

Table of Contents

Preface, Committee

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

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