

Table of Contents

Preface, Committee

Experiment and Numerical Simulation on Non-Magnetic Prestressed Beam	1
S.Y. Jiang, W. Fei, W.L. Yao and X.Y. Li	
Experimental Investigation on the Fracture Mechanism of Two-Layer Steel/Aluminum Explosively Welded Plate	10
N. Zhou, H.T. Guo, J. Jiang and S.Z. Tang	
A Simple Microwave Route for the Synthesis of Tricalcium Phosphate (β-TCP) Powders for Bone Healing Applications	14
N. Iqbal and M.R. Abdul Kadir	
Mechanical Properties of Toughened Polyester Reinforced with Untreated and Treated Kenaf Hybird Carbon Composite	17
N.N. Bonnia, A.A. Redzuan, S.N. Surip and N.A. Hassan	
Mechanical Properties and Surface Integrity of Recycling Aluminum 6061 by Hot Extrusion Process	21
S.N. Ab Rahim and M.A. Lajis	
Study of Nano-Fe_3O_4 Addition on Magnetic and Mechanical Properties of HMDI-Based Polyurethane	25
M. Chalid, Masrudin and J.H. Mustafa	
Flexural & Impact Properties of PLA/Kenaf Fibers Bio-Composites	29
S.N. Surip, W.N.R. Wan Jaafar and N.N. Bonnia	
Effect of TiB_2 Content on Microstructure and Hardness of <i>In Situ</i> TiB_2 Reinforced High Zinc Content Al-Zn-Mg-Cu-Zr Composite Materials	34
H. Li, L.H. Chai, Z.Y. Chen, H.J. Wang and T.N. Jin	
Mechanical Properties of Carbon Nanotubes Reinforced AZ91 Composites by Enhanced Interfacial Bonding	38
G.Q. Han, W.B. Du, X. Du, Z.H. Wang, K. Liu and S.B. Li	
Unidirectional Kenaf Polypropylene Composites: Optimization Process by Two Level Full Factorial	42
D. THOLIBON, A.B. Sulong, N. Muhamad, N.F. Ismail, I. Tharazi and M.K.F. Md Radzi	
The Influence of Alkaline Treatment of Plant Fibres on Tensile Properties of Single Fibres and Composites	46
J. Chaishome and S. Rattanapaskorn	
Minimizing Property Variation in Natural Fiber Reinforcements for Green Composite Materials Applications	50
L.J.L. Diaz, S.M. Hagad and P.J.M. Santiago	
Unidirectional Abaca Fiber Reinforced Thermoplastic Starch Composite	56
J.Z. Vasquez and L.J.L. Diaz	
Performance Properties of Irradiated Recycled Polypropylene as a Compatibilizer in Recycled Polypropylene/Microcrystalline Cellulose Composites	62
N. Samat, N.H.M. Lazim, S.N.R. Motsidi and N.A. Hassan	
Biodegradable Corn Starch/Silica Nanocomposite Sheets for Food Packaging Applications	66
A.A. Dorado, E.K. Peralta, E.V. Carpio, E.P. Lozada and A.R. Elepaño	
Utilization of EAFC in Concrete Composite	72
M.F. Nuruddin, A. Fauzi, M.M. Abdul Wahab, N. Shafiq and A.B. Malkawi	
ZnO Nanoparticles for Anti-Corrosion Nanocoating of Carbon Steel	76
J.N. Hasnidawani, N.A. Hassan, H. Norita, N. Samat, N.N. Bonnia and S.N. Surip	
Optimizing Injection Parameters of Kenaf Filler Polypropylene Composite by Taguchi Method	81
M.K.F. Md Radzi, N. Muhamad, A.B. Sulong and Z. Razak	
Sintering Behaviour and Properties of Flyash-Doped Zirconia	85
S. Ramesh, W.J.K. Chew, H.C.A. Chee and C.Y. Tan	
Influence of Plasticizers on the Electrical Conductivity of Polyacrylonitrile (PAN)/Lithium-Montmorillonite (Li-MMT) Polymer Composite Electrolyte	89
M.I.K.N. Galvan and L.J.L. Diaz	

Philippine Kaolinite Clay as Reinforcing Filler for Rubber	
M.I.K.N. Galvan, M.L.H. Yorro, J.A. Villarias, J.M. Ambait and L.J.L. Diaz	94
Elastomeric Properties in Thermosetting Polymer Induced by Nanoclay Addition	
E.G.T. Suarnaba, I.A.C. Razonado, L.V. Madriaga and L.J.L. Diaz	99
High Purity Silica Nanoparticles from Geothermal Waste Brine as Reinforcing Filler in Rubber Composite Material	
J.A. Villarias, M.L.H. Yorro, M.I.K.N. Galvan and L.J.L. Diaz	104
Study on Radiation Properties of Polyurethane/Nano Zirconium Oxide Nanocomposite Coatings	
A.A. Azemati, H. Khorasanizadeh, B. Shirkavand Hadavand and G.A. Sheikhzadeh	109