

Table of Contents

Preface

Chapter 1: Physicochemical Properties of Materials

Influence of Electrochemically Exfoliated Graphite Addition on the Dielectric Properties of Epoxy/Montmorillonite Nanocomposites	
A. Radoń and D. Łukowiec	3
Study of the Optical Properties of Electrospun PAN/GO Nanocomposites	
T. Tański, W. Matysiak, W. Smok and Z. Marta	17
Mechanical and Tibiological Properties of SLM AlSi10Mg Alloy Subjected to ECAP	
P. Snopiński, A. Woźniak and M. Król	33
Influence of Post-Processing and the Type of Filling on Strength Properties of Elements Printed by Stereolithography Technology	
E. Wacławik-Macura and M. Król	51
Mechanism of Cavitation Wear of a Low-Friction Composite Coating CrN+WC/C Deposited on Ferritic-Pearlitic P265GH and Austenitic X2CrNi18-9 (304L) Steels	
T. Linek, T. Tański, W. Borek and A. Nowak	61
Evaluation of Physicochemical and Electrochemical Properties of Surface Modified Pure Titanium Grade II	
A. Woźniak and M. Adamiak	75
Effect of the Nanostructures Addition on TiO₂ Photoanode and DSSC Properties	
B. Hrapkowicz, K. Jędrzejczak, P. Jarka and T. Tański	89
Structure of N-Layer Film Obtained by Developed Blow Molding Process	
M. Bilewicz, T. Tański, T. Gliński and J. Viana	101

Chapter 2: Morphological and Microstructural Investigation of Materials

Effect of Al10Sr and TiB on the Microstructure and Solidification Behavior of AlMg5Si2Mn Alloy	
P. Snopiński	111
Influence of the ECAP Tool Channel Geometry on the Structure and Properties of Al-3%Mg Aluminium Alloy	
P. Snopiński	125
Microstructure and Hardness of AlMg3 Alloy Subjected to Ultrasonic Upsetting	
P. Snopiński	149
Microstructure and Properties of the Aluminum Alloyed with ZrO Powder Using Fiber Laser	
P. Smolarczyk, M. Krupiński and W. Pakieła	157
Laser Cladding Cermet Coatings on Niobium Substrate	
R. Szklarek, W. Pakieła, T. Tański and K. Sobczak	167
Chemical Composition of Alloys as Primary Material Property Influencing the Accuracy of Measurements Obtained in Energy-Dispersive X-Ray Spectroscopy (EDS), Wavelength-Dispersive X-Ray Spectroscopy (WDX) and X-Ray Fluorescence (XRF)	
D. Szyba	185