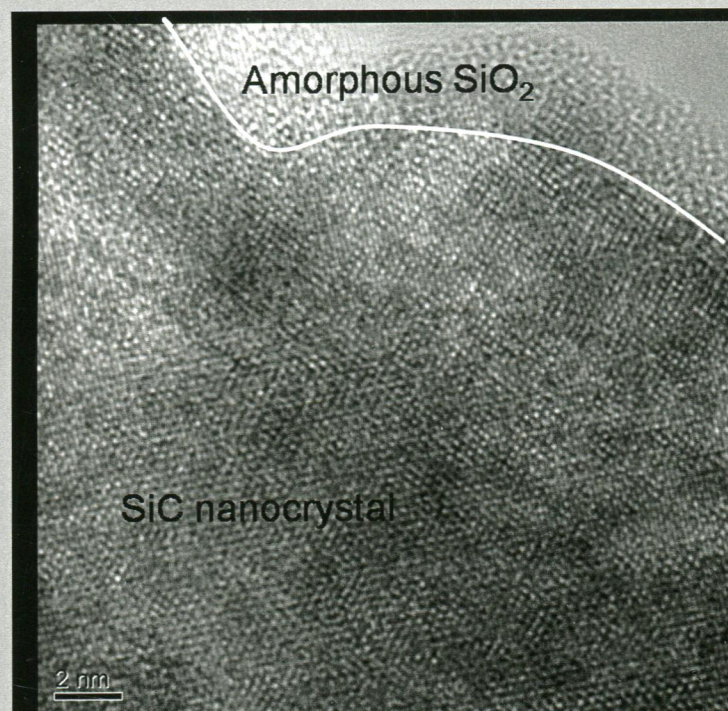


ПН
С41/сi

CERAMICS INTERNATIONAL



PIETRO VINCENZINI

GENERAL EDITOR

EDITORS-IN-CHIEF

L. BERGSTROM
SWEDEN

R.K. BORDIA
USA

Z.Y. FU
CHINA

T. OHJI
JAPAN

J.A. VARELA
BRAZIL

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



ELSEVIER



(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 SCOPUS®. Full text available on ScienceDirect®.)

CONTENTS

Volume 40 Issue 2 2014

Reviews

- 2557 Improved mechanical properties of SnO₂:F thin film by structural modification
Q. GAO, H. JIANG, M. LI, P. LU, X. LAI, X. LI, Y. LIU, C. SONG & G. HAN (China)
- 2565 Eutectic crystallization in the UO₂-Al₂O₃-HfO₂ ceramic phase diagram
K. PLEVACOVA, C. JOURNEAU, P. PILUSO & J. POIRIER (France)

Original Articles

- 2575 A reddish orange stoichiometric phosphor LiEu(PO₃)₄ for white light-emitting diodes
Z. MU, Y. HU, L. CHEN, X. WANG, G. JU, Z. YANG & R. CHEN (PR China)
- 2581 Green and red upconversion luminescence of Er³⁺-doped K_{0.5}Na_{0.5}NbO₃ ceramics
H. SUN, Q. ZHANG, X. WANG & M. GU (PR China)
- 2585 Effects of CuO addition on the structure and electrical properties of low temperature sintered Ba(Zr,Ti)O₃ lead-free piezoelectric ceramics
D. LIANG, X. ZHU, J. ZHU, J. ZHU & D. XIAO (PR China)
- 2593 Effects of excess boron on combustion synthesis of alumina-tantalum boride composites
C.L. YE H & Y.S. HUANG (Taiwan)
- 2599 Effect of Bi₂O₃ on the electrochemical performance of LaBaCo₂O_{5+δ} cathode for intermediate-temperature solid oxide fuel cells
R. LI, D. WANG, L. GE, S. HE, H. CHEN & L. GUO (PR China)
- 2605 Microstructure development and phase evolution of alumina-mullite nanocomposite
A. SEDAGHAT, E. TAHERI-NASSAJ (Iran), G.D. SORARU (Italy) & T. EBADZADEH (Iran)
- 2613 Synthesis and characterization of Tb³⁺/Gd³⁺ dual-doped multifunctional hydroxyapatite nanoparticles
Z. LIU, Q. WANG, S. YAO, L. YANG, S. YU, X. FENG & F. LI (China)
- 2619 Visible-light photocatalytic activity of SiC hollow spheres prepared by a vapor-solid reaction of carbon spheres and silicon monoxide
O. HAIBO, H. JIANFENG, Z. XIERONG, C. LIYUN, L. CUIYAN, X. XINBO & F. JIE (China)

Continued on inside back cover



ELSEVIER

Available online at www.sciencedirect.com

ScienceDirect



CONTENTS—Continued from outside back cover

- 2627 Electrocaloric effect based on the depolarization transition in $(1-x)\text{Bi}_{0.5}\text{Na}_{0.5}\text{TiO}_3-x\text{KNbO}_3$ lead-free ceramics
X. JIANG, L. LUO, B. WANG, W. LI & H. CHEN (China)
- 2635 Room temperature multiferroic properties of Ni-doped Aurivillius phase $\text{Bi}_5\text{Ti}_3\text{FeO}_{15}$
X. CHEN, J. XIAO, Y. XUE, X. ZENG, F. YANG & P. SU (PR China)
- 2641 Microwave dielectric properties of neodymium tin oxide
Y.-N. WANG, Y.-C. CHEN, S.-L. YAO & C.-Y. WU (Taiwan)
- 2647 Microwave hydrothermal synthesis of Sr^{2+} doped ZnO crystallites with enhanced photocatalytic properties
D. LI, J.-F. HUANG, L.-Y. CAO, J.-Y. LI, H.-B. OUYANG & C.-Y. YAO (China)
- 2655 Effect of lithium extraction on the stabilities, electrochemical properties, and bonding characteristics of LiFePO_4 cathode materials: A first-principles investigation
Z.-C. XIONG, Y. XIE, T.-F. YI, H.-T. YU, Y.-R. ZHU & Y.-Y. ZENG (PR China)
- 2663 Synthesis and luminescence properties of $\text{Y}_2\text{O}_2\text{S}:\text{Dy}^{3+}$, Mg^{2+} , Ti^{4+} phosphors prepared by sol-gel process
P. HUANG, X. HE, C. CUI & L. WANG (China)
- 2669 Microstructure and optical limiting properties of multicomponent inorganic gel-glasses: A focus on SiO_2 , TiO_2 and PbO gel-glasses
C. ZHENG, W. LI, W. CHEN, X. YE, S. CAI & X. XIAO (China)
- 2677 Dopant induced RTFM and enhancement of fluorescence efficiencies in spintronic ZnS:Ni nanoparticles
B. POORNAPRAKASH (India), S. SAMBASIVAM (South Korea), D. AMARANATHA REDDY (India, Korea)
G. MURALI, R.P. VIJAYALAKSHMI & B.K. REDDY (India)
- 2685 Synthesis of $\text{FePO}_4 \cdot x\text{H}_2\text{O}$ for fabricating submicrometer structured LiFePO_4/C by a co-precipitation method
Y. ZHU, S. TANG, H. SHI & H. HU (China)
- 2691 Efficient visible-light photocatalysts from Gd-La codoped TiO_2 nanotubes
Y. CHAI, L. LIN, K. ZHANG, B. ZHAO & D. HE (PR China)
- 2697 Synthesis and characterization of chlorapatite-ZnO composite nanopowders
B. NASIRI-TABRIZI & A. FAHAMI (Iran)
- 2707 Sol-gel derived amorphous/nanocrystalline MgZnO thin films annealed by atmospheric pressure plasma jets
S.-T. LIEN, J.-Z. CHEN, Y.-J. YANG, C.-C. HSU & I.-C. CHENG (Taiwan)
- 2717 Sintering behavior and mechanical properties of alumina/zirconia multilayers composite via nano-powder processing
E. SALAHI, H. ESFAHANI, I. MOBASHERPOUR, M.A. BIJARCHI (Iran) & M. TAHERI (Canada)
- 2723 Role of interface on electrical conductivity of carbon nanotube/alumina nanocomposite
S. SARKAR & P.K.R. DAS (India)
- 2731 Effect of SrZrO_3 on phase structure and electrical properties of $0.974(\text{K}_{0.5}\text{Na}_{0.5})\text{NbO}_3-0.026\text{Bi}_{0.5}\text{K}_{0.5}\text{TiO}_3$ lead-free ceramics
T. HUANG, D. XIAO, C. LIU, F. LI, B. WU, J. WU & J. ZHU (China)
- 2737 Influence of LaF_3 on the crystallization and luminescence of Eu^{3+} -doped oxyfluoride glass ceramics
C. ZHANG, S. ZHAO, D. DENG, L. HUANG, Y. TIAN & S. XU (China)
- 2741 Variation in ferroelectric polarization direction of epitaxial (001) $\text{SrBi}_2\text{Ta}_2\text{O}_9$ thin film induced by oxygen vacancy
J. YEOG SON (Republic of Korea), W. JOO MAENG (USA) & W.-H. KIM (Republic of Korea)
- 2747 Direct synthesis of barium zirconate titanate (BZT) nanoparticles at room temperature and sintering of their ceramics at low temperature
J.Q. QI (PR China), X.H. WANG, H. ZHANG (China), H. ZOU, Z.B. WANG, X.W. QI (PR China), Y. WANG, L.T. LI & H.L.W. CHAN (China)

(contents continued from Inside back cover)

- 2751 The effect of excess phosphate on the solubility of hydroxyapatite
Q. LIU, Z. CHEN, H. PAN (China) & B.W. DARVELL (Kuwait)
- 2763 Microstructure and electrical properties of $(\text{Na}_{0.5}\text{K}_{0.5})_{1-2x}\text{Mg}_x\text{NbO}_3\text{-Bi}_{0.5}\text{Na}_{0.5}\text{TiO}_3$ lead-free piezoelectric ceramics
S. LIANG, J. ZHU, M. ZHENG, P. ZHANG, P. SUN, Z. WANG & X. ZHU (China)
- 2769 Development of crystalline phases in sintered glass-ceramics from residual E-glass fibres
M.I. MARTÍN, F.A. LÓPEZ, F.J. ALGUACIL & M. ROMERO (Spain)
- 2777 Refined measurements of indentation fracture resistance of alumina using powerful optical microscopy
H. MIYAZAKI & Y.-I. YOSHIZAWA (Japan)
- 2785 Mechanical and dielectric properties of short carbon fiber reinforced Al_2O_3 composites with MgO additive
S. HUANG, W. ZHOU, F. LUO, P. WEI & D. ZHU (China)
- 2793 Effects of copper on microstructure and mechanical properties of C_f/ZrC composites fabricated by low-temperature liquid metal infiltration
Y. ZHU, S. WANG, H. CHEN, W. LI & Z. CHEN (China)
- 2799 The influence of SrSO_4 on the tribological properties of $\text{NiCr-Al}_2\text{O}_3$ cermet at elevated temperatures
F. LIU, G. YI, W. WANG, Y. SHAN & J. JIA (PR China)
- 2809 Effects of particulate metallic phase on microstructure and mechanical properties of carbide reinforced alumina ceramic tool materials
Z. YIN, C. HUANG, B. ZOU, H. LIU, H. ZHU & J. WANG (PR China)
- 2819 Binder removal via a two-stage debinding process for ceramic injection molding parts
S. MD ANI, A. MUCHTAR, N. MUHAMAD & J.A. GHANI (Malaysia)
- 2825 Structural and magnetic evaluation of substituted $\text{NiZnFe}_2\text{O}_4$ particles synthesized by conventional sol-gel method
A. GHASEMI & M. MOUSAVINIA (Iran)
- 2835 Synthesis, structural and morphological characteristics, magnetic and optical properties of Co doped ZnO nanoparticles
A. MESAROS, C.D. GHITULICA, M. POPA, R. MEREU, A. POPA, T. PETRISOR JR., M. GABOR, A.I. CADIS & B.S. VASILE (Romania)
- 2847 Synthesis and characterization of ZnSe rose-like nanoflowers and microspheres by the hydrothermal method
Q. ZENG, S. XUE, S. WU, K. GAN, L. XU, J. HAN, W. ZHOU & R. ZOU (China)
- 2853 Effect of LiAlSiO_4 particle size on the properties of LAS/SiC porous ceramics with near zero thermal expansion
B. WANG, S.-C. XU, F. JIN, J.-F. YANG (China), K. ISHIZAKI & K. NIIHARA (Japan)
- 2857 Corrosion protection by zirconia-based thin films deposited by a sol-gel spin coating method
M. NOROUZI & A. AFRASIABI GAREKANI (Iran)
- 2863 Nanoceria: Gum mediated synthesis and *in vitro* viability assay
M. DARROUDI, M. SARANI, R. KAZEMI OSKUEE, A. KHORSAND ZAK & M.S. AMIRI (Iran)
- 2869 Microwave synthesis and sintering of forsterite nanopowder produced by high energy ball milling
H. BARZEGAR BAFROOEI, T. EBADZADEH & H. MAJIDIAN (Iran)
- 2877 Microwave-hydrothermal synthesis of Fe-based materials for lithium-ion batteries and supercapacitors
K. CHEN (China), Y. DONG NOH (USA), W. HUANG (China), J. MA (USA, China), S. KOMARNENI (USA) & D. XUE (China)

- 2885 Influence of annealing temperature on the structural and anti-corrosion characteristics of sol-gel derived, spin-coated thin films
E. SALAHINEJAD (Iran, USA), M.J. HADIANFARD (Iran), D. VASHAEE & L. TAYEBI (USA)
- 2891 Mechanical properties and chemical bonding characteristics of WC and W_2C compounds
Y. LIU, Y. JIANG, R. ZHOU (PR China) & J. FENG (USA)
- 2901 Behavior and mechanism of the stress buffer effect of the inside ceramic layer to the top ceramic layer in a double-ceramic-layer thermal barrier coating
M. HAN, J. HUANG & S. CHEN (China)
- 2915 Influence of metal ion concentration in the glycol mediated synthesis of $Gd_2O_3:Eu^{3+}$ nanophosphor
R.G. ABHILASH KUMAR (India), S. HATA, K.-I. IKEDA (Japan) & K.G. GOPCHANDRAN (India)
- 2927 The phase structure and electric properties of low-temperature sintered (K, Na) NbO_3 -based piezoceramics modified by CuO
J.-J. ZHOU, L.-Q. CHENG, K. WANG, X.-W. ZHANG, J.-F. LI, H. LIU & J.-Z. FANG (China)
- 2933 Investigation of mechanical behavior of CPC/bone specimens by finite element analysis
T. YU, X. LIU, J. YE & M. ZHANG (China)
- 2943 Photoinduced electron transfer mechanism between green fluorescent protein molecules and metal oxide nanoparticles
S. ACIKGOZ, Y. ULUSU, S. AKIN, S. SONMEZOGLU, I. GOKCE & M.N. INCI (Turkey)
- 2953 Role of carbon nanotubes on load dependent micro hardness of SWCNT-lead silicate glass composite
S. GHOSH, A. GHOSH, T. KAR, S. DAS, P.K. DAS, J. MUKHERJEE & R. BANERJEE (India)
- 2959 Effect of HfO_2 content on the microstructure and piezoelectric properties of $(Bi_{0.5}Na_{0.5})_{0.94}Ba_{0.06}TiO_3$ lead-free ceramics
T. CHEN, H. WANG, T. ZHANG, G. WANG, J. ZHOU, J. ZHANG & Y. LIU (PR China)
- 2965 Synthesis and characteristics of fly ash and bottom ash based geopolymers—A comparative study
E. UL HAQ, S. KUNJALUKKAL PADMANABHAN & A. LICCIULLI (Italy)
- 2973 Self-assembly synthesis of ZnO with adjustable morphologies and their photocatalytic performance
Y. LIU, S. LI, H. LV, D. PING, S. LI, Z. LI & H. TANG (PR China)
- 2979 Enhancement of the dielectric, piezoelectric, and ferroelectric properties in $BiYbO_3$ -modified $(Ba_{0.85}Ca_{0.15})(Ti_{0.9}Zr_{0.1})O_3$ lead-free ceramics
J. MA, X. LIU, C. ZHOU, C. YUAN, W. LI & M. JIANG (PR China)
- 2985 Ablation of C/SiC, C/SiC-ZrO₂ and C/SiC-ZrB₂ composites in dry air and air mixed with water vapor
X. FANG, F. LIU, H. SU, B. LIU & X. FENG (China)
- 3993 Antibacterial responses of zinc oxide structures against *Staphylococcus aureus*, *Pseudomonas aeruginosa* and *Streptococcus pyogenes*
L.C. ANN, S. MAHMUD, S.K.M. BAKHORI, A. SIRELKHATIM, D. MOHAMAD, H. HASAN, A. SEENI & R.A. RAHMAN (Malaysia)
- 3003 Nanocrystalline Nd_2O_3 : Preparation, phase evolution, and kinetics of thermal decomposition of precursor
Q. LIQIN, W. KAITUO, W. XUEHANG, W. WENWEI, L. SEN & L. GENGMING (People's Republic of China)
- 3011 Diffusion bonding of alumina using interlayer of mixed hydride nano powders
N. HOSSEINABADI, R. SARRAF-MAMOORY & A. MOHAMMAD HADIAN (Iran)
- 3023 Fabrication of multifunctional TiO_2 -fly ash/polyurethane nanocomposite membrane via electrospinning
H. JOO KIM (Republic of Korea), H. RAJ PANT (Republic of Korea, Nepal), J. HEE KIM, N. JUNG CHOI & C. SANG KIM (Republic of Korea)

- 3031 Effect of suspension medium on the electrophoretic deposition of hydroxyapatite nanoparticles and properties of obtained coatings
M. FARROKHI-RAD & T. SHAHRABI (Iran)
- 3041 Permeability and dynamic elastic moduli of controlled porosity ultra-precision aerostatic structures
I.S. DURAZO-CARDENAS, J. CORBETT & D.J. STEPHENSON (United Kingdom)
- 3053 Toughness control of boron carbide obtained by spark plasma sintering in nitrogen atmosphere
P. BADICA (Singapore, Japan, Romania), H. BORODIANSKA (Singapore, Japan), S. XIE, T. ZHAO (Singapore), D. DEMIRSKYI (Japan), P. LI, A.I.Y. TOK (Singapore), Y. SAKKA (Japan) & O. VASYLKIV (Singapore, Japan)
- 3063 Degradation of alumina refractory bricks by sintering Mn low-alloy steels
M. CAMPOS, J.A. SICRE-ARTALEJO, J.M. TORRALBA (Spain), H. ZBIRAL, H. DANNINGER (Austria) & P. PENA (Spain)
- 3071 Highly porous corundum–mullite ceramics – Structure and properties
I. ZAKE-TILUGA, R. SVINKA & V. SVINKA (Latvia)
- 3079 Preparation of a hemiporous hydroxyapatite scaffold and evaluation as a cell-mediated bone substitute
J. JOON YOO, H. JOONG KIM, S.-M. SEO & K.-S. OH (South Korea)
- 3089 Structural, morphological and up-converting luminescence characteristics of nanocrystalline $Y_2O_3:Yb/Er$ powders obtained *via* spray pyrolysis
V. LOJPUR, L. MANCIC, P. VULIC, M.D. DRAMICANIN (Serbia), M.E. RABANAL (Spain) & O. MILOSEVIC (Serbia)
- 3097 Porous titania microspheres with uniform wall thickness and high photoactivity
X. LIANG & R.L. PATEL (USA)
- 3105 Preparation and characterization of basic carbonates as novel anode materials for lithium-ion batteries
L. SHAO, K. WU, X. JIANG, M. SHUI, R. MA, M. LAO, X. LIN, D. WANG, N. LONG & J. SHU (People's Republic of China)
- 3117 Synthesis and luminescence of $Y_2O_3:Eu^{3+}$ inorganic–organic hybrid nanostructures with thenoyltrifluoroacetone
L. JI, N. CHEN, G. DU, M. YAN & W. SHI (China)
- 3123 Joining partially-sintered alumina ceramics using a mixture slurry of alumina sol and suspension
J.-H. HAN (Republic of Korea)
- 3131 High performance $BaCe_{0.8}Y_{0.2}O_{3-a}$ (BCY) hollow fibre membranes for hydrogen permeation
X. TAN, X. TAN, N. YANG, B. MENG (China), K. ZHANG & S. LIU (Australia)
- 3139 Electrical properties of niobium doped $Bi_4Ti_3O_{12}-SrBi_4Ti_4O_{15}$ intergrowth ferroelectrics
G. PARIDA & J. BERA (India)
- 3145 One step solid state synthesis of $FeF_3 \cdot 0.33H_2O/C$ nano-composite as cathode material for lithium-ion batteries
X. XU, S. CHEN, M. SHUI, L. XU, W. ZHENG, J. SHU, L. CHENG, L. FENG & Y. REN (PR China)
- 3149 Generalized synthesis of yolk–shell metal oxide spheres
H. JIU, Y. SUN, L. ZHANG, C. ZHANG, J. ZHANG (PR China) & J. LIU (USA)
- 3155 Conventional- and microwave-hydrothermal synthesis of $LiMn_2O_4$: Effect of synthesis on electrochemical energy storage performances
K. CHEN (PR China), A.C. DONAHOE, Y.D. NOH (USA), K. LI (PR China), S. KOMARNENI (USA) & D. XUE (PR China)
- 3165 Modification of glass ionomer cement by incorporating hydroxyapatite-silica nano-powder composite: Sol–gel synthesis and characterization
R. AHMAD SHIEKH, I. AB RAHMAN, S. MALIK MASUDI & N. LUDDIN (Malaysia)

- 3171 Developing empirical relationships to estimate porosity and microhardness of plasma-sprayed YSZ coatings
S. KARTHIKEYAN, V. BALASUBRAMANIAN & R. RAJENDRAN (India)
- 3185 Gelcasting of alumina using the hexamethylenediamine–paraformaldehyde monomer system
S. VIJAYAN, R. NARASIMMAN & K. PRABHAKARAN (India)
- 3193 Synthesis of ZnO/Cu micro and nanostructures via a vapor phase transport method using different tube systems
A. KAMALIANFAR (Malaysia, Iran), S.A. HALIM (Malaysia) & A. KHORSAND ZAK (Iran)
- 3199 Growth of $(K_{0.5}Na_{0.5})NbO_3$ – $SrTiO_3$ lead-free piezoelectric single crystals by the solid state crystal growth method and their characterization
M.U. FAROOQ & J.G. FISHER (Republic of Korea)
- 3209 Synthesis and characterization of nanocrystalline zinc aluminate spinel powder by sol–gel method
R.K. SHARMA & R. GHOSE (India)
- 3215 The influence of oxygen partial pressure on the performance and stability of Ge-doped InGaO thin film transistors
K.-H. LEE, K.-C. OK, H. KIM & J.-S. PARK (Republic of Korea)
- 3221 Large-area TiO_2 nanotube dye-sensitized solar cells using thermal-sprayed Ti layers on stainless steel
C.C. CHEN, W.-D. JHENG & C.-K. LIN (Taiwan)
- 3227 Li–Y doped and codoped TiO_2 thin films: Enhancement of photocatalytic activity under visible light irradiation
Z. HAMDEN (Tunisia, Portugal), D.P. FERREIRA, L.F.V. FERREIRA (Portugal) & S. BOUATTOUR (Tunisia)
- 3237 Garnet-based red emitting phosphors $Li_6MLa_2Nb_2O_{12}$: Eu^{3+} (M=Ca, Sr, Ba): Photoluminescence improvement by changing crystal lattice
F. LIU, Y. FANG, J. HOU, N. ZHANG & Z. MA (PR China)
- 3243 Phase transformation behavior of 3 mol% yttria partially-stabilized ZrO_2 (3Y–PSZ) precursor powder by an isothermal method
C.-W. KUO, Y.-H. SHEN, F.-L. YEN, H.-Z. CHENG, I.-M. HUNG, S.-B. WEN, M.-C. WANG (Taiwan) & M. STACK (UK)
- 3253 Possibilities of the Computer-Controlled Detonation Spraying method: A chemistry viewpoint
D.V. DUDINA, I.S. BATRAEV, V.YU. ULIANITSKY & M.A. KORCHAGIN (Russian Federation)
- 3261 Characterization of Mg-substituted hydroxyapatite synthesized by wet chemical method
L. STIPNIECE, K. SALMA-ANCANE, N. BORODAJENKO, M. SOKOLOVA, D. JAKOVLEVS & L. BERZINA-CIMDINA (Latvia)
- 3269 Size-controlled high magnetization $CoFe_2O_4$ nanospheres and nanocubes using rapid one-pot sonochemical technique
M. ABBAS (South Korea, Egypt), B. PARVATHEESWARA RAO (India), MD. NAZRUL ISLAM, K.W. KIM (South Korea), S.M. NAGA (Egypt), M. TAKAHASHI (South Korea, Japan) & C. KIM (South Korea)
- 3277 Deposition of thin ultrafiltration membranes on commercial SiC microfiltration tubes
M. FACCIOITTI, V. BOFFA (Denmark), G. MAGNACCA (Italy), L.B. JØRGENSEN, P.K. KRISTENSEN, A. FARSI, K. KÖNIG, M.L. CHRISTENSEN & Y. YUE (Denmark)
- 3287 Fabrication and characterization of bioactive calcium silicate microspheres for drug delivery
K. LIN, D. ZHAI, N. ZHANG (China), N. KAWAZOE, G. CHEN (Japan) & J. CHANG (China)
- 3295 Eggshell-membrane-templated synthesis of hierarchically-ordered NiO – $Ce_{0.8}Gd_{0.2}O_{1.9}$ composite powders and their electrochemical performances as SOFC anodes
M.K. RATH, B.-H. CHOI, M.-J. JI & K.-T. LEE (Korea)
- 3305 Water purification and toxicity control of chlorophenols by 3D nanofiber membranes decorated with photocatalytic titania nanoparticles
S. AN, M.W. LEE, B.N. JOSHI, A. JO, J. JUNG & S.S. YOON (Republic of Korea)

- 3315 Chemical control on the size and properties of nano NiFe₂O₄ synthesized by sol-gel autocombustion method
T. PRABHAKARAN & J. HEMALATHA (India)
- 3325 Synthesis, characterization and electrochemical performances of MoO₂ and carbon co-coated LiFePO₄ cathode materials
S. LIU, H. YIN, H. WANG, J. HE & H. WANG (PR China)
- 3333 Sintering behavior and microwave dielectric properties of a new low-permittivity ceramic system
Ca(Mg_{1-x}Al_x)(Si_{1-x/2}Al_{x/2})₂O₆
H. WANG, D. LI, Q. YANG, R. LEI, H. MA & S. XU (PR China)
- 3341 Preparation and corrosion assessment of electrodeposited Ni-SiC composite thin films
C. MA, G. LIANG, Y. ZHU, H. MU & F. XIA (PR China)
- 3347 High/room temperature mechanical properties of 3Y-TZP/CNTs composites
M. TAHERI (Iran), M. MAZAHERI (Japan, Sweden), F. GOLESTANI-FARD, H. REZAIIE (Iran) & R. SCHALLER (Switzerland)
- 3353 A suitable chemical conversion route to synthesize ZnO/CdS core/shell heterostructures for photovoltaic applications
Y.F. ZHU, D.H. FAN, G.H. ZHOU, Y.B. LIN & L. LIU (China)
- 3361 Hydroxyapatite nanofibers fabricated through electrospinning and sol-gel process
J.-H. LEE & Y.-J. KIM (Republic of Korea)
- 3371 Luminescence of LiNbO₃ polycrystalline ceramics: Effect of Sc₂O₃ and Lu₂O₃ doping
A. TUMULURI & K.C.J. RAJU (India)
- 3379 Rietveld refinement of hydroxyapatite, tricalcium phosphate and biphasic materials prepared by solution combustion method
J. ZHAO, J. ZHAO, J. CHEN, X. WANG, Z. HAN & Y. LI (China)
- 3389 Fabrication and corrosion resistance of calcium phosphate glass-ceramic coated Mg alloy via a PEG assisted sol-gel method
X. WANG, S. CAI, T. LIU, M. REN, K. HUANG, R. ZHANG & H. ZHAO (People's Republic of China)
- 3399 Multi-color emission tunability and energy transfer studies of YAl₃(BO₃)₄:Eu³⁺/Tb³⁺ phosphors
G.V.L. REDDY, L.R. MOORTHY, T. CHENGAI AH (India) & B.C. JAMALAI AH (India, Portugal)
- 3411 Effects of BN/SiC dual-layer interphase on mechanical and dielectric properties of SiC_f/SiC composites
Y. MU, W. ZHOU, F. LUO & D. ZHU (China)
- 3419 Fabrication and characterization of shape anisotropy AlN/FeCoSiB magnetoelectric composite films
S. CHEN, X. YANG, J. OUYANG, G. LIN, F. JIN & B. TONG (China)
- 3425 Low temperature preparation and characterization of (Ga_{1-x}Zn_x)(N_{1-y}O_y) alloy nanostructures using electrospun nanofibers as source materials
X.H. LI, C.L. SHAO, D. WANG, X. ZHANG, P. ZHANG & Y.C. LIU (People's Republic of China)
- 3433 Preparation and powder properties of zinc phosphates with additives
H. ONODA, M. HARUKI & T. TOYAMA (Japan)
- 3439 Change in the coercivity of CoFe₂O₄ nano-particles verified to result from a change in their domain structure
Y. ZHANG, Z. YANG, B.-P. ZHU (PR China), W. YU (USA), S. CHEN, X.-F. YANG, F. JIN & J. OU-YANG (PR China)
- 3445 A simple annealing process to obtain highly transparent and conductive indium doped tin oxide for dye-sensitized solar cells
I.Y.Y. BU (Republic of China)

- 3453 Synthesis and investigation of Indium doping and surfactant on the morphological, optical and UV/Vis photocatalytic properties of ZnO nanostructure
M. REZAPOUR & N. TALEBIAN (Iran)
- 3461 Influence of Sb doping on the structural, optical, electrical and acetone sensing properties of In₂O₃ thin films
N.G. PRAMOD & S.N. PANDEY (India)
- 3469 TPR studies on NiO–CGO composites prepared by combustion synthesis
J. MARRERO-JEREZ, E. CHINARRO, B. MORENO, M.T. COLOMER, J.R. JURADO & P. NÚÑEZ (Spain)
- 3477 Change in microstructures and physical properties of ZrB₂–SiC ceramics hot-pressed with a variety of SiC sources
S. KIM, J.-M. CHAE, S.-M. LEE, Y.-S. OH, H.-T. KIM (Republic of Korea) & B.-K. JANG (Japan)
- 3485 Facile electrochemical synthesis of uniform β-Co(OH)₂ nanoplates for high performance supercapacitors
M. AGHAZADEH, S. DALVAND & M. HOSSEINIFARD (Iran)
- 3495 Highly efficient visible light-driven Ag/AgBr/ZnO composite photocatalyst for degrading Rhodamine B
L. SHI, L. LIANG, J. MA, Y. MENG, S. ZHONG, F. WANG & J. SUN (China)
- 3503 Oxidation protection of Ti–6Al–4V alloy using a novel glass–amorphous silica composite coating
Z. XIAO, F. TAN, W. WANG, F. SUN, H. LU, X. QIU, J. CHEN & X. QIAO (People's Republic of China)
- 3511 Electrochemical characteristics of LiNi_{0.7}Co_{0.3}O₂ synthesized at 850 °C from carbonates or oxides of Li, Ni, and Co
H. RIM (Republic of Korea), J. SONG & D.R. MUMM (USA)
- 3517 Effects of manufacturing conditions and heating on properties of electrochemically produced magnetite nano-powders
D. MAMULA-TARTALJA, LJ. VULIĆEVIĆ, I. RADISAVLJEVIĆ, M. MITRIĆ, V. ANDRIĆ, B. KUZMANOVIĆ, M. MEDIĆ & N. IVANOVIĆ (Serbia)
- 3527 Sol–gel synthesis of Co-doped LiMn₂O₄ with improved high-rate properties for high-temperature lithium batteries
Z. WANG, J. DU, Z. LI & Z. WU (China)
- 3533 Shear thinning behavior of aqueous alumina nanoparticle suspensions with saccharides
K.A. AMENT, M.R. KESSLER & M. AKINC (USA)
- 3543 Sintered and glazed glass-ceramics from natural and waste raw materials
M.A. BINHUSSAIN (Saudi Arabia), M. MARANGONI, E. BERNARDO (Italy) & P. COLOMBO (Italy, USA)
- 3553 Inorganic polymers as novel chromatographic stationary phase media
M. ALZEER, R.A. KEYZERS & K.J.D. MACKENZIE (New Zealand)
- 3561 Transformation-assisted consolidation of Y₂O₃:Eu³⁺ nanospheres as a concept to optical nanograined ceramics
R.P. YAVETSKIY, V.N. BAUMER, M.I. DANYLENKO, A.G. DOROSHENKO (Ukraine), I.N. OGORODNIKOV (Russia), I.A. PETRUSHA, A.V. TOLMACHEV & V.Z. TURKEVICH (Ukraine)
- 3571 Magnetic, ferromagnetic resonance and electrical transport study of Ni_{1-x}Tb_xFe₂O₄ spinel ferrites
M.A. KHAN, M.U. ISLAM, M.A. IQBAL, M. AHMAD, M.F. DIN, G. MURTAZA, I. AHMAD & M.F. WARSI (Pakistan)
- 3579 Effect of Ho³⁺ doping on the electric, dielectric, ferromagnetic properties and T_C of BiFeO₃ ceramics
G.L. SONG, G.J. MA, J. SU, T.X. WANG, H.Y. YANG & F.G. CHANG (China)
- 3589 Effect of Zr⁴⁺ content on the T_C range and dielectric and ferroelectric properties of BaZr_xTi_{1-x}O₃ ceramics prepared by microwave sintering
Z. SUN, Y. PU, Z. DONG, Y. HU, X. LIU & P. WANG (People's Republic of China)
- 3595 Sintering behavior and microwave dielectric properties of (1-x)Li₂TiO₃+xLiF ceramics prepared by enhanced sintering
B. JIANJIANG & D. YAOMIN (China)

- 3603 Influence of synthesis conditions on the properties of electrochemically synthesized BaTiO₃ nanoparticles
G.O.S. SANTOS, R.S. SILVA, L.P. COSTA, T.S.P. CELLET, A.F. RUBIRA, K.I.B. EGUILUZ & G.R. SALAZAR-BANDA (Brazil)
- 3611 Thermal shock behaviour of α : β -SiAlON–TiN composites
N.C. ACIKBAS, S. TEGMEN, S. OZCAN & G. ACIKBAS (Turkey)
- 3619 XRD cation distribution and magnetic properties of mesoporous Zn-substituted CuFe₂O₄
N. NAJMODDIN (Sweden, Iran), A. BEITOLLAHI (Iran), H. KAVAS (Turkey), S. MAJID MOHSENI (Sweden), H. REZAIE (Iran), J. AKERMAN & M.S. TOPRAK (Sweden)
- 3627 The tribological properties of bioceramic coatings produced on Ti6Al4V alloy by plasma electrolytic oxidation
S. DURDU & M. USTA (Turkey)
- 3637 Growth of flower-like ZnO on polyhedron CuO fabricated by a facile hydrothermal method on Cu substrate
R. SHI, P. YANG, S. ZHANG & X. DONG (PR China)
- 3647 Enhanced photocatalytic performance of graphene–ZnO nanoplatelet composite thin films prepared by electrostatic spray deposition
B.N. JOSHI, H. YOON, S.-H. NA, J.-Y. CHOI & S.S. YOON (Korea)
- 3655 Optimization of rheological properties of photopolymerizable alumina suspensions for ceramic microstereolithography
A. GOSWAMI, K. ANKIT, N. BALASHANMUGAM, A.M. UMARJI & G. MADRAS (India)
- 3667 Effects of Al₂O₃ and NbC additives on the microstructure and mechanical properties of TiB₂–TiC composite ceramic cutting tool materials
B. ZOU, C. HUANG, W. JI & S. LI (PR China)
- 3679 Enhancement of the compressive strength of highly porous Al₂O₃ foam through crack healing and improvement of the surface condition by dip-coating
R. AHMAD, J.-H. HA & I.-H. SONG (Republic of Korea)
- 3687 Effect of TiO₂ nanostructures on specific capacitance of Al₂O₃–TiO₂ composite film on etched aluminum foil formed by the sol–gel and anodizing
J. LIU, Q. GUO, M. YU & S. LI (China)
- 3693 Antimicrobial activity of Ag nanoclusters encapsulated in porous silica nanospheres
R. LU, W. ZOU, H. DU, J. WANG & S. ZHANG (China)
- 3699 Biomimetic synthesis and properties of cellular SiC
M. GORDIC, D. BUCEVAC, J. RUZIC, S. GAVRILOVIC, R. HERCIGONJA, M. STANKOVIC & B. MATOVIC (Serbia)
- 3707 Influence of copper ions on thermoluminescence characteristics of CaF₂–B₂O₃–P₂O₅ glass system
B.J.R.S. SWAMY, B. SANYAL, R. VIJAY, P. RAMESH BABU, D. KRISHNA RAO & N. VEERAIHAH (India)
- 3715 The radiation hardness of Pr:LuAG scintillating ceramics
Y. SHEN, X. FENG, Y. SHI (China), A. VEDDA (Italy), F. MORETTI (Italy, France), C. HU, S. LIU, Y. PAN, H. KOU & L. WU (China)
- 3721 Preparation of nanostructured YSZ granules by the spray drying method
M.R. LOGHMAN-ESTARKI (Islamic Republic of Iran, Iran), M. POURBAFRANY, R. SHOJA RAZAVI, H. EDRIS, S.R. BAKHSHI, M. ERFANMANESH, H. JAMALI, S.N. HOSSEINI & M. HAJIZADEH-OGHAZ (Iran)
- 3731 Microstructure and properties evaluation of TiO₂ ceramics with multi-oxides glass additions
B. HOUNG, S.-J.J. WU, S.H. LU & W.C. CHIEN (ROC)
- 3737 Ca(Zn_{1/3}Nb_{2/3-x}V_x)O₃ solid solution: Microstructural evolution, optimized sintering behavior and microwave dielectric properties
H. ZHOU, X. CHEN, L. FANG & W. WANG (China)

- 3743 Electrical conduction of dense Ga³⁺-doped SnP₂O₇-SnO₂ composite ceramic at intermediate temperatures
H. WANG, L. SUN, J. CHEN, C. LUO & S. FAN (China)
- 3747 Influence of synthesis conditions on the microstructure of Li-Ta-Ti-O microsheets by molten salt method
Z. ZHANG, Z. LIU & Y. LI (PR China)
- 3755 Enhanced piezoelectric coefficient of HfO₂-modified (K_{0.44}Na_{0.56})_{0.94}Li_{0.06}(Nb_{0.94}Sb_{0.06})O₃ lead-free ceramics
T. CHEN, H. WANG, T. ZHANG, G. WANG, J. ZHOU, J. ZHANG & Y. LIU (PR China)
- 3761 Forming of thin porcelain tiles: A comparison between tape casting and dry pressing
A.L. DA SILVA, A.M. BERNARDIN & D. HOTZA (Brazil)
- 3769 Enhanced decolorization of azo dye solution by cadmium sulfide/multi-walled carbon nanotubes/polymer composite in combination with hydrogen peroxide under simulated solar light irradiation
H.-Y. ZHU, J. YAO, R. JIANG, Y.-Q. FU, Y.-H. WU & G.-M. ZENG (PR China)
- 3779 Studies on the rheological properties of aluminium oxihydroxide (boehmite) colloidal suspension
A. ISLAM, E.-S. CHAN, Y. HIN TAUFIQ-YAP, S. HWA TEO & MD. ASHRAFUL HOQUE (Malaysia)
- 3785 Deposition of Al₂O₃ by resistive evaporation and thermal oxidation of Al to be applied as a transparent FET insulating layer
M.H. BORATTO & L.V. DE ANDRADE SCALVI (Brazil)
- 3793 Structural health monitoring capabilities in ceramic-carbon nanocomposites
F. INAM (United Kingdom), B.R. BHAT (India), T. VO (United Kingdom) & W.M. DAOUSH (Egypt)
- 3799 The influence of the TiO₂ particle size on the properties of Li₄Ti₅O₁₂ anode material for lithium-ion battery
D. WANG, X. WU, Y. ZHANG, J. WANG, P. YAN, C. ZHANG & D. HE (China)

Short Communications

- 3805 Hydroxyapatite-tricalcium phosphate-bioactive glass ternary composites
D. BELLUCCI, A. SOLA, L. LUSVARGHI & V. CANNILLO (Italy)
- 3809 Structural and electrical properties of double doped (Fe³⁺ and Ba²⁺) PZT electroceramics
B. PRAVEEN KUMAR, S.R. SANGAWAR & H.H. KUMAR (India)
- 3813 Effect of AlF₃ seed concentrations and calcination temperatures on the crystal growth of hexagonally shaped α-alumina powders
H.S. KIM, N.-K. PARK, T.J. LEE & M. KANG (Republic of Korea)
- 3819 The preparation and lithium mobility of zinc based NASICON-type solid electrolyte Li_{1+2x+2y}Al_xZn_yTi_{2-x-y}Si_xP_{3-x}O₁₂
X. XU, T. YANG, M. SHUI, Z. LU, S. GAO, J. SHU, W. ZHENG, L. CHENG, L. FENG & Y. REN (China)
- 3823 Determination of the maximum Ca content in La_{2-x}Ca_xZr₂O_{7±δ} by XRD intensity ratio
Z. TAO, G. HOU & N. XU (China)

Corrigendum

- 3827 Corrigendum to: "Improved oxidation resistance of thermoelectric skutterudites coated with composite glass" [Ceramics International 39 (2013) 4551-4557]
H. DONG, X. LI, X. HUANG, Y. ZHOU, W. JIANG & L. CHEN (China)