

Table of Contents

Preface

Chapter 1: Polymer Engineering

Degradation of Bioplastic TPS Composite with Natural Fillers M.J. Tóth and A. Polyákné Kovács	3
Effects of HDPE-g-MAH on Mechanical and Thermal Properties of Recycled rPET/rHDPE Blends D. Gere	15
Investigation of Behavior of Aliphatic Polyketone under the Effects of Recycling and UV A. Polyákné Kovács, S. Hajjalilou, M. Tomin, Y.F. Minale, B. Gyore and T.J. Szabó	25
A Novel Air-Flow Electrospinning Setup for Controlling Fiber Distribution and Morphology K.K. Abdullah and K. Molnár	37
Feasibility of Utilizing a Thermoplastic Elastomer Seal Made from a Natural Rubber Blend with Recycled Polypropylene from Packaging Waste U. Sookyung, S. Matchawet and J. Johns	45
Fabrication of Polyethylene Glycol Composite Films Reinforced with Corn Husk-Derived Cellulose Nanocrystals (PEG-CNC) for Shape-Stabilized Phase Change Materials (SSPCMs) M.J.M. Borromeo, C.K.W. Chua, J.F. Lacosta, L.L. Mercado, S.N.O. Bendulo, K.A.S. Usman and Y.D.G. Edañol	57

Chapter 2: Surface Treatment, Protection and Inspection

Functionalization of MWCNTs and Graphite for Enhanced Composite Properties H. Lee, S. Lee, C. Kim, S. Lee, M. Shin, M. Choi, Y. Noh, S. Choi, J. Park and S. Koh	67
Oxidation Resistance Evaluation at High Temperature of Ni5Al and Fe13Cr Coatings on an AISI 321 Stainless Steel Preparing by Plasma Spray Method S.C. Agnes, D.H. Prajitno and R.H. Mulyani	75
Empirical Analysis and Mitigation Response of Synthesised Musa Paradisiaca Compounds Inhibitory Extract on AA6063 O.S.I. Fayomi	81
Optimizing Cluster Defect Identification in 300 mm Silicon Wafers: Impact of Spot Size and Size Threshold in Surface Scanning Inspection Systems H. Hu, X. Lai and M. Chen	97

Chapter 3: Composites for Microwave Absorption

Cobalt Titanate/Natural Rubber Composites: A Promising Microwave Absorber in X-Band M. Apit, Y.K. Krisnandi and W.A. Adi	105
Hard-Soft Magnetic Composite as Microwave Absorber in S-Band and C-Band Y.E. Gunanto, J. Setiawan, M.P. Izaak, W.A. Adi, A. Mulyawan, H. Sitompul and Y. Yunasfi	121
Radar Absorbption Performance in the K_a- Band Region of Fe₃O₄/SWCNT/TiO₂ Nanocomposite D.A. Putra, W. Agista, S.T.U.I. Subadra, S. Sunaryono, E. Handoko, M. Alaydrus, N.E. Khamsan and A. Taufiq	131

Chapter 4: Solid Electrolytes

Thermal Behaviour of Ta-Doped LATP NASICON-Type Compounds A.S. Sanda, M.I. Isah Kimpa, K.A. Matori, S. Mamat, S.O. Ibrahim and K.U. Isah	145
--	-----