

# Table of Contents

## Preface

<b>Preparation of Nanostructured Al-4.5wt%Mg Powder via Mechanical Alloying Process</b>	1
A. Shokuhfar, O. Ozhdelnia, A. Mostaed and E. Mostaed	
<b>Synthesis and Characterization of Al<sub>2</sub>O<sub>3</sub>-SiC Nano Composite by Sol-Gel Method and the Effect of TiO<sub>2</sub> on Sintering</b>	7
H.R. Rezaie, R. Mohammad-Rahimi, A. Nemati and M. Samadani	
<b>Synthesis of LiFePO<sub>4</sub>/C Nanocomposite and its Electrochemical Properties</b>	21
J.S. Lim, E.S. Choi, D.H. Kim, C.H. Choi and J.K. Kim	
<b>Advanced Fillers Enhancing Thermal and Mechanical Properties of Rubber Blends</b>	27
Z. Jonšta, P. Koštial, I. Ružiak, P. Jonšta, J. Jurčiová, Z. Jančíková, J. David and I. Kopal	
<b>Viscoelastic Properties of Multi Walled Carbon Nanotube/Epoxy Composites at the Different Nanotube Content</b>	33
A. Montazeri, A. Khavandi, J. Javadpour and A. Tcharkhtchi	
<b>Aluminum A356 Reinforcement by Carbide Nanoparticles</b>	41
K. Borodianskiy, M. Zinigrad and A. Gedanken	
<b>Numerical Investigation of the Overall Stiffness of Carbon Nanotube-Based Composite Materials</b>	47
S. Mavalizadeh, M. Rahmandoust and A. Öchsner	
<b>Numerical Method on Drug Release from Nanoparticles Using CFD</b>	61
S.A. Hussain, M.I. Rosly and N. Abdullah	
<b>EG/CNTs Nanofluids Engineering and Thermo-Rheological Characterization</b>	69
B.C. Lamas, A. Fonseca, F.A.M.M. Gonçalves, A.G.M. Ferreira, I.M.A. Fonseca, S. Kanagaraj, N. Martins and M.S.A. Oliveira	
<b>Numerical Study of Natural Convection in a Differentially-Heated Rectangular Cavity Filled with TiO<sub>2</sub>-Water Nanofluid</b>	75
G.A. Sheikhzadeh, A. Arefmanesh and M. Mahmoodi	
<b>Delafossite-CuAlO<sub>2</sub> Thin Films Prepared by Thermal Annealing</b>	81
H.Y. Chen and M.W. Tsai	
<b>Photoconductivity of Nanocomposite MEH-PPV: TiO<sub>2</sub> Thin Films</b>	87
M.S.P. Sarah, F.S. Zahid, M.Z. Musa, U.M. Noor, Z. Shaameri, A.S. Hamzah and M. Rusop	
<b>Synthesis and Characterizations of ZnO Nanoparticles for Application in Electromagnetic Detectors</b>	93
H.M. Zaid, N. Yahya, M. Niaz Akhtar and A.B.A. Sallehim	
<b>Nano-Based Optical Chemical Sensors</b>	99
A. Lobnik and S. Korent Urek	