



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

Meteoritic Widmanstätten 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. Griffo
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