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Editors: Hector A. Calderon, Armando Salinas Rodriguez and Heberto Balmori-Ramirez

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**MATERIALS RESEARCH SOCIETY
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Advanced Structural Materials—2010

Symposium held August 15–19, 2010, Cancún, Mexico

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CONTENTS

Preface ix

Materials Research Society Symposium Proceedings. x

Oxidation Products in Inconel Alloys 600 and 690 Under Hydrogenated Steam Environments and Their Role in Stress Corrosion Cracking. 1
Hugo F. Lopez

Mathematical Modeling of Impingement of an Air Jet in a Liquid Bath 11
J. Solórzano-López, R. Zenit,
and M.A. Ramírez-Argáez

Manufacturing of Hybrid Composites and Novel Methods to Synthesize Carbon Nanoparticles 21
Andres E. Fals, Julio Quintero,
and F.C. Robles Hernández

Effect of the Deposition Rate on Thin Films of CuZnAl Obtained by Thermal Evaporation 31
L. López-Pavón, E. López-Cuellar,
A. Torres-Castro, C. Ballesteros,
and C. José de Araújo

Development of an Algorithm for Random Packing of Multi-Sized Spherical Particles 39
H. de la Garza-Gutiérrez, G. Plascencia-Barrera,
and S.D. de la Torre

Development of a New Nickel-Base Superalloy for High Temperature Applications 49
Octavio Covarrubias

Stress Ratio Effect on Fatigue Behavior of Aircraft Aluminum Alloy 2024 T351 55
M. Benachour, A. Hadjoui, M. Benguediab,
and N. Benachour

**Influence of Tempering Temperature in Wear of AISI T15
HSS Tools Produced by HIP and Liquid Phase Vacuum
Sintering 61**
Emmanuel P.R. Lima, Maurício D.M. das Neves,
Sérgio Delijaicov, and Francisco A. Filho

**Effect of Hot Band Annealing on the Microstructure and
Mechanical Properties of Low Carbon Electrical Steels 67**
E. Gutiérrez-Castañeda and A. Salinas-Rodríguez

**Microstructural and Mechanical Characterization
of a TRIP-800 Steel Welded By Laser-CO₂ Process 73**
G.Y. Perez-Medina, P. Zambrano, H.F. López,
F.A. Reyes-Valdés, and V.H. López-Cortés

**Mechanism of Grain Growth During Annealing of Si-Al
Electrical Steel Strips Deformed in Tension 79**
J. Salinas B. and A. Salinas R.

**Evolution of Microstructure of 304 Stainless Steel Joined
by Brazing Process. 85**
F. García-Vázquez, I. Guzmán-Flores, A. Garza,
and J. Acevedo

**Fourier Thermal Analysis of Eutectic Al-Si Alloy
with Different Sr Content 91**
R. Aparicio, G. Barrera, G. Trapaga,
and C. Gonzalez

Synthesis of Nanostructured Metal (Fe, Al)-C₆₀ Composites 97
I.I. Santana García, V. Garibay Febles,
and H.A. Calderon

**Metal-Graphite Couples Synthesized by Means
of Mechanical Milling 103**
I. Estrada-Guel, C. Carreño-Gallardo,
R. Pérez-Bustamante, J.M. Herrera-Ramírez,
and R. Martínez-Sánchez

**Strengthening Phases in the Production of Al₂₀₂₄-CNTs
Composites by a Milling Process 111**
R. Pérez-Bustamante, F. Pérez-Bustamante,
J.M. Herrera-Ramírez, I. Estrada-Guel,
P. Amézaga-Madrid, M. Miki-Yoshida,
and R. Martínez-Sánchez

**Wear Properties of an In-Situ Processed
TiC-Reinforced Bronze 117**
R. Sanchez and H.F. Lopez

**Nanoceria Coatings and Their Role on the High Temperature
Stability of 316L Stainless Steels 123**
H. Mendoza-Del-Angel and H.F. Lopez

**Preparation and Mechanical Characterization
of a Polymer-Matrix Composite Reinforced with PET 129**
J. Elena Salazar-Nieto, Alejandro Altamirano-Torres,
Francisco Sandoval-Pérez, and Enrique Rocha-Rangel

Micromechanical Models of Structural Behavior of Concrete 135
Ilya Avdeev, Konstantin Sobolev, Adil Amirjanov,
and Andrew Hastert

**Performance of Cement Systems with Nano- SiO₂ Particles
Produced Using Sol-Gel Method 141**
Konstantin Sobolev, Ismael Flores,
Leticia M. Torres, Enrique L. Cuellar,
Pedro L. Valdez, and Elvira Zarazua

**Preparation and Mechanical Characterization of Composite
Material of Polymer-Matrix with Starch Reinforced
with Coconut Fibers 149**
Yaret G. Torres-Hernández,
Alejandro Altamirano-Torres,
Francisco Sandoval-Pérez,
and Enrique Rocha Rangel

**Magnetic Properties of Bulk Composite FeBSiM (M=Cr,Zr)
Alloys with High Microhardness 155**
S. Báez, I. Betancourt, M.E. Hernandez-Rojas,
and I.A. Figueroa

**Microstructure Characterization of Textured Nickel Using
Parameters of Extinction. 163**
A. Cadena Arenas, T. Kryshab, J. Palacios Gómez,
G. Gómez Gasga, A. De Ita de la Torre,
and A. Kryvko

**Mechanofusion Processing of Metal-Oxide Composite Powders
for Plasma Spraying 169**
Ricardo Cuenca-Alvarez,
Carmen Monterrubio-Badillo, Hélène Ageorges,
and Pierre Fauchais

Cambridge University Press
978-1-107-40676-6 - Materials Research Society Symposium Proceedings: Volume 1276:
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Frontmatter
[More information](#)

**Stress Concentration on Artificial Pitting Holes and Fatigue
Life for Aluminum Alloy 6061-T6, Undergoing Rotating
Bending Fatigue Tests 175**
 Victor H.M. Lemus, Gonzalo M.D. Almaraz,
 and J. Jesús V. Lopez

**Synthesis of La₄Ni₃O₁₀ Cathode Material (SOFC) by Sol-Gel
Process 181**
 Rene Fabian Cienfuegos, Sugeheidy Carranza,
 Leonardo Chávez, Laurie Jouanin, Guillaume Marie,
 and Moisés Hinojosa

**Alumina-Based Functional Materials Hardened with Al or Ti
and Al-Nitride or Ti-Nitride Dispersions. 187**
 José G. Miranda-Hernández,
 Elizabeth Refugio-García, Elizabeth Garfias-García,
 and Enrique Rocha-Rangel

Author Index 193

Subject Index 195

Cambridge University Press

978-1-107-40676-6 - Materials Research Society Symposium Proceedings: Volume 1276:
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Editors: Hector A. Calderon, Armando Salinas Rodriguez and Heberto Balmori-Ramirez
Frontmatter

[More information](#)

PREFACE

Symposium 4, “Advanced Structural Materials,” held August 15–19, 2010, in Cancún, Mexico, was part of the XIX International Congress on Materials Research organized jointly by the Mexican Materials Research Society (MRS Mexico) and the Materials Research Society (MRS). The symposium was devoted to fundamental and technological applications of structural materials, and continued the tradition of providing a forum for scientists from various backgrounds with a common interest in the development and use of structural materials to come together and share their findings and expertise.

The papers contained in this volume are a collection of invited and contributed papers. This year, the symposium was attended by participants from France, Japan, Mexico, Turkey, the United States and Spain. We are grateful to all of the referees who, by their comments and constructive criticism, helped to improve the final printed papers, and to all the authors who made additional efforts to prepare their manuscripts.

This symposium was the latest in a series held over the last 13 years with the objective of presenting an overview and the most recent investigations into advanced structural metallic, ceramic and composite materials. The topics include innovative processing, phase transformations, mechanical properties, oxidation resistance, modeling and the relationship between processing, microstructure, and mechanical behavior. Additionally, papers on industrial application and metrology are included.

The organizing committee gratefully acknowledges the enthusiastic cooperation of all symposium participants, as well as the kind acceptance of the Materials Research Society staff to publish these proceedings. The financial support of the Instituto Politécnico Nacional (Mexico) and the Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional is also acknowledged.

Hector A. Calderon
Armando Salinas Rodríguez
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J.J. Watkins, A. Saiani, R. Callens, J.H. Collier, A. Donald, W. Murphy, D.H. Gracias,
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