}Y_{0.1}O_{2.95}:BaZr_{0.9}Y_{0.1}O_{2.95}
L. WANG, C. JIN, L. DAI, Y.-H. LI, J. ZHU, H.-Z. ZHOU & L.-M. ZHANG (China)
- 7967 Co-precipitation synthesis and AC conductivity behavior of gadolinium-doped ceria
T.H. HSIEH, D.T. RAY & Y.P. FU (Taiwan)
- 7975 Structural and electrical properties of La_{0.7}Sr_{0.3}Co_{0.5}Fe_{0.5}O₃ powders synthesized by solid state reaction
R.V. DA CÔRTE, L. DA CONCEIÇÃO & M.M.V.M. SOUZA (Brazil)
- 7983 Co-precipitation synthesis and two-step sintering of YAG powders for transparent ceramics
X. LI, B. ZHENG, T. ODOOM-WUBAH & J. HUANG (PR China)
- 7989 Effect of the O₂/N₂ ratio on the morphology of ZnO nanostructures grown by a thermal evaporation technique
G.-H. LEE (Republic of Korea)
- 7993 The evolution behavior of microstructures and optical properties of ZnO films using a Ti buffer layer
X. ZHANG, S. MA, F. YANG, Q. ZHAO, F. LI & J. LIU (China)
- 8001 Single-phased emission-tunable Ca₃Si₂O₇:Ce³⁺, Eu²⁺ phosphors for white light-emitting diodes
H. JU, L. WANG, B. WANG, Y. MA, H. WANG, S. CHEN & X. TAO (China)
- 8007 Functional properties of glass–ceramic composites containing industrial inorganic waste and evaluation of their biological compatibility
I. ROZENSTRAUHA, E. LODINS, L. KRAGE, M. DRILLE, M. BALODE, I. PUTNA, V. FILIPENKOV (Latvia),
R.K. CHINNAM & A.R. BOCCACCINI (Germany)
- 8015 Response of 45S5 Bioglass® foams to tensile loading
L. ŘEHØŘEK, Z. CHLUP (Czech Republic), D. MENG, D.M. YUNOS (UK), A.R. BOCCACCINI (UK, Germany)
& I. DLOUHÝ (Czech Republic)
- 8021 Compositional dependence of phase structure and electrical properties in (K_{0.50}Na_{0.50})_{0.97}Bi_{0.01}(Nb_{1-x}Zr_x)O₃ lead-free ceramics
X. WANG, J. WU, X. CHENG, B. ZHANG, J. ZHU & D. XIAO (PR China)
- 8025 Structural and electrical properties of LaNiO₃ thin films grown on (100) and (001) oriented SrLaAlO₄ substrates by chemical solution deposition method
D.S.L. PONTES, F.M PONTES, M.A. PEREIRA-DA-SILVA, O.M. BERENGUE, A.J. CHIQUITO & E. LONGO (Brazil)

- 8035 Effect of key operational factors on decolorization of methyl orange by multi-walled carbon nanotubes (MWCNTs)/TiO₂/CdS composite under simulated solar light irradiation
K. OUYANG, S. XIE & X. MA (China)
- 8043 A hybrid dielectric resonator antenna based upon novel complex perovskite microwave ceramic
Y.-C. CHEN, K.-C. CHANG & D.-Y. TSAI (Taiwan)
- 8049 Effect of La substitution on the structural and electrical properties of BaBi_{4-x}La_xTi₄O₁₅
J.D. BOBIĆ, M.M. VIJATOVIĆ PETROVIĆ (Serbia), J. BANYS (Lithuania) & B.D. STOJANOVIĆ (Serbia)
- 8059 Photocatalytic hydrogen production over In₂S₃-Pt-Na₂Ti₃O₇ nanotube films under visible light irradiation
J. LIU, T. DING, Z. LI, J. ZHAO, S. LI & J. LIU (PR China)
- 8065 Production and structural characterization of tailored made open-cell alumina-vanadia foams
F. STERGIOUDI, G. KARELIS, E. PAULIDOU & N. MICHAELIDIS (Greece)
- 8073 Novel all solution processed heterojunction using p-type cupric oxide and n-type zinc oxide nanowires for solar cell applications
I.Y.Y. BU (Republic of China)
- 8079 Recycling MgO-C refractories and dolomite fines as slag foaming conditioners: experimental and thermodynamic evaluations
A.P. LUZ, D.O. VIVALDINI, F. LÓPEZ, P.O.R.C. BRANT & V.C. PANDOLFELLI (Brazil)
- 8087 Size-dependent degradation and bioactivity of borate bioactive glass
A.M. DELIORMANLI (USA, Turkey)
- 8097 Improved efficiency of dye-sensitized solar cells through fluorine-doped TiO₂ blocking layer
S.I. NOH, K.-N. BAE, H.-J. AHN & T.-Y. SEONG (Republic of Korea)
- 8103 Study of colloidal behaviour and rheology of Al₂O₃-TiO₂ nanosuspensions to obtain free-flowing spray-dried granules for atmospheric plasma spraying
M. VICENT, E. SÁNCHEZ, G. MALLOL & R. MORENO (Spain)
- 8113 High temperature dielectric and magnetic response of Ti and Pr doped BiFeO₃ ceramics
V. KUMAR, A. GAUR, N. SHARMA, J. SHAH & R.K. KOTNALA (India)
- 8123 Effect of Sr and Ca dopants on oxidation and electrical properties of lanthanum chromite-coated AISI 430 stainless steel for solid oxide fuel cell interconnect application
H. RASHTCHI, M.A.F. SANI & A.M. DAYAGHI (Iran)
- 8133 Selectivity of doping ions to effectively improve dielectric and non-ohmic properties of CaCu₃Ti₄O₁₂ ceramics
S. VANGCHANGYIA, T. YAMWONG, E. SWATSITANG, P. THONGBAI & S. MAENSIRI (Thailand)
- 8141 Mechanochemical activation of aluminum powder and synthesis of alumina based ceramic composites
S.A. BARSEGHYAN (Armenia) & Y. SAKKA (Japan)
- 8147 Synthesis, sintering, and characterization of BNT perovskite powders prepared by the solution combustion method
X. MA, L. XUE, L. WAN, S. YIN, Q. ZHOU & Y. YAN (China)
- 8153 Influence of Li doping on the humidity response of maghemite (γ -Fe₂O₃) nanopowders synthesized at room temperature
P.V. ADHYAPAK, V. KADAM, U. MAHADIK, D.P. AMALNERKAR & I.S. MULLA (India)
- 8159 Preparation and characterization of Lu₂SiO₅:Ce³⁺ luminescent ceramic fibers via electrospinning
Q. LU, Q. LIU, Q. WEI, G. LIU & J. ZHUANG (PR China)
- 8165 Hydrophobic properties of biomorphic carbon surfaces prepared by sintering lotus leaves
T. WANG, L. CHANG, S. YANG, Y. JIA (China) & C. WONG (USA)

- 8173 Microstructures and ablation properties of C/C–SiC–ZrC composites prepared using C/C skeletons with various densities
Z. LI, H. LI, S. ZHANG, W. LI & J. WANG (PR China)
- 8183 A hydrothermal synthesis of eggshell and fruit waste extract to produce nanosized hydroxyapatite
S.-C. WU, H.-K. TSOU, H.-C. HSU, S.-K. HSU, S.-P. LIOU & W.-F. HO (ROC)
- 8189 Effect of Sr substitution on electrical transport and thermoelectric properties of $Y_{1-x}Sr_xCoO_3$ ($0 \leq x \leq 0.2$) prepared by sol–gel process
Y. LIU, H. LI, Y. LI & W. SUN (PR China)
- 8195 Microstructures and electrical properties of $0.5(Ba_{0.7}Ca_{0.3})TiO_3$ – $0.5Ba(Zr_{0.2}Ti_{0.8})O_3$ thin films prepared by a sol–gel route
Q.G. CHI, H.F. ZHU, J.C. XU, X. WANG, J.Q. LIN, Z. SUN, Y. CHEN & Q.Q. LEI (PR China)
- 8199 Mechanical behavior of electrospun Nylon66 fibers reinforced with pristine and treated multi-walled carbon nanotube fillers
K.S. JEON, R. NIRMALA, R. NAVAMATHAVAN & H.Y. KIM (South Korea)
- 8207 Effect of La_2O_3 addition on crystallization and properties of Li_2O – Al_2O_3 – SiO_2 glass-ceramics
P. LU, Y. ZHENG, J. CHENG & D. GUO (China)
- 8213 Electrical conductivity of $SrBi_2Ta_2O_9$ ceramics
D. KAJEWSKI & Z. UJMA (Poland)
- 8219 The effect of bismuth oxide polymorph forms on degradation processes in ZnO varistors
W. MIELCAREK, A. GUBAŃSKI, G. PAŚCIAK, K. PROCIÓW, J. WARYCHA (Poland) & J.M. WROBEL (USA)
- 8227 Macrostructures with hierarchical porosity produced from alumina–aluminum hydroxide–chitosan wet-spun fibers
R. SALOMÃO & J. BRANDI (Brazil)
- 8237 Effect of Co_3O_4 content and compaction pressure on the microstructure and electric properties of SnO_2 – Sb_2O_5 – Cr_2O_3 varistor ceramics
J.A. AGUILAR-MARTÍNEZ, M.I. PECH-CANUL, C. LEYVA-PORRAS, E. RODRÍGUEZ & V. IVÁN HERNÁNDEZ (Mexico)
- 8245 Effects of extra Ba^{2+} and two-step sintering on the crystal structure, microstructure, and dielectric properties of $(Ba, Ca)(Ti, Zr)O_3$
C.-Y. CHANG, H.-I. HO, T.-Y. HSIEH, C.-Y. HUANG & Y.-C. WU (Taiwan)
- 8253 Ballistic performance of liquid-phase sintered silicon carbide
C.-Y. LIU, W.-H. TUAN & S.-C. CHEN (Taiwan)
- 8261 Magnetic properties of Eu^{3+} lightly doped $ZnFe_2O_4$ nanoparticles
L. YANG, Z. WANG, B. ZHAI, Y. SHAO, Z. ZHANG, Y. SUN & J. YANG (China)
- 8267 Thermal expansion behavior of La-doped $(Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2})O_{3-\delta}$ cathode material
B.-K. KANG, H.-C. LEE, Y.-W. HEO, J.-J. KIM, J.Y. KIM & J.-H. LEE (Republic of Korea)
- 8273 Si incorporated diamond-like carbon film-coated electrochromic switchable mirror glass for high environmental durability
K. TAJIMA, M. IKEYAMA, S. NAKAO, Y. YAMADA & K. YOSHIMURA (Japan)
- 8279 Aqueous tape casting of micro and nano YSZ for SOFC electrolytes
T. BAQUERO, J. ESCOBAR (Colombia), J. FRADE (Portugal) & D. HOTZA (Brazil)
- 8287 Conversion of ZnO microrods into microdisks like structures and its effect on photoluminescence properties
P. RAI, S. RAJ, I.-H. LEE, W.-K. KWAK & Y.-T. YU (South Korea)

- 8293 Flower-like hydroxyapatite nanostructure obtained from eggshell: A candidate for biomedical applications
G.S. KUMAR & E.K. GIRIJA (India)
- 8301 Pottery from Halat Aobeer and Hazem Al-Jasrah, Qatar
M.A. AL MAADEED, N.J. AL THANI, M. SADEQ (Qatar) & R. SOBOTT (Germany)
- 8311 Morphology-controlled synthesis of SnO_2 nanostructures using hydrothermal method and their photocatalytic applications
N. TALEBIAN & F. JAFARINEZHAD (Iran)
- 8319 Photoluminescence properties of $\text{Ca}-\alpha\text{-SiAlON:Ce}^{3+}$ phosphors as function of composition and microstructure
L. GAN, Z.-Y. MAO, Y.-F. WANG, F.-F. XU, Y.-C. ZHU, Q. HUANG & X.-J. LIU (PR China)
- 8327 X-ray diffraction, Raman and photoluminescence studies of nanocrystalline cerium oxide thin films
G. BALAKRISHNAN, C.M. RAGHAVAN (South Korea), C. GHOSH, R. DIVAKAR, E. MOHANDAS (India), J.I. SONG, S.I. BAE & T. GYU KIM (South Korea)
- 8335 Surface properties of copper-incorporated diamond-like carbon films deposited by hybrid magnetron sputtering
M.-Y. TSAI, M.-S. HUANG, L.-K. CHEN, Y.-D. SHEN, M.-H. LIN, Y.-C. CHIANG, K.-L. OU & S.-F. OU (Taiwan)
- 8341 Mode I fracture toughness of short carbon fiber-dispersed SiC matrix composite fabricated by melt infiltration process
R. INOUE (Japan), J.M. YANG (Japan, USA), H. KAKISAWA & Y. KAGAWA (Japan)
- 8347 Solvothermal growth of three-dimensional TiO_2 nanostructures and their optical and photocatalytic properties
J. ZHOU, G. ZHAO, G. HAN & B. SONG (PR China)
- 8355 Porous silicon nitride ceramics designed for bone substitute applications
K. BODIŠOVÁ, M. KAŠIAROVÁ, M. DOMANICKÁ, M. HNATKO, Z. LENČÉŠ, Z.V. NOVÁKOVÁ, J. VOJTAŠŠÁK, S. GROMOŠOVÁ & P. AJGALŠÍK (Slovakia)
- 8363 Influence of different additives on the synthesis of VO_2 polymorphs
Y. ZHANG, J. ZHANG, X. ZHANG, Y. DENG, Y. ZHONG, C. HUANG, X. LIU, X. LIU & S. MO (PR China)
- 8377 Colloidal stability of dextran and dextran/poly ethylene glycol coated TiO_2 nanoparticles by hydrothermal assisted sol-gel method
S. NAGHIBI, H.R. MADAAB HOSSEINI & M.A. FAGHIHI SANI (Iran)
- 8385 Citrate-hydrothermal synthesis, structure and electrochemical performance of $\text{La}_{0.6}\text{Sr}_{0.4}\text{Co}_{0.2}\text{Fe}_{0.8}\text{O}_{3-\delta}$ cathodes for IT-SOFCs
L.M.P. GARCIA, D.A. MACEDO, G.L. SOUZA, F.V. MOTTA, C.A. PASKOCIMAS & R.M. NASCIMENTO (Brazil)
- 8393 Investigations on phase constitution, mechanical properties and hydration kinetics of aluminous cements containing magnesium aluminate spinel
J.-H. LI, B.-Y. CAI, W.-W. FENG, Y.-Q. LIU & H.-W. MA (China)
- 8401 Bone marrow absorption and retention properties of engineered scaffolds with micro-channels and nano-pores for tissue engineering: A proof of concept
D.S. OH (USA), Y. HYUK KIM, D. GANBAT, M.-H. HAN (Korea), P. LIM, J.-H. BACK, F.Y. LEE & H. TAWFEEK (USA)
- 8411 Characterization of $\text{Ce}_{0.8}\text{Sm}_{0.2}\text{O}_{2-\delta}$ -infiltrated $\text{La}_{0.8}\text{Ca}_{0.2}\text{CoO}_{3-\delta}$ cathode for solid oxide fuel cells
R.-W. YOU, J. OUYANG, Y.-P. FU, S.-H. HU & K.-W. TAY (Taiwan)
- 8421 Thermal expansion behaviors of yttrium tungstates in the $\text{WO}_3-\text{Y}_2\text{O}_3$ system
J.-H. KOH, E. SORGE, T.-C. WEN & D.K. SHETTY (USA)
- 8429 Synthesis of Cu^{2+} and Ag^+ doped $\text{Na}_2\text{Ti}_3\text{O}_7$ by a facile ion-exchange method as visible-light-driven photocatalysts
M. VITHAL, S. RAMA KRISHNA, G. RAVI, S. PALLA, R. VELCHURI & S. POLA (India)

- 8441 Synthesis and properties of V_2O_3 – Fe_2O_3 magnetic ceramic nanostructures
M. SORESCU, T. XU, C. WADE, J.D. BURNETT & J.A. AITKEN (USA)
- 8453 Surface modification of $LiCoO_2$ with $Li_{3x}La_{2/3-x}TiO_3$ for all-solid-state lithium ion batteries using Li_2S – P_2S_5 glass–ceramic
S. NOH, J. KIM, M. EOM & D. SHIN (Republic of Korea)
- 8459 Visible fluorescence characteristics of Dy^{3+} doped zinc alumino bismuth borate glasses for optoelectronic devices
K. SWAPNA, SK. MAHAMUDA, A. SRINIVASA RAO, M. JAYASIMHADRI, T. SASIKALA & L. RAMA MOORTHY (India)
- 8467 Synthesis and characterization of morphologically tailored NiO – $Ce_{0.8}Gd_{0.2}O_{2-\delta}$ anode materials for solid oxide fuel cells: A micro-emulsion followed by solvothermal approach
M.K. RATH, B.-H. CHOI & K.-T. LEE (Republic of Korea)

Short Communications

- 8475 Synthesis of SnO_2 nanowires their structural and H_2 gas sensing properties
E.M. EL-MAGHRABY (Egypt), A. QURASHI (Saudi Arabia) & T. YAMAZAKI (Japan)
- 8481 Facile electrochemical synthesis of $PbWO_4$ dendrites
Y. WANG, L. YANG, Y. WANG, X. WANG & L. WANG (PR China)
- 8487 Preparation of graphitic carbon nanofibres by in situ catalytic graphitisation of phenolic resins
Q. HU, X. WANG & Z. WANG (China)
- 8493 Development of SiO_2 based thin film on metal foils for space application
I.N. REDDY, V.R. REDDY, N. SRIDHARA, S. BASAVARAJA, M. VENKATANARAYANA, V.S. RAO, A.K. SHARMA & A. DEY (India)
- 8499 Monophasic $ZnFe_2O_4$ synthesis from a xerogel layer by auto combustion
A. SUTKA, G. MEZINSKIS, M. ZAMOVSKIS, D. JAKOVLEVS & I. PAVLOVSKA (Latvia)
- 8503 Microwave dielectric properties and chemical compatibility with silver electrode of low-fired $Li_2Cu_{0.2}Mg_{0.8}Ti_3O_8$ ceramic
Y. TANG, L. FANG, H. ZHOU, Q. LIU & H. ZHANG (China)
- 8507 The effect of particle size in freeze casting of porous alumina–zirconia composite
G. LIU & T.W. BUTTON (UK)
- 8513 Low-temperature synthesis of single-crystalline $BiFeO_3$ using molten KCl–KBr salt
Y. LIU, Q. QIAN, Z. YI, L. ZHANG, F. MIN & M. ZHANG (China)
- 8517 Pyroelectric properties of lead-free ferroelectric niobium-rich potassium lithium tantalate niobate single crystals
J. LI, Y. LI (China, USA), Z. ZHOU (China), R. GUO & A. BHALLA (USA)
- 8521 Biocompatible multichannel mesoporous bioactive glass microtubes as a drug carrier
W. LIU, X. WANG, X. GAO, X. CHEN, X. YU, H. WANG & X. DENG (PR China)
- 8527 Effects of Ni doping on ferroelectric and ferromagnetic properties of $Bi_{0.75}Ba_{0.25}FeO_3$
R. CASTAÑEDA, G. ROJAS-GEORGE, J. SILVA, M.E. FUENTES-MONTERO, J.A. MATUTES-AQUINO, A. REYES-ROJAS & L. FUENTES (Mexico)
- 8531 Effect of sintering atmosphere on the densification behavior of hot pressed TiN ceramics
J.-X. XUE, H.-T. LIU, Y. TANG, C.-M. XU & G.-J. ZHANG (China)
- 8537 Structure and dielectric properties of niobium-rich potassium lithium tantalate niobate single crystals
J. LI, Y. LI (China, USA), Z. ZHOU (China), R. GUO & A.S. BHALLA (USA)

- 8543 Ultra-flexible polymethyl methacrylate composites induced by sliding of micron-sized hexagonal boron nitride platelets
B.-H. XIE, X. HUANG & G.-J. ZHANG (China)
- 8549 The influence of particle in-flight properties on the microstructure of coatings deposited by the supersonic atmospheric plasma spraying
Y. BAI, K. LIU, Z.H. WEN, J.J. TANG, L. ZHAO & Z.H. HAN (China)
- 8555 Praseodymium-doped calcium stannates phosphor coatings prepared by electrostatic spray deposition
K.S. HWANG, Y.S. JEON, S. HWANGBO & J.T. KIM (Republic of Korea)
- 8559 Microstructure, mechanical, and thermal properties of in situ-synthesized $(\text{ZrB}_2+\text{SiC})/\text{Zr}_2[\text{Al}(\text{Si})]_4\text{C}_5$ composites
D.D. GUO, J. YANG, L. YU, L.M. PAN, T. QIU & J.X. ZHANG (China)
- 8565 Controlled nucleation and crystal growth through nano SiO_2 for enhancing the orange luminescence of $(\text{Sr},\text{Ba})_3\text{SiO}_5 \cdot \text{Eu}^{2+}$ in white LEDs application
L. CHEN, A. LUO, X. CHEN, F. LIU, E. ZHAO, Y. WANG, Y. JIANG, Z. YAO, W. ZHANG & S. CHEN (China)
- 8571 Effect of PMN content on the phase structure and electrical properties of PMN–PZT ceramics
L. WANG, R. LIANG, C. MAO, G. DU, G. WANG & X. DONG (People's Republic of China)