

Table of Contents

Preface

Chapter 1: Alloys and Steel

Fabrication and Characterization Study of Al₂₅Ni₂₅W₂₅Cr₂₀V₅ Refractory High Entropy Alloy through Mechanical Alloying D. Jeyasimman, H. Hajamoideen, B.H. Raghavan and M. Aswin	3
A Critical Review on Ultrasonic Assisted Electric Discharge Machining and Various Processes S. Kalakonda, P.S. Rao and R. Kant	11
Analysis of Corrosion Behavior on Rotary Friction Welded NiTiInol Alloy Subjected to Heat Treatment A. Shashikala, H. Pakkappa, R. Shadakshari, M. Muniraju and P.S. Dabeer	23
Effects of Alloying Elements on Mechanical Properties and Corrosion Resistance of Weathering Steel for Transmission Tower Q. Hou, L.J. Xing, M.Z. Zhao, J.T. Bai and F.H. Li	39

Chapter 2: Biobased Materials and Biomass Processing

Widely Targeted Metabolomics Analysis of Phenols in Two Types of Bamboo Leaves J.Q. Hei, J. Wu and X.F. Guo	53
Determination of Operating Conditions in the Synthesis of 1,3-Bis(p-Hydroxyphenyl)Urea from Urea and Para-Aminophenol R.H. Ananda, M. Fahrurrozi and H. Purnomo	71

Chapter 3: Waste Recycling and Pollution Removal

NaOH-Mediated Precipitation of Cu(OH)₂ from Recycled SIM Card Leachate L.U. Fadhilah, H.S.E.A. Gustiana and N. Zalfa	81
Mathematical Modeling of Combustion Characteristics of Agricultural Waste Briquettes O.B. Overmars, S. Kimutai and E. Mukubwa	87
Preparation and Application of Geopolymer Binders from Industrial Waste J.H. Ri, Y.B. Hong, S. Kim, Y. Kim, G.M. Go, Z.M. An and K. Ryu	109
Biochar Derived from Ketapang (<i>Terminalia catappa</i>) Leaves by Hydrothermal Process as an Adsorbent for the Removal of Hg from Aqueous Solution B.S.T. Sembodo, K. Isyatirrodhiyah and V. Salsabila	121
Kinetic Studies and Statistical Design of CO₂ Capture Process from Stream of Gas Mixture at Elevated Temperature Using Composites of Nanoparticles O.E. Ojong, O.D. Adoga, U.C. Anaba, S.S. Samuel, R.R. Ana and O.A. Osha	131