

Volume 24, Number 2, April 2023

## CONTENTS

## Research Articles

<b>Homogeneous distribution and quantitative evaluation of sintering additives in spray-dried silicon nitride granules</b>	<i>Kati Raju, Tae-Gyeong Kim and Hyun-Kwuon Lee</i>	211
<b>Comparative study of WC-Co-VC-Cr<sub>3</sub>C<sub>2</sub> cemented carbide by spark plasma sintering: densification, microstructure, and mechanical properties</b>	<i>Jeong-Han Lee, Jae-Cheol Park, Bum-Soon Park and Hyun-Kuk Park</i>	216
<b>Synthesis, characterization, and dielectric properties of SBN ferroelectric matrix doped with Eu<sub>2</sub>O<sub>3</sub></b>	<i>Anasser Imane, Zegzouti Abdelouahad, Noureddine Elbinna, Elaatmani Mohamed and Daoud Mohamed</i>	222
<b>Ultrashort pulse laser processing of ZrO<sub>2</sub> ceramics</b>	<i>Qibiao Yang, Yunhan You, Bojin Cheng, Lie Chen, Jian Cheng, Deyuan Lou, Yutao Wang and Dun Liu</i>	230
<b>The use of alternative raw material as a fluxing agent in hard porcelain bodies</b>	<i>H. Yildizay</i>	237
<b>Effect of nanoclay and nano rice bran powder in clay soil</b>	<i>M.R. Abisha and J. Prakash Arul Jose</i>	242
<b>Microstructure and mechanical behaviour of graphene reinforced friction stir welded joint of nickel-based superalloy Incoloy 925</b>	<i>Varalakshmi Penugonda, S. Sudhakar Babu and B. Vijaya Kumar</i>	250
<b>Development of high-strength pervious concrete with an emphasis on durability properties</b>	<i>Mycherla Chaitanya and G. Ramakrishna</i>	257
<b>Performance enhancement of concrete by using ceramic waste as a partial replacement for coarse aggregate</b>	<i>M. Harikaran, P. Kulanthaivel, A.R. Krishnaraja and P.C. Murugan</i>	266
<b>Experimental fabrication and analysis of AA1050-Cu of dissimilar fsw joint</b>	<i>A. Mahabubadsha and K. Anandavelu</i>	274
<b>A review on the failure behavior and countermeasures of thermal barrier coatings</b>	<i>Jiahang Liu, Zhe Lu, Yanwen Zhou, Jing Zhang and Guanlin Lyu</i>	285
<b>Preparation and performance of fly ash-loess based ceramic membrane supports: Effect of calcium carbonate addition and sintering temperature</b>	<i>Zhi Tong, Miaoyu Li, Dachuan Li, Kui Wu and Xiaoyu Yang</i>	308

<b>Effects of different carbon sources on the phase composition and microstructure of synthesized SiC-B<sub>4</sub>C composite powders</b>	<i>Yu Cao, Ruyi Deng, Jilin Hu, Jinxiu He, Dapeng Lei, Zhanjun Chen and Yangxi Peng</i>	321
<b>The influence mechanism of modified calcium bentonite on drying shrinkage of alkali-activated material</b>	<i>Li Wanqiang, Jiang Chunmeng and Li Shuangxi</i>	329
<b>Improved temperature stability of Ba<sub>0.5</sub>Sr<sub>0.5</sub>TiO<sub>3</sub>/ZnAl<sub>2</sub>O<sub>4</sub> ceramics by controlling microstructure with sintering behavior</b>	<i>Yuze Xue, Mingwei Zhang, Le Xin, Luchao Ren, Panpan Lv, Hang Zhan, Jing He and Jiwei Zhai</i>	336
<b>Effects of Zn content on microstructure and magnetic properties of MnZn ferrite</b>	<i>Yingming Zhang, Yujie Yang, Dongyang Chen, Congliang Chen and Yuting Meng</i>	342
<b>Experimental investigation on the dielectric and impedance properties of indium doped titanium dioxide ceramics</b>	<i>Liqi Cui, Ruifeng Niu, Depeng Wang and Weitian Wang</i>	348
<b>Comparative analysis of shear bond strength and quality of interface at novel bioactive material or Biodentine</b>	<i>Ivanka Dimitrova DMD, PhD and Desislava Tsanova-Tosheva, DMD</i>	353
<b>Analyst of nanofluids massic temperature quality assessment of artificial intelligence</b>	<i>Tawfiq Al-Mughanam and Vineet Tirth</i>	359
<b>Effect of ethylene glycol on the synthesis of crystalline boron carbide powder from condensed boric-acid-glycerin precursor</b>	<i>Li Yang, Li Sanxi, Wang Song, Tian Chengcheng and Otitoju Tunmise Ayode</i>	367
<b>Synthesis of Co:MgAl<sub>2</sub>O<sub>4</sub> nano-powders for saturable absorber</b>	<i>Wang Chuanyun, Yang Wei, Wang Zhiqi, Liu Bin, Li Shihua, Lu Tao, Li Xueren, Miao Weipeng and Luo Wei</i>	374
<b>Research progress on the interfacial phases of ceramic matrix composites</b>	<i>Weina Guo and Yantao Gao</i>	379
<b>Characterization study on concrete developed with fly ash, bottom ash, GGBS and construction debris</b>	<i>K. Sabarinathan and G. Arunkumar</i>	390
<b>Molecular dynamics simulation of nanoindentation influence of indenter velocity on 3C-SiC ceramics</b>	<i>Yu Dongling, Liu Dongliang, Yi Jiaqi, Zhou Jianzhen and Wu Nanxing</i>	397
<b>Characterization of mechanical and tribological behavior of r-GO and hBN reinforced AZ91 hybrid metal matrix composites: NSGA approach</b>	<i>T. Siva and K. Anandavelu</i>	406