

Volume 25, Number 6, December 2024

## CONTENTS

## Research Articles

<b>Influence of graphene reinforced inside yttria stabilized zirconia in terms of functional &amp; mechanical properties</b>	<i>P. Ganeshan, T. Rajesh, Bipin Kumar Singh and K. Raja</i>	931
<b>Electrochemical and structural properties of carbon-coated <math>\text{LiFe}_{0.2}\text{Mn}_{0.8}\text{PO}_4</math> cathode</b>	<i>Ung Jae Jeon, Tae-Yeon Shim, In-Ho Im, Kyong-Nam Kim and Seung-Hwan Lee</i>	937
<b>Experimental study of the mode II fracture toughness of frozen silty clay</b>	<i>Weihang Hua, Huimei Zhang, Yongtao Wang, Zengle Li and Shiguan Chen</i>	941
<b>Heat treatment process of steel for thermal insulation decoration</b>	<i>Jianwei Zhang, Linke Huang and Zhengfa Li</i>	954
<b>Study of the effect of the electric current density on the densification kinetics of the ultra-fine pure WC powder during spark plasma sintering</b>	<i>Zhenyao Fan, Yitao Zhang, Siyao Xie and Yafei Pan</i>	964
<b>Study on the vibration characteristics of full ceramic ball bearings under low temperature working conditions</b>	<i>Jian Sun, Junran Huang, Zhonghao Tian, ZhongXian Xia, Lu Wang and Yang Zhang</i>	975
<b>Experimental study on interfacial bonding performance of BTRC reinforced brick masonry</b>	<i>Peijian Yang and Wenling Tian</i>	985
<b>Encapsulation of combined bacterium in clay pellet and silica gel for the autogenous healing of concrete</b>	<i>DhivakarKarthick Mani, Gobi Subburaj Rampradheep, Sampathkumar Velusamy and Hema Sudhakar</i>	997
<b>Color stability of graphene oxide reinforced monolithic zirconia after hydrothermal aging</b>	<i>Nazmiye Şen</i>	1007
<b>Application of advanced synthesis and sintering technologies in the preparation of high-entropy ceramics: A review</b>	<i>Jiahang Liu, Zhe Lu, Yeon-Gil Jung, Jeong-Hun Son, Guanlin Lyu, YiYong Wang, Jing Zhang, Yanwen Zhou and Yan Li</i>	1013
<b>Enhanced photocatalytic activity of electrospun <math>\text{TiO}_2/\text{Ag}@\text{SiO}_2</math> inorganic composite nanofibers toward colored organic dye</b>	<i>Hyung Jun Lim, Gyu Il Jung, Da Young Kang and Sang Man Koo</i>	1042
<b>Structural and electrical behaviour studies in K doped <math>\text{BaSnO}_3</math> for IT-SOFC applications</b>	<i>De Wu and Chengkai Li</i>	1052

<b>Evaluation of uniaxial compressive strength, moisture content, and soundness in recycled-content ceramics for sustainable building materials</b>	<i>Hai Qiang Miao and Youyang Xin</i>	1056
<b>Graphene oxide-nanocellulose-cellulose acetate mixed matrix membrane as an efficient separator for carbon dioxide from natural gas</b>	<i>Mingyue Wang, Qiang Wei, Dong Li and Changwei Pang</i>	1060
<b>Machining of Ti6Al4V under Cu particle mixed dielectric medium using aluminium composite tool for production of electric motors components</b>	<i>G. Radhakrishnan, J. Jebeen Moses, M. Felix Xavier Muthu and Sudharsan Gunasekaran</i>	1069
<b>Electrochemical synthesis for a greener future: Insights from Kolbe electrolysis</b>	<i>Abhishek Saxena, Amith Abraham and Byoung-In Sang</i>	1087
<b>Effect of cracks and optimizations of high strength concrete beams with hybrid fibre reinforced polymer (HYFRP) laminates</b>	<i>P. Somiyadevi and V. Ramasamy</i>	1105
<b>Synthesis of nano-scale silicon powder by magnesio-thermic reduction for anodes in lithium-ion battery</b>	<i>Ju-Chan Kwon and Sang-Jin Lee</i>	1115
<b>Bio-concrete for the modern era: Paving the way for future construction</b>	<i>Abhishek Saxena, Amith Abraham and Byoung-In Sang</i>	1122
<b>Tribological behavior of AA7075 hybrid composites reinforced with Al<sub>2</sub>O<sub>3</sub> and TiO<sub>2</sub> particles</b>	<i>N.H. Agilandeswari, J. Jebeen Moses, M. Felix Xavier Muthu and T CH Anil Kumar</i>	1142