Table of Contents

Preface

Chapter 1: Functional Nanomaterials

Study the Effect of Sintering Temperature on the Structural and Optical Properties of Y ₂ O ₃ Nanoparticles Synthesized by Sol Gel Method A.S. Patil, A.V. Patil, C.G. Dighavkar, V.V. Deshmane and U.J. Tupe	3
Optical Studies of TiO ₂ Nanocomposites with Mg, Zn and Co K. Gokila, A.A. Banu, S.A. Fowziya, A. Shajahan, M.P. Palanivelu, M.I. Fathima and A. Ayeshamariam	19
Comparative Studies on the Effects of Li ⁺ and Bi ³⁺ Sensitisation in Enhancing the Emission Intensity of Y ₂ O ₃ :Eu ³⁺	
D. Pyngrope, A.I. Prasad and R. Pradhan Chapter 2: Environmentally Friendly Technologies, Biomass Processing and Applications	35
Study of the Thermal Pyrolysis of Packaging Materials by Derivatographic Methods M.A. Gurbanov, U.A. Guliyeva and E.V. Mirzazada	49
Novel <i>Blighia sapida</i> Leave-Derived Biochar (BSLB) for Highly Efficient Removal of Cefuroxime from Aqueous Media I.M. Babarinde, A.A. Adeyi, L.T. Popoola, I.I. Olateju and A. Giwa	61
Investigation of Effective Moisture Diffusivity and Activation Energy in Thin-Layer Drying of White Yam Slices (<i>Dioscorea rotundata</i>): A Study of Solar Drying and Pretreatment Techniques	
O.T. Aduewa, S.A. Oyerinde, P.A. Olalusi, S. Oladele and S.G. Omotoso	75
Physico-Thermal and Mechanical Characterization of Newbouldia laevis Fibres as Reinforcement for Sustainable Polymer Composites Applications P.O. Chikelu, O.W. Obot and W.A. Akpan	93
Chapter 3: Materials and Technologies in Construction	
Improvement of Geopolymer Concrete Using Synthetic Fibers C.F. Ahmad, M. Mehboob, M.A. Qureshi, W.B. Masood, M.A. Cheema and H.A. Farooq	109
Influence of Grain Size on the Surface Heave due to Sodium Chloride Internal Crystallization B. Diouf	117
Flexural Response of Ultra-High Performance Fiber Reinforced Concrete Beams with	11/
Varying Reinforcement Ratios Using Recycled Tire Steel Fibers L.Z. Tuleun and A.A. Adedeji	133