

Table of Contents

Preface

Committees

Full-Scale Numerical Simulation of Plasma-Sprayed Functionally Gradient Materials F.C. Wang, Q.B. Fan, L. Wang, Q.S. Wang and Z. Ma	1
A Study of the Structural, Mechanical and Tribological Properties of Ti-Al-N Coatings Post-Treated by Carbon Implantation P.W. Shum, Z.F. Zhou and K.Y. Li	7
Study on Photocatalytic Degradation of Electroless Ni-P-TiO₂ Composite Coating Y.C. Wu, Z.M. Zhang, X.M. Huang, C.L. Shan and Z.P. Lin	13
A Study on the Properties, Friction, Wear and Adhesion of HVOF Thermal Spray Coating of Micron Size Co-Alloy Powder T.Y. Cho, J.H. Yoon, K.O. Song, Y.K. Joo, J.Y. Cho, J.H. Kang, S.H. Zhang, H.G. Chun and S.C. Kwon	19
Wear and Cutting Performance of Microdrills Coated Hard Film Deposited Using Closed Field Unbalanced Magnetron Sputter Ion Plating M.D. Bao, X.B. Xu, J.W. He, H.L. Sun and D.G. Teer	25
Depletion Model of Aluminum in Bond Coat for Plasma-Sprayed Thermal Barrier Coatings C. Che, G.Q. Wu, H.Y. Qi, Z. Huang and X.G. Yang	31
Oxidation Resistance of Multicomponent CrTiAlN Hard Coatings at Elevated Temperatures P.L. Tam, Z.F. Zhou, P.W. Shum and K.Y. Li	37
Development of Spherical Iron-Based Composite Powder with Carried Alumina Abrasive Grains by Plasma Spray K. Hanada and H. Yamaguchi	43
Ceramic Coatings by Electrophoretic Deposition: Processing and Properties B. Baufeld, H.J. Rätzer-Scheibe and O. Van der Biest	47
Electroless Ni-Co-P Coatings on Sintered Nd-Fe-B Magnets with Improved Corrosion Resistance T.Y. Ma, H.G. Ying and M. Yan	53
Study on the Pretreatment Process for Nickel Coating on Microspheres Z.F. Liang, Y. Zhao and Y.X. Duan	57
Effect of Silicon Sol on Anodic Oxidation Film of Titanium Alloys H.C. Liu, L.Q. Zhu and W.P. Li	63
Performance of TC4 Titanium Alloys Coated with Different Sol H.C. Liu, L.Q. Zhu and W.P. Li	67