

Volume 25, Number 2, April 2024

CONTENTS

Research Articles

Application of Taguchi based entropy weighted TOPSIS method for AZ 91D magnesium alloy friction stir welded joints with cerium addition at interface	<i>K. Rajesh Kumar, Kiran Kumar Dama and Vaddi Venkatasatyanarayana</i>	151
Mechanical characterisation of glass fibre reinforced with aluminium wire mesh under various analysis	<i>A. Manikandan and G.B. Bhaskar</i>	159
Impact of incorporating Gr particles in dielectric fluid on machining performance of AA7050/SiC/Al ₂ O ₃ hybrid composites	<i>A. Vishnu and M. Subramanian</i>	168
The influence of the nature and functionalization of the nanoparticulated fillers on the performances of the dental nanocomposite	<i>Ammar Ali Husseina, Mohammed Ali Mutar and Anton Ficai</i>	178
Investigation and parametric optimization with 97Mg+1.5Ag+1.5 LiAlO ₂ metal matrix composite in wire EDM performance using DFA technique	<i>T. Suresh, P. Suresh and M. Prabu</i>	192
Design optimization and development of SMC composite tray	<i>Cun-fei Wang, Zeng-fu Yang, Chengwang Shi, Xiaodong Li and Xu-feng Zhang</i>	202
Preparation and sinterability of submicron titanium carbide powders synthesized with phenolic resin as carbon source by carbothermal reduction	<i>Huijuan Qiu, Hongkang Wei, Shifeng Ren, Lingjun Sun, Jia Li, Zihan Wang, Lin Zhao, Chang-an Wang and Zhipeng Xie</i>	212
Unleashing the potential of ceramic discards as a green marvel in self-compacting concrete	<i>P. Subashree, V. Sampathkumar, S. Gowtham, Abeer A. AlObaid and Ismail Warad</i>	220
Effect of air flow rate on preparation of boron carbide by sol-gel low-temperature pyrolysis system	<i>Chengcheng Tian, Yang Li, Yuanxia Wang, Ying Shi, and Li-Zhi Liu</i>	228
Comparison of WC and SiO ₂ mill additives for abrasion resistance sodium borosilicate glass-ceramics coating	<i>Yasin Bozkurt Yilmaz, Oğuz Karaahmet and Buğra Çiçek</i>	234
KCl flux-assisted CaTiO ₃ : Pr ³⁺ red phosphors for temperature sensing	<i>Xin Liu, Xiuying Tian, Huiyan Sheng, Changyan Ji, Zhi Huang, Jin Wen, Hongxia Peng, Ling Zhu, Jing Li, Ping Liu, Yangxi Peng and Guowen Li</i>	242
Graphene-infused fabric gloves redefining thermal comfort and flexibility for athletes	<i>Haihua He and Shaofan Liu</i>	251

Mechanical performance of mono and hybrid synthetic fibers engineered cementitious composites with silica fume	<i>K. Yuvaraj, M. Sakthivel, M. Dhivakar Karthick, T. Pradeep, M. Veerapathran and S. Gowtham</i>	254
Effect of Pd addition on porosity properties of γ-Al₂O₃ as a catalyst support material	<i>Dwita Suastiyanti, Marlin Wijaya and Byakta Gana Pandita</i>	261
Study on crystallization kinetics and curing mechanism of the multiple heavy metals in slag glass-ceramics	<i>Yongsheng Du, Ying Wei, Zhicheng Zheng, Yuhang Guo, Hongxia Zhang, Leibo Deng, Hua Chen and Ming Zhao</i>	268
Examining the temperature at which magnesium titanates undergo phase formation in the presence of various sintering accelerators	<i>Ping-Cheng Chen, Chung-Long Pan, Kuei-Chih Lin and Chun-Hsu Shen</i>	278
Numerical simulation of methanol steam reforming based on Cu/ZnO/Al₂O₃ via micro-channel reactor for hydrogen production	<i>Weiqiang Kong, Qiuwan Shen, Jiadong Liao, Ziheng Jiang, Naibao Huang, Guogang Yang and Shian Li</i>	285
The dielectric and electrical modulus properties of Ba(Al_{0.5}Nb_{0.5})_xTi_{1-x}O₃ ceramics	<i>R.F. Niu, D.P. Wang, Z.H. Huang, and W.T. Wang</i>	300
Indigenous materials revolution: Synthesizing porcelain alumina ceramic insulators for sustainable electrical systems in Indonesia	<i>W. Garinas, A. Fauzi, H. Hidayaturrehman, Q.N. Madra, Subari, D.M. Nurjaman, W. Hidayat, Y. Sudyanto, N.V. Permatasari, Zulfahmi and Yurohman</i>	306
Structural and magnetic properties of Ce⁴⁺-substituted W-type strontium ferrites	<i>Jinsong Li, Xiubin Zhao and Ailin Xia</i>	316