

Table of Contents

High-Entropy Alloys – A New Era of Exploitation J.W. Yeh, Y.L. Chen, S.J. Lin and S.K. Chen	1
Synthesis of Si₃N₄ from Na₂SiF₆ as a Solid Precursor: Thermodynamic Study A.L. Leal-Cruz and M.I. Pech-Canul	11
Thixotropic Behaviour of a Cu – Eutectic Sn-Pb Slurry C. Merizalde, J.M. Cabrera and J.M. Prado	17
Effect of Plastic Deformation on the Isothermal FCC/HCP Phase Transformation during Aging of Co-27Cr-5Mo-0.05C Alloy A. Mani-Medrano and A. Salinas-Rodríguez	23
Effect of Fast Annealing on Microstructure and Mechanical Properties of Non-Oriented Al-Si Low C Electrical Steels E. Gutiérrez C., A. Salinas-Rodríguez and E. Nava-Vázquez	29
In Vitro Bioactivity Assessment of Ceramics in the SiO₂–CaO–MgO System L.A. Bretado-Aragón, D.A. Cortés-Hernández, J.C. Escobedo-Bocardo, J.M. Almanza-Robles and J.I. Escalante G.	35
Self-Affine Quasi-Static Fracture of Soda-Lime Glass C. Guerra-Amaro, M. Hinojosa, E. Reyes-Melo and V. González	41
Thermal Analysis and Microstructure Comparison Between A356 Aluminum Alloy and A356/15%vol. SiC_p Cast Composite Modified with Strontium E. Trejo E., J.A. García-Hinojosa, M.K. Surappa and E. Rodríguez	47
WC / Stainless Steel Joints Produced by Direct Diffusion Bonding Using a Ni-Foil Interlayer J. Lemus-Ruiz, J.J. Ávila-Castillo and R. García-Estrada	53
Development of Instrumented Composite Cylinders H. Hernández-Moreno, F. Collombet, B. Douchin, P. Davies and J.L. González	59
Composite Coatings Elaborated by Plasma Spraying of Dry Coated Particles R. Cuenca-Alvarez, H. Ageorges and P. Fauchais	67
Prediction of Microstructure and Distribution of Solute in Al-Zn-Mg Non-Dilute Alloys J.L. Soto, B. Campillo and J.A. Juárez-Islas	73
Austenite-Ferrite Transformation in Hot Rolled Mn-Cr-Mo Dual Phase Steels A. López-Baltazar, A. Salinas-Rodríguez and E. Nava-Vázquez	79
Austenite-Ferrite Transformation in Non-Oriented Electrical Steels E. Díaz Barriga-Castro, A. Salinas-Rodríguez and E. Nava-Vázquez	85
Self-Affine Analysis of Fractures Surfaces of an Aluminum Alloy Using Fractographic Techniques M. Hinojosa, E.I. Morales and N. Mohamed	91
The Role of Ti Inoculation of Al-Zn-Si Coating Alloys on the Formation of Intermetallic Compounds by Interaction with Solid Steel F. García, A. Salinas-Rodríguez and E. Nava-Vázquez	97
Effect of Deformation Temperature on the Hot Ductility of Non-Oriented Electrical Steels E. García S., E. Treviño L. and A. Salinas-Rodríguez	103
Synthesis of Si₃N₄ from Na₂SiF₆ as a Solid Precursor: Microstructural Evolution A.L. Leal-Cruz and M.I. Pech-Canul	109
Microstructure and Mechanical Properties of Al/SiC_p Composites with Multimodal Size Distribution of Reinforcements M. Montoya-Dávila, M.A. Pech-Canul and M.I. Pech-Canul	115
Sintering + HIP of Ultrafine WC-Co Hardmetals A. Ordóñez, R. González and J.M. Sánchez	121
Biomimetic Coating on Zirconia Composites Induced by Chemical Treatment S. Ortega-Chavarría, D.A. Cortés-Hernández and A.A. Nogiwa-Valdez	127
Microstructural Mechanisms of Fatigue Failure in PA66 Fibers J.M. Herrera-Ramírez, A. Bunsell and P. Colombari	133
Degradation of Al/SiC_p Composites Processed with Fly Ash via Reactive Infiltration R. Escalera-Lozano, C.A. Gutiérrez-Chavarría, M.A. Pech-Canul and M.I. Pech-Canul	139

**On the Fluid Flow and Mixing Phenomena in Ladles Equipped with Impeller and Gas
Purging for Degassing of Al-Based Alloys**

M. Ramírez-Argáez, F. Contreras-Bustos and C. González-Rivera