2002 International Metallographic Contest Winners

Best In Show, Jacquet-Lucas Award

Cracking Susceptibility of AISI 1013 Steel - Copper Alloys

Rick Noecker
Lehigh University, Dept. Materials Science and Eng.
5 East Packer Ave., Bethlehem, PA 18015, USA

CLASS 1: Light Microscopy - Metals and Metal Alloys

1st Place
none awarded

2nd Place

Modification of Dendritic Microstructures in a Nickel Base Superalloy Weld
H. Longmire, S.S. Babu, O. Barabash, S.A. David and *H. Harada
Metals and Ceramics Division
Oak Ridge National Laboratory
* National Institute for Materials Science
Tsukuba, Japan

3rd Place

Nonequilibrium Solidification in Fe-C-Al-Mn Steel Welds
T. Geer, S.S. Babu, S.A. David and *J.W. Elmer
Metals and Ceramics Division
Oak Ridge National Laboratory
Oak Ridge, Tennessee, USA
* Lawrence Livermore National Laboratory
Livermore, California

Honorable Mention

Meteoric Widmanstatten Structure
Phyllis Z. Budka
2135 Morrow Ave.
Niskayuna, NY 12309, USA

CLASS 2: Light Microscopy - All Other Engineering Materials
1st Place

**Double Cemented Carbide - A Creative Composite Design Concept**
Xin Deng, B.R. Patterson (CONTACT PERSON), M.C. Koopman, K.K. Chawla, M. Estrada, Naiyu Sun
University of Alabama at Birmingham, Dept. Materials Science and Engineering
BEC 254, 1150 10th avenue, Birmingham AL, 35294-4461, USA
and
Z. Fang, G. Lockwood and A. Griffio
Smith International Inc.
16740 Hardy Street, P.O. Box 60068, Houston TX 77205-0068, USA

2nd Place

**none awarded**

3rd Place

**Here Comes the Sun**
Maude Larouche and Bernard Larouche*
Université Laval
Département de Mines et Métallurgie
Québec, QC, CANADA G1K 7P4
* Transmateria inc.
185 de Rotterdam
St-Augustin-de-Desmaures
QC, CANADA G3A 2K2

3rd Place

**Planetary Blue Sky**
Bernard Larouche and *Maude Larouche
Transmateria inc.
185 de Rotterdam
St-Augustin-de-Desmaures
QC, CANADA G3A 2K2
* Université Laval
Département de Mines et Métallurgie
Québec, QC, CANADA G1K 7P4

**CLASS 3: Electron Microscopy - Transmission and Analytical**

1st Place

**TEM Observation of Au and Ir Nano-particles on TiO2 Single Crystal**
Tomoki AKITA, Mitsutaka OKUMURA, Koji TANAKA, Susumu TSUBOTA and Masatake HARUTA
National Institute of Advanced Industrial Science and Technology (AIST)
Midorigaoka 1-8-31, Ikeda, Osaka 563-8577, Japan

2nd Place
Electrospun Polycarbonate (PC) Fibers as a Template for Dye-Sensitized Nanocrystalline TiO2 Solar Cells
Jamila Shawon, Christopher Drew and Changmo Sung (co-author and advisor)
201 Riverside St.
Center for Advanced Materials
Olney Hall OG02
University of Massachusetts Lowell
Lowell, MA 01854, USA

3rd Place

Microstructure of a High Strength Nanocrystalline Mg9Zn1Y2 Alloy Studied by Atomic-resolution Z-Contrast STEM
Eiji Abe, Y. Kawamura, M. Matsushita and A. Inoue
National Institute for Materials Science
1-2-1 Sengen, Tsukuba 305-0047, Japan

CLASS 4: Electron Microscopy - Scanning

1st Place

Solvent Mixtures (THF & DMF) and Electrostatic Voltage Effect on Bead Formation during Electrospinning of Polycarbonate (PO) Fibers
Jamila Shawon and Changmo Sung (as co-author and advisor)
201 Riverside St.
Center for Advanced Materials
Olney Hall OG02
University of Massachusetts Lowell
Lowell, MA 01854, USA

2nd Place

The Carbides and Borides in a Ni-base Superalloy
Boncina Tonica
University of Maribor
Faculty of Mechanical Engineering, Smetanova 17, SI-2000 Maribor, SLOVENIA

3rd Place

Development of Polycaprolactone/Hydroxyapatite Scaffolding for the Re-Growth of Bone Tissue
Stephen Iadarola
University of Massachusetts Lowell
Department of Chemical and Nuclear Engineering
Center for Advanced Materials
1 University Avenue, Lowell, MA 01854 USA

Honorable Mention
Thin Films with Tailored Nano-morphology
*Motofumi Suzuki and Yasunori Taga
Toyota Central R&D Laboratories
Nagakute, Aichi 480-1192, Japan
*Present affiliation:
Dept. of Engn Physics and Mechanics, Graduate school of Engineering
Kyoto University, Kyoto 606-8501, Japan

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

1st Place

Complex Ceramic Sample Preparation for “Charge-free” Electron Beam Analysis
Surasak Wannaparhun, Sudipta Seal, Zia Ur Rahman and Kirk Scammon
Advanced Materials Processing and Analysis Center (AMPAC) and
Mechanical, Materials, Aerospace Engineering Department
College of Engineering
University of Central Florida
Orlando, Eng.381, 4000 Central Florida Blvd, Orlando, FL 32816, USA

2nd Place

Improved Magnesium Metallography
Alexandre Maltais
Université Laval
Dept. of Mining, Metallurgical and Materials Engineering
Quebec, Canada G1K 7P4

3rd Place

Effects of Liquid Phase Chemistry in PMN-35PT Ceramic
Ed Gorzkowski and Masashi Watanabe
Lehigh University
5 East Packer Ave., Bethlehem, PA 18015, USA

Honorable Mention

AFM Characterization of Nano-Scale GaSb Surface Oxide Modification Using Gas Cluster Ion Beam Processing
Xianglin Li, [Changmo Sung and William Goodhue as advisors]
201 Riverside St.
Center for Advanced Materials
Olney Hall OG2
University of Massachusetts Lowell
Lowell, MA 01854 USA

CLASS 6: Color Microscopy

1st Place
Cracking Susceptibility of AISI 1013 Steel - Copper Alloys
Rick Noecker
Lehigh University, Dept. Materials Science and Eng.
5 East Packer Ave., Bethlehem, PA 18015, USA

2nd Place

**none awarded**

3rd Place

Si Microsegregation in Nodular Cast Iron
Janina M. Radzikowska
Foundry Research Institute
Zakopianska 73, 30-418 Krakow, Poland

3rd Place

Imilac Stony-Iron Meteorite (Pallasite) - Olivine “Windows” Provide Unique Insight into Pallasite Formation
Phyllis Z. Budka
2135 Morrow Ave.
Niskayuna, NY 12309
USA

CLASS 7: Artistic Microscopy - Color Only

1st Place

Microstructure of a Uranium Nitride Fuel Pellet
Ramiro A. Pereyra
Los Alamos National Laboratory
Mail stop G721, PO BOX 1663, Los Alamos, NM 87545, USA

2nd Place

Austempered Ductile Iron
Janina M. Radzikowska
Foundry Research Institute
Zakopianska 73, 30-418 Krakow, Poland

3rd Place

Ledeburite in Nodular Cast Iron
Janina M. Radzikowska
Foundry Research Institute
Zakopianska 73, 30-418 Krakow, Poland

Honorable Mention
Color Metallography of TMS-75 Nickel Base Superalloy Welds  
H. Longmire, T. Geer and S.S. Babu  
Metals and Ceramics Division  
Oak Ridge National Laboratory  
Oak Ridge, Tennessee, USA  

Honorable Mention  

Microstructure in the Vicinity of Oxide Layer  
*Miladin Radovic and Michel Barsoum  
Drexel University, Dept. of Materials Engineering  
32nd and Chestnut str., Philadelphia, PA 19104, USA  
* Now at: ORNL, 1 Bethel Valley Rd. M.S. 6069  
Oak Ridge, TN 37831-6069 USA  

CLASS 8: Artistic Microscopy - B&W Only  

1st Place  

Shark and Lionfish  
Faramarz Zarandi and Steve Yue  
McGill University, Department of metals and materials engineering  
3610 University, M.H. Wong Building, Montréal, Québec, H3A 2B2, Canada  

2nd Place  

Orchid  
Malgorzata Warmuzek  
Foundry Research Institute  
Zakopianska 73, 30-418 Krakow, Poland  

2nd Place  

Decoration of Thermally Etched Surfaces in an Alumina-Zirconia Composite  
Paul Sheedy  
Materials Research Center, Lehigh University  
5 East Packer Ave., Bethlehem, PA 18015, USA  

3rd Place  

Winter  
Elena Saez  
Alcan International Limited  
Kingston Research and Development Centre  
Box 8400, Kingston, Ontario  
Canada K7L 5L9  

CLASS 9: Undergraduate Student - Metals and Metal Alloys
1st Place

Flourine Induced Corrosion in Micro-D Connectors
Jeannie Y. Chan
University of California, Berkeley
2601 Channing Way, Apt.#310
Berkeley, CA 94704, USA

2nd Place

Failure of a Field-Programmable Gate Array Due to Kirkendall-Like Voids
Hayley Han Li
University of California, Berkeley
2732 Channing Way
Berkeley, CA 94704, USA

2nd Place

Porous Nickel Fiber Composites
Martin Sims
University of Alabama at Birmingham
Dept. of Materials Science and Engineering
BEC 254
1530 Third Ave. South
Birmingham, AL 35294-4461, USA

CLASS 10: Undergraduate Student - All Other Engineering Materials

1st Place

none awarded

2nd Place

SEM/EDXS Analysis of Ancient Peruvian Cotton Fibers
Michelle Kearns, *Changmo Sung (co-author), *Bongwoo Kang and ** Dr Irene Good
Center for Advanced Materials
201 Riverside St, Olney Hall OG2
University of Massachusetts Lowell
Lowell, MA 01854 USA
* Center for Advanced Materials, Chemical and Nuclear Engineering Department
University of Massachusetts Lowell, Lowell MA 01854 USA
** Peabody Museum of Archeology and Ethnology, Harvard University
11 Divinity Avenue, Cambridge, MA 02138, USA

3rd Place

none awarded
CLASS 11: Digital Microscopy

1st Place

Cocoa Butter Cosmos
Jerrold Litwinenko
University of Guelph
Department of Food Science
Guelph, ON Canada N1G 2W1

2nd Place

none awarded

3rd Place

none awarded

CLASS 12: DuBose-Crouse Award

Metallographic Study of a Roman Nail
George VanderVoort
Buehler Limited
41 Waukegan Road
Lake Bluff, IL 60044, USA