

Table of Contents

Preface

Chapter 1: Functional and Special Materials

Progress in Biomass-Based Electrospun Nanofibers in Bio-Medical Application S.N. Surip, M.Z.U.M. Faiz Liew, K.A. Sekak, W.N.R. Wan Jaafar and J.F. Fatriansyah	3
Study of the Photocatalytic Efficiencies and Characteristics of Cu Doped TiO₂ Coating on Reticulated Stainless Steel Mesh C.C. Yang, Y.C. Huang and Y.P. Tsai	9
Analysis of Post-Treatment Heating of Stretchable Piezoelectric Electrospun Nanofibers N. Shehata, R. Nair, K. Maree and M.A. Trabelsi	15
Development of Advanced Bio Thermoset Polymers from Sustainable Resources K. Khiari, A. Berrouane and M. Derradji	21
Analysis of the Thermomechanical Behavior of SiC/Si/TiSi₂ Cermets Manufactured with Waste Wood from Capirona and Capinuri Peruvian Species V.C. Bringas-Rodríguez, D.E. Camero-Carnero, C.K. Palomino-Ñaupa, G.P. Rodríguez-Guillén, D.L. Mayta-Ponce and F.A. Huamán-Mamani	27
A Study on NbN Thin Films as Resistive Films Prepared via Reactive Magnetron Sputtering Y.C. Lee, H. Yang and H.J. Shih	35

Chapter 2: Structural Metals

Tensile Properties, Strain Rate Sensitivity and Microstructural Analysis of SN100C Solder Alloys T.H. Gu, S.W. Jiang and W. Su	43
Material Characterisation and Mechanical Properties of WNbMoVAl_xCr_y (x=0.5, 1 y= 0.5, 1) Refractory High Entropy Alloys M. Biyiklioglu, K.G. Bayrak, E. Ayas, B. Baksan, H. Gokce, D. Agaogullari and M.L. Ovecoglu	51
A Comparative Study on Force Deformation Behaviour of Fe and Cu-Based SMA with NiTi SMA M.Y.M.H. Shaikh and S. Gur	59
Experimental Investigation of the Effect of Input Control Variables and Thermal Treatments on the Impact Toughness of EN-31 Steel K. Kamei, R. Davis and R.B.D. Pereira	65
Target Alloys of Iron-Based Materials through CALPHAD Method Y. Faqiri and T. Hassel	73

Chapter 3: Additive Manufacturing

Enhancing Surface Finish in FDM 3D Printing: The Impact of a Spherical Ironing Tool A. Montalti, G. Galiè and A. Liverani	87
Influence of Selected Printing Parameters on the Mechanical Behavior of FDM-Printed ABS Specimens Using Taguchi Method E. Biglete and R.R. Aquino	93