

Table of Contents

Preface

Chapter 1: Properties and Processing Technologies of Structural Materials

Wear Evaluation Results from a Practical Trial of Laser-Coated Pump Parts in the Mineral Processing Industry

A. Purvee, G.C. Stehr, B. Baatar and D. Narmandakh 3

Effect of Air Cooling on Tool Wear in Drilling CFRP

K. Kesmanee, A. Chanpariyavatevong and W. Boongsood 13

A Numerical Study on Increasing the Cavity Temperature in Injection Molds

P.S. Minh and T.D. Thanh 19

Strip Casting of Al-4.7%Mg with Impurity Fe Using a Single Roll Caster with a Scraper

T. Haga, K. Oida, K. Yamazaki, H. Watari and S. Nishida 25

Chapter 2: Materials for Optoelectronics

Luminescence Properties of Eu-Doped BaLaAlO₄ Phosphors for Solid State Lighting

N.O. Etafo, C.E.R. Garcia, J.O. Uc, E. Viesca-Villanueva, M.A.G. Lobato and R.C. Torres-Ramírez 35

Chapter 3: Materials and Technologies for Environmental Engineering and Biomass Processing

Chitosan/PVA Nanofibrous Membranes as Air Filter Material

H. Sosiati, I. Suhandra, M. Ramadhan, F.A.K. Yuda, Yusmaniar and Y. Iriani 43

Preparation of Starch Nanocrystals with Antimicrobial Property

C.S. Emolaga, M.A. Paglicawan, U.P. Bigol, P.A.N. de Yro, J.A. Sy, B.A. Visaya and M.T.A. Bauca 53

Potential Assessment of Combustible Municipal Wastes in Morocco and their Ability to Produce Bio-Oil by Pyrolysis

S. El Kourdy, S. Aboudaoud, S. Abderafi and A. Cheddadi 59

Biodiesel Synthesis from Coconut Oil Using Calcined Scallop Shell Waste as the Heterogeneous Catalysts

A. Hidayat, S.S. Nadifah and A.T. Lidya 65

Co-Pyrolysis of Disposable Mask with Sugarcane Bagasse

A. Hidayat, D. Dimas and I. Sidiq 71

Chapter 4: Building Materials and Construction Technologies

Evaluation of a Green Roof for Heat Mitigation in a Building Located in a City with a Hot and Humid Climate

V.C. Cardoso, G.S.S. Louro, A.A. Stroke, I.M. Assumpção, G.V. Brigagão and B.B.F. da Costa 79

The Influence of Water Foaming and Ageing on the Properties of Bitumen 50/70

M.M. Iwański and M.V. Nemchinov 85

Chapter 5: Research and Designing of Machines and Mechanisms

Vibrational Analysis of Mini - Unmanned Aerial Vehicles due to Gun Recoil

N.R. Nelson and P.M. Siva 93

