

Table of Contents

Preface

Inclusion of Tapered Tubes in Enhancing the Crash Performance of Automotive Frontal Structures	
Z. Ahmad, G. Nagel and D. Thambiratnam	1
Graphene Nanoribbon Based Gas Sensor	
M.J. Kiani, M.T. Ahmadi, E. Akbari, H. Karimi and F.K. Che Harun	7
Modelling of Steel Creep at High Temperatures Using an Implicit Creep Model	
N. Torić, A. Harapin and I. Boko	13
Study of the Secondary Phases in Inconel 718 Aged Superalloy Using Thermodynamics Modeling	
F.R. Caliari, N.M. Guimarães, D.A.P. Reis, A.A. Couto, C. de Moura Neto and K.C.G. Candioto	23
The Study of Microstructures and Tensile Properties of an <i>In Situ</i> A356-ZrB₂ Metal Matrix Composite	
H. Moosavian, M. Emamy, M.M. Arani and S. Mahboubi	29
Selection of ILs for Separation of Benzene from n-Hexane Using COSMO-RS. A Quantum Chemical Approach	
K.A. Kurnia, M.I. Abdul Mutalib, Z. Man and M.A. Bustam	35
A Comparison of Tensile Strength and Impact Energy of Austempered versus Step Quenched 4340 Ultra High Strength Steel	
S.M. Safi, S.Y.A. Brooghani, H. Amirabadi, K. Khalili and M.K.B. Givi	41
Influence of Oil Lubrication and Heat Treatment on Wear Resistance of Thermally Sprayed Molybdenum Coating	
M. Laribi, A.B. Vannes and D. Treheux	47
New Developed Formula to Calculate the Permittivity of Ferrite-Polymer Composite	
R. Al-Habashi and Z. Abbas	53
Adjusting the Influence Function Method for Subsidence Prediction	
A. Saeidi, O. Deck, M. Al Heib, T. Verdel and A. Rouleau	59
Effect of the Shear Force on the Failure of Spatial Concrete Framework Structures	
J. Radnić, A. Harapin, R. Markić, N. Grgić, M. Sunara and A. Buzov	67
Improvement of the Adhesive Wear Resistance and Mechanical Properties of Low-Carbon Steel by Solid Carbonization	
M.N.I. Dabo and M.S. Aldlemey	81
Effects of the SIMA Process on the Microstructure of 6061 Al Alloy Refined by Al-5Ti-1B	
R. Khorshidi, M. Emamy and M. Amuei	87
Effect of Titanium on Microstructure of Al2014 Alloy Prepared by SIMA Process	
M. Amuei, M. Emamy and R. Khorshidi	93
Tensile and Fatigue Properties of Fe-Cu-C Sintered Steels	
S. Surapunt and Y. Mutoh	99
Interactive Buckling Tests of Externally Pressurized Stiffened Bent Pipelines	
V. Hoseinzadeh and H. Showkati	103
Synthesis and Characterization of Zn Phtalocyanine (ZnPc) Using Maghnite-Zn as Clay Catalyst	
A. Belmokhtar, A. Yahiaoui, A. Hachemaoui and M. Belbachir	111
Extreme Modal Combinations for Pushover Analysis of RC Buildings	
A. Mihanović, B. Trogrlić and I. Balić	117
Finite Difference Approximations of Elasto-Plastic Bending Problems: Layered Approach and Error Estimates	
M.M. Davoudi and A. Öchsner	125