



2003 International Metallographic Contest Winners

Best In Show, Jacquet-Lucas Award

Effect of Homogenization Heat Treatment on Critical Pitting Temperature and Sigma Phase Formation in Super Duplex Stainless Steel

Rick Noecker
Lehigh University, Dept. Materials Science and Eng.
Whitaker Lab #5
Bethlehem, PA 18015

CLASS 1: Light Microscopy - Metals and Metal Alloys

1st Place

Three-Dimensional Metallographic Reconstruction of Solidification Microstructures in Stainless Steel Single Crystals

Lynn Boatner, Stan David and Allison Baldwin
Oak Ridge National Laboratory
Bethal Valley Road, MS-6056, Building 3150
Oak Ridge, TN 37831

2nd Place

Evidence of Static Recrystallized Grain Formation in Extrusion of Al-Mg-Si Alloys

William Van Gertruyden
Lehigh University
Dept. of Materials Science and Engineering
5 E. Packer Avenue
Bethlehem, PA 18015

3rd Place

none awarded

Honorable Mention

Egg-Type Core Microstructure of Immiscible Alloy Powders
C.P. Wang, X.J. Liu, I. Ohnuma, R. Kainuma and K. Ishida
Department of Materials Science, Graduate School of Engineering
Tohoku University
Aoba-yama 02, Sendia 980-8579, Japan

Honorable Mention

Metallography of Rhenium
Nancy Moore and Todd Leonhardt
Rhenium Alloys Inc.
1329 Taylor Street
P.O. Box 245
Elyria, OH 44035

CLASS 2: Light Microscopy - All Other Engineering Materials

1st Place

none awarded

2nd Place

none awarded

3rd Place

none awarded

Honorable Mention

Morphological Instability in an Sb-Doped Ge Single Crystal
Andrew Deal
University of Florida
Dept. of Materials Science & Engineering
100 Rhines Hall
P.O. Box 116400
Gainesville, FL 32611-6400

CLASS 3: Electron Microscopy - Transmission and Analytical

1st Place

none awarded

2nd Place

none awarded

3rd Place

none awarded

Honorable Mention

Phase Characterization of Nanofibers of PANI/PMMA Blends

Keyur Desai and Changmo Sung
University of Massachusetts, Lowell
Center for Advanced Materials
Dept. of Chemical & Nuclear Engineering

CLASS 4: Electron Microscopy - Scanning

1st Place

Electrospinning of Uniform, Beadless Polycarbonate Nanofibers

Nirupama Kattamuri
University of Massachusetts, Lowell
Department of Chemical & Nuclear Engineering
Center for Advanced Materials
Lowell, MA 01854

2nd Place

Micromechanical Characterization of GaSb Microbridges by SEM & FEM

M.Ospina and C. Sung of the Department of Chemical Engineering, Center for Advanced Materials
and
S. Vangala and W. D. Goodhue of the Department of Physics and Applied Physics
University of Massachusetts, Lowell

3rd Place

none awarded

Honorable Mention

Titanium Spider Web

Sesh Tamirisa
Ohio University
Department of Mechanical Engineering
Athens, OH 45701
and
Radhakrishna B. Bhat
UES, Inc.
4401 Dayton-Xenia Road
Dayton, OH 45432
and
Daniel B. Miracle

Air Force Research Laboratory
Materials and Manufacturing Directorate
AFRL/MLLMD
Wright-Patterson AFB, OH 45433-7817

CLASS 5: Unique, Unusual, and New Techniques in Microscopy

1st Place

Scanning Electron Microscopy of Petrified Wood Archeological Artifacts

Tim Casias, Fred Fraikor, Craig Simmons and Steve Kalasz
Colorado School of Mines
Golden, CO 80401

2nd Place

none awarded

3rd Place

none awarded

Honorable Mention

Development of Low Loss Grain Oriented Silicon Steel Sheets Using Very Thin Forsterite Film with Characteristic Morphology

Yukio Inokuti
JFE Steel Corp.
Steel Research Lab.
1, Kawasaki, Chuo
Chiba 260-0835 Japan

Honorable Mention

Tip Verifications of Atomic Force Microscopy Based on Polymer Sample

Jun S. Lee and Changmo Sung
Center for Advanced Materials
University of Massachusettes, Lowell

CLASS 6: Color Microscopy

1st Place

Effect of Homogenization Heat Treatment on Critical Pitting Temperature and Sigma Phase Formation in Super Duplex Stainless Steel

Rick Noecker
Lehigh University, Dept. Materials Science and Eng.
Whitaker Lab #5
Bethlehem, PA 18015, USA

2nd Place

none awarded

3rd Place

Phase Identification in HP50 Nb-Modified Steel

Azmi Abdul Wahab
University of Canterbury
Mechanical Engineering Department
Private Bag 4800
Christchurch, New Zealand

3rd Place

Fe-Rich Intermetallics in Al-Si Casting Alloy

Hamish R. McIntyre
University of Canterbury
Mechanical Engineering Department
Private Bag 4800
Christchurch, New Zealand

CLASS 7: Artistic Microscopy - Color Only

1st Place

As-Cast Weld Deposit of 409 Stainless Steel Joint

Brian Rose
ArvinMeritor
Columbus Technical Center
Materials Technology Lab
950 W 450 S, Bldg. 1
Columbus, ID 47201

2nd Place

**As-Cast Weld Deposit of 409 Stainless Steel Joint
Exhibiting Large Columnar Ferrite Grains**

Brian Rose
ArvinMeritor
Columbus Technical Center
Materials Technology Lab
950 W 450 S, Bldg. 1
Columbus, ID 47201

3rd Place

Austempered Ductile Iron

Janina M. Radzikowska

Foundry Research Institute
Zakopianska 73, 30-418 Krakow, Poland

Honorable Mention

Cementite Centurions
Janina M. Radzikowska
Foundry Research Institute
Zakopianska 73, 30-418 Krakow, Poland

CLASS 8: Artistic Microscopy - B&W Only

1st Place

none awarded

2nd Place

Martin Sighting
Brian Rose
ArvinMeritor
Columbus Technical Center
Materials Technology Lab
950 W 450 S, Bldg. 1
Columbus, ID 47201

2nd Place

Frozen in Time
Michael L. Morgan
ArvinMeritor
Columbus Technical Center
Materials Technology Lab
950 W 450 S, Bldg. 1,
Columbus, ID 47201

3rd Place

none awarded

CLASS 9: Undergraduate Student - Metals and Metal Alloys

1st Place and George L. Kehl Plaque

**Microstructural Development of an AISI 1080 to 316L Stainless Steel Functionally Graded Joint
Processed
with Laser Engineered Net Shaping (LENS)**
Jeff Farren
Lehigh University

Materials Science and Engineering
5 E. Packer Avenue
Bethlehem, PA 18015

2nd Place

Microstructural Analysis of a Cannonball of Unknown Origin

Kevin Rose
Lehigh University
Materials Science and Engineering
Whitaker Lab # 5
Bethlehem, PA 18015

3rd Place

"Fishing in the Hole" In-situ Focused Beam Liftout for Transmission Electron Microscopic Analysis

K.E. Rea, S.Seal, S.M. Schwarz and B. Kempshall
AMPAC and MMAE
University of Central Florida
4000 Central Florida Blvd., Engineering Bldg. 1, Room 381
Box 162455, Orlando, FL 32816-2455
and
S.O'dell, T. McKechnie and A. Agarwal
Plasma Processes Inc.
4914 Moores Mill Road
Huntsville, AL 35811 USA

CLASS 10: Undergraduate Student - All Other Engineering Materials

1st Place

none awarded

2nd Place

**Continuously Increasing Applied Voltage to the Electrospinning of Polycaprolactone (PCL)
for Bone Tissue Reconstruction**

Victoria Tran and Prof. Changmo Sung
Center for Advanced Materials
Department of Chemical and Nuclear Engineering
University of Massachusetts, Lowell
One University Avenue
Lowell, MA 01854

2nd Place

Effects of Polymer Concentration in Electrospinning of PANI/PMMA Blends

Kareem Reda, Keyur Desai and Changmo Sung
Center for Advanced Materials

Department of Chemical and Nuclear Engineering
University of Massachusetts, Lowell
One University Avenue
Lowell, MA 01854

CLASS 11: Digital Microscopy

1st Place

none awarded

2nd Place

none awarded

3rd Place

none awarded

CLASS 12: DuBose-Crouse Award

Metallographic Examination of Structural Steel From the World Trade Center

George VanderVoort
Buehler Limited
41 Waukegan Road
Lake Bluff, IL 60044, USA