

Table of Contents

Preface

Chapter 1: Additive Manufacturing

Optimization of 3D Printing Parameters for H13 and Inconel Metal Powders: A Comprehensive Study on Achieving Superior Print Quality D.A. Predu, N.A. Sîrbu, N. Trihenea and R. Faur	3
Aly718 and H13 Alloy Mixed Powder Vs. Layers, 3D Printed by DED Method. Comparison G.V. Mnerie, D.A. Predu, N.A. Sîrbu, P. Tanović, L. Sikolya and A. Suci	21
Impact Properties of SLM Printed Specimens from AlSi10Mg According to Building Orientation G. Murariu, G. Ivanici and S.V. Galatanu	31
Effect of Infill Density and Outer Shell on Flexural Behavior of FFF Printed PLA Samples I. Miron, A.A. Medru and E. Linul	39
Effect of Printing Parameters on Mode I Fracture Toughness of FFF Printed PLA Samples R.P. Bercuci, M.V. Baban and E. Linul	47

Chapter 2: Corrosion Engineering

Local Corrosion Attack of Stainless Steels in the Food Industry G. Rožnovská, J. Kosňovská and Z. Kuboň	57
Dezincification as a Cause of Damage to Brass Fittings J. Kosňovská, G. Rožnovská and Z. Kuboň	63

Chapter 3: Functional and Special Materials

Preparation and Luminescence of Novel O-Phenanthroline-Acyl Amino Acid Rare Earth Praseodymium Complexes Z.H. Qiu, G. Naren, R. Meng, R. Liang and Z.Y. Chen	71
Design, Fabrication, and Characterization of Silicon Mach-Zehnder Interferometers with Varying Path Lengths S.A. Nomoev	81
Liquid Phase Exfoliation of MoS₂ Nanosheets in Aqueous IPA O. Erdenetuya, B. Odontuya, Y. Ganchimeg, D. Otgonbayar, G. Batdemberel, E.O. Gurbadam, S. Jargalan and G. Munkhsaikhan	89
Surface Properties of the Mechanical Exfoliated MoS₂ few Layers B. Odontuya, D. Otgonbayar, O. Erdenetuya, G. Batdemberel, E.O. Gurbadam, S. Jargalan and G. Munkhsaikhan	97
Synthesis and Characterization of Carbon Aerogel by Freeze-Drying Method J.Y. Li, T.N. Bao, Y.Y. Li, A. Bolag, X. Tian and T. Ojiyed	105
Characterization of Low- and High-Calcium Pond Ashes and their Applicability for the Preparation of Alkali-Activated Pastes J. Temuujin and U. Bayarzul	115