Table of Contents

Preface

Chapter 1: Structural Metals and Processing Technologies

Zn Magnesium Alloys	
U.K. Singh, A.K. Dubey, S.K. Saini and S. Singh	3
Dry Turning of Mild Steel Using HSS Tool: Parametric Effect Evaluation of Material Removal Rate	
J. Negongo, K. Ferdinand, S.K. Saini and E. Angula	11
Parametric Effect and Optimization of Milling Operation of Mild Steel H. Petrus, V. Olivia, S.K. Saini and E. Angula	19
Surface Modification of Stainless Steel Using Radio-Frequency Generated Cold Plasma S. Margala, J. Nosal and N. Abramzon	25
Chapter 2: Properties and Processing Technologies of Polymers and Composites	
Dimensional Stability and Roundness Error Optimization of Injection Molded Cu/Polyamide 6	
A.A.K. Aji, B. Pramujati, W. Widyastuti, I.M.L. Batan and L. Nurahmi	39
Eco-Friendly High-Performance 3D Printer Filament from Polycarbonate Waste; How its Processability and Properties Y. Mardiyati, I.G.N.N. Nareswara, N.R. Lutfhyansyah and S. Steven	47
Rheological Investigation of Cu Alloy Feedstock for Metal Injection Moulding Using	4/
Polyamide(PA) Based Binder W. Widyastuti, F.A.M. Rochdiyati, R. Fajarin, V.M. Pratiwi and N. Safrida	57
Gamma Radiation Dose Variation of Hydroxyapatite/Ultra High Molecular Weight Polyethylene (UHMWPE) Nano Composite as Orthopedic Implant Material	65
F. Qulub and H.N. Maulida	65
Unveiling the Corrosion, Optoelectrical and Strengthening Effect of Recycled Snail Shell Particulate on Doped 75Al + 25SSP Alloy for Marine and Automotive Application O.S.I. Fayomi	73
Chapter 3: Functional and Special Materials	
Improved Performance of Hydrogen Sulfide Gas Sensor Based on Zinc Oxide Nanostructures Thermally Synthesized Doped with Silver Nanoparticles and Multi-Walled Carbon Nanotubes	
W.R. Saleh, K.M. Ibrahim and M.H. Al-Hakeem	87
Improving Electrochemical Performance of Biomass-Derived Carbon Electrodes by Post-Carbonization Chemical Activation M. Gupta, Y. Kumar, A. Kumar, Y. Kumar and P. Bocchetta	99
Influence of Cable Design on Stress State of Elastic Shell in Elastomer-Cable Rope	99
I. Belmas, D. Kolosov, O. Bilous, H. Tantsura and S. Onyshchenko	117