

Table of Contents

Preface

Chapter 1: Conventional and Advanced Structural Metals

Development and Characterization of Aluminum Bronze Alloy Bush Sleeve Using Horizontal Centrifugal Casting	3
M. Nadeem Azam and A. Wakeel	
Research on the Cavitation Resistance Testing of Friction Stir Welded Joint of Cu99 Cooper	13
C. Besalic, A.N. Luca, G.V. Mnerie, L. Botila, C. Ghera and R. Bădărău	
Considerations on the Behaviour and Resistance of Aluminium Alloys to Cavitation Erosion	21
I. Bordeasu, A.N. Luca, C. Ghera, C.L. Salcianu, D. Ostoia and L.M. Micu	
Structure and Properties of AlCrCo_(1-x)Fe_(1+x)Ni₂ High Entropy Alloy	35
S.Z. Abbas, R.A. Sandhu and F.A. Khalid	
Effect of Heat Treatment on Impact Transition Temperature of High Strength Low Alloy Steel (HSLA) Steel Rods	43
S. Akhtar	
A Review of Welding Techniques for Dissimilar Alloys: Titanium-Nickel System	49
Q.M. Yaseen, R.M. Gul, F.N. Khan and M.N. Baig	
Investigation of the Influence of Bonding Parameters on the Homogenous Diffusion Bonding of Copper	63
S. Khan, K. Khadija and M. Junaid	

Chapter 2: Advanced Materials and Technologies for Pollutant Removal

Self-Assembled Hierarchical Bi₂WO₆ Microspheres for Effective Photocatalytic Cr(VI) Reduction and H₂ Evolution	73
J.C. Sin, J.H. Tan, S.M. Lam and H.H. Zeng	
Hydrogel for Aqueous Methylene Blue Removal: Natural Rubber/ Poly(ethylene Glycol) Methyl Ether Methacrylate Semi-IPN	79
P. Thusanaphoom, T. Yingshataporn-a-nan, L. Sunthornwaree, P. Laohasathit, E. Martwong, J. Jitcharoen and N. Sukhawipat	
Bifunctional Fe₂WO₆/SrTiO₃ Composites with Eminent Antibacterial and Photocatalytic Studies	87
S.M. Lam, J.C. Sin, L. Zhao and H.H. Zeng	
Innovative Lead Removal: Natural Rubber Latex Foam/Coconut Shell-Based Activated Carbon Composite on Flexible Substrates	93
N. Sukhawipat, A. Limrueangamphon, C. Intachai, K. Aopoom, T. Navanuch, J. Upan, B. Sukkaneewat, Y. Wongnongwa and N. Sosa	
Enhancing Wastewater Treatment Efficiency through Photosynthetic Bacteria Activation	101
T. Chotchuangchutchaval, T. Inthakesorn, A. Ruemchatskul and S. Limrungruengrat	
An Experimental Investigation on Enhancing Nitrogen Oxides Reduction of Non-Thermal Plasma (NTP) Aftertreatment System with Silver-Base Catalyst with NTP Downstream SCR Catalyst Configuration	109
W. Temwutthikun, P. Promhuad, T. Iamcheerangkoon, B. Sawatmongkon, K. Theinnoi and S. Sittichompoo	