

Table of Contents

Chapter 1: Nanomaterials and Nanoprocessing

Study of Foaming Morphology in Microcellular Injection Molded TPU/MWCNT Composites under Gas Counter Pressure C.Y. Chung, Y.M. Huang and S.S. Lin	3
Fabrication of Hybrid Micro/Nano Structures on Titanium by Vector Femtosecond Laser Beam S.J. Jhu, Y.H. Liu and C.W. Cheng	11
The Effect of Calcination Temperature and Time on the Synthesis of Graphene nanoplatelets - TiO₂ Composites on Photocatalytic Performance D. Heltina, A. Gusti, M.A. Syahri, E. Evelyn, K. Komalasari, M.P. Sembiring and A. Amri	21
Manufacturing Method and Characteristics of Nanocopper Fiber Yarn J.D. Lee, J.X. Qiu, J.C. Hung, S.S. Lee, L.C. Su and W.H. Lee	31
Effect of Gas Flowrate on the Properties and Photocatalytic Activity of ZnO-Ag Nanocomposite Materials Prepared by Flame Pyrolysis J. Wardah, S. Winardi, S. Madhania, W. Widiyastuti, M.I.F. Rozy and K. Kusdianto	39

Chapter 2: Biomaterials

The Effect of Fibre Content on Mechanical Properties, Water Absorption and Morphology of Corn Husk Fibre Reinforced HDPE/POE Biocomposites W.Z. Wan Mohamed, M.E. Zulkifli, T.A. Tuan Daud, R. Mohd Taib, S.A. Latif, A. Baharum and N.E. Zakaria	51
Silver Nanoparticles Biosynthesis Using White Nest-Swiftlet Extract: A Sustainable Pathway for Nanomedicine Applications N.F.I.M. Jauhari, F.H. Zulkifli, H. Abd Hamid and F.S.J. Hussain	59
Synthesis of Magnesium Oxide Nanoparticles for Fabric Coating and its Antibacterial Activities H.M. Yusop, W.N. Wan Ismail, N.F. Zulkifli and S.N. Tajuddin	65

Chapter 3: Minerals Extraction

Optimized Ilmenite Leachate by Wet Mechanical Activation for the Synthesis of TiO₂ Nanoparticles through Sulfate Route F.A. Maulana, A.H. Yuwono, N. Sofyan, D. Dhaneswara, F. Septiningrum, E. Nurhidayah, A. Noviyanto and M. Dioktyanto	77
The Effect of Leaching Duration and Solid/Liquid Ratio on Lithium Extraction from Mica Schist Used Hydrochloric Acid Process N.C. Natasha, L.H. Lalasari and J.W. Soedarsono	89