

Volume 20, Number 5, October 2019

CONTENTS

Research Articles

- | | | |
|---|---|-----|
| Dosimetric properties of Mg-doped Al ₂ O ₃ transparent ceramics | <i>Takumi Kato, Noriaki Kawaguchi, and Takayuki Yanagida</i> | 449 |
| Scintillation properties of Pr-doped Li ₂ O-GeO ₂ glasses | <i>Noriaki Kawaguchi and Takayuki Yanagida</i> | 455 |
| Improved luminescence properties of Na ₂ TiSiO ₅ phosphor by the Ge ⁴⁺ doping in the crystal lattice | <i>Young Ji Park, Sun Woog Kim, Kazuma Sugimoto, Takuya Hasegawa, Koudai Tanima, Kazuyoshi Uematsu, Kenji Toda and Mineo Sato</i> | 460 |
| Electrical characteristics of multi-walled carbon nanotube-polyethylene composites by catalyst and gas control | <i>Suyoung Park, Sun-Woo Choi and Changhyun Jin</i> | 464 |
| Efficiency of <i>gerAa</i> , <i>tupA</i> and <i>ca</i> transformation in <i>Bacillus subtilis</i> for self-healing of concrete cracks | <i>Hanxing He, Gefei Li, Jiantao Zhang, Jinlong Zhang, Mingyue Luo, Wenkai Hu, Yamin Lin, Ziyu Deng, Zhicheng Liu, Weizhao Chen and Xu Deng</i> | 470 |
| Microstructure and depolarization behavior of ZnO-added (Bi _{0.5} Na _{0.5}) _{0.94} Ba _{0.06} TiO ₃ lead-free ceramics sintered at different heating rates | <i>Han-li Lian and Rui-xue Cheng</i> | 479 |
| MIT characteristic of VO ₂ thin film deposited by ALD using vanadium oxytriisopropoxide precursor and H ₂ O reactant | <i>Changhee Shin, Namgwe Lee, Hyeongsu Choi, Hyunwoo Park, Chanwon Jung, Seokhwi Song, Hyunwoo Yuk, Youngjoon Kim, Jong-Woo Kim, Keunsik Kim, Youngtae Choi, Hyungtak Seo, and Hyeongtae Jeon</i> | 484 |
| Optimization of active area of proton exchange membrane fuel cell with better water management | <i>M. Karthikeyan, M. Muthukumar, P. Karthikeyan and C. Mathan</i> | 490 |
| Effect of coating thickness on contact fatigue and wear behavior of thermal barrier coatings | <i>Dong Heon Lee, Bin Jang, Chul Kim and Kee Sung Lee</i> | 499 |
| Influence of ball milling time on structural stability and distribution of CNTs in aluminium matrix composites | <i>R. Murugesan, M. Gopal and G. Murali</i> | 505 |
| Effects of rod-like BN on dielectric and mechanical properties of Si ₃ N ₄ porous composite prepared via gel-casting method | <i>M. Vaseghi, S. Baghshahi, M. Mashhadi and A. Nemati</i> | 512 |
| Morphological, structural, and optical properties of Co-doped ZnO NPs prepared by precipitation method | <i>S. Iwan, D. Dianisya, Riser Fahdiran, Isnaeni, Esmar Budi, Anggara Budi Susila and Erfan Handoko</i> | 518 |

Enhancement of compressive strength of lightweight geopolymers	<i>Yootaek Kim and Minjeong Kim</i>	522
Synthesis and analysis of the influence of Eu^{3+} on the structural, ferromagnetic, dielectric and conductive characteristics of $\text{Ni}_{0.4}\text{Zn}_{0.45}\text{Cu}_{0.15}\text{Fe}_{(2-x)}\text{Eu}_x\text{O}_4$ composites using conventional double sintering ceramic method	<i>I.N. Esha, Md. Al-Amin, F.T.Z. Toma, Enayet Hossain, M.N.I. Khan and Kazi Haniun Maria</i>	530
Synthesis of carbon nanotubes on template coated biomorphic composites	<i>Jung Gyu Park, Se Young Kim, In Sub Han, Hyun Sung Kim and Ik Jin Kim</i>	540
Improving ceramic monolith properties in binder jetting 3D printing using glass frit binders	<i>Jung-Hoon Choi, Kyu-Hong Hwang, Ung-Soo Kim, Ji-Hyeon Lee, Kwang-Bo Shim, Seung-Min Kang and Woo-Seok Cho</i>	547
Characterization of morphology and hardness of electroless Ni-P-PTFE composite coatings	<i>Young-Min Byoun, Sun-Kyo Seo, Jin-doo Yoon and Sang-Jo Na</i>	556
Effect of pyrolysis temperature on heat-generating behavior and morphology of SiC fiber mats	<i>Young Jun Joo, Kwang Youn Cho and Cheol Jin Kim</i>	563
Rainwater treatment using porous geopolymer modified with IGCC slag and Si sludge	<i>Yootaek Kim and Taesung Chae</i>	570