



2010 International Metallographic Contest Winners

Best in Show - Jacquet-Lucas Award

Identification of Secondary Phases in a Ti-Mo Alloy

Christopher Roberts
Carpenter Technology, Corp.
Reading, PA
and
Hendrik Colijn
The Ohio State University
Campus Electron Optics Facility
Columbus, OH

Class 1 Light Microscopy - Metal and Metal Alloys Only - sponsored by Struers, Inc.

First Place

None awarded

Second Place

Graphite Formation on Surface of Low Carbon Steel Sheet After Annealing

Dr. Yukio Inokuti
Steel Research Laboratory OB
JFE Steel Corp
Japan

Honorable Mention

Revealing Phosphorus in Ferrite Matrix of Nodular Cast Iron

Wiwik Purwadi, Dipl. Ing
Politeknik Manufaktur Bandung
Indonesia

Honorable Mention

Ti6Al4V Etched With Modified Weck's Reagent

Lukasz Boron
Foundry Research Institute
Krakow, Poland

Honorable Mention

Ni-Cr Alloy Etched With Aqua Regia

Lukasz Boron
Foundry Research Institute
Krakow, Poland

Class 2 - All Other Materials - sponsored by Allied High Tech Products

No entries

Class 3 Electron Microscopy - Transmission and Analytical

First Place

Identification of Secondary Phases in a Ti-Mo Alloy

Christopher Roberts
Carpenter Technology, Corp.
Reading, PA
and
Hendrik Colijn
The Ohio State University
Campus Electron Optics Facility
Columbus, OH

Second Place

**Structure Refinement Using Electron Diffraction from Nanomaterials - an
Extension of the Electron Diffraction Usage in Metallurgy**

Dr. Zhiping Luo
Texas A&M University
Microscopy and Imaging Center
College Station, TX

Third Place

**Direct Observation of Ordered Vacancies in Re₄Si₇ by Spherical Aberration
Corrected STEM**

Shunta Harada, Katsushi Tanaka, Norihiko L. Okamoto, Kyosuke Kishida, Haruyuki Inui
Kyoto University
Japan

and
Norikai Endo, Eiji Okunishi
JEOL Ltd.
Tokyo, Japan

Honorable Mention

**Formation of MnSe or MnS Precipitates at Near-Surface of Grain Oriented Silicon
Steel Sheets**

Dr. Yukio Inokuti
JFE Steel Corp
Chiba, Japan

Class 4 Electron Microscopy Scanning

First Place

Scanning Electron Microscopy of Selectively Etched Nickel Super Alloys

Jeff Rodelas, Boian Alexandrox, and Peggy Kittila
The Ohio State University
Columbus, OH

Second Place

Curved Graphite Layer on Nickel Substrate

Shaahin Amini, Haamun Kalaantari, Reza Abbaschian
University of California, Riverside
Department of Mechanical Engineering
Riverside, CA

Third Place

None awarded

Honorable Mention

**Variations in Contrast of SEM Images for GOI Thin Film Fabricated by RMG
Method**

K. Yokomizo, M. Itakura, M. Nishida, Dr. M. Itakura
Kyushu University
Kasuga, Japan
and
S. Tachibana
SII Nano Technology Inc.
Yokohama Demonstration Laboratory
Yokohama, Japan

Honorable Mention

Plasticity in Steel Micro-pillars

Siddhartha Pathak
EMPA
Thun, Switzerland

Class 5 Color Microscopy

No entries

**Class 6 The Dubose-Crouse Award for Unique, Unusual, and New Techniques in
Microscopy - sponsored by Metallurgical Supply Company**

First Place

Ultraviolet Laser Assisted Atom Probe Analysis of Bulk Nano-composite Ceramic

Y.M Chen
University of Tsukuba
Japan
and
T. Ohkubo, K Morita, K. Hono
National Institute for Materials Science
Japan

Second Place

**Unique Magnetic Domain Structure in Iron Meteorite Induced by the Presence of
L1₀-FeNi**

Masato Kotsugi PhD
Japan Synchrotron Radiation Research Institute
Sayo, Japan
and
Chiharu Mitsumata (Prof.)
Tohoku University
Japan

Third Place

Low-Angle Sectioning Technique for Analysis of Dissimilar Weld Interfaces

Jeffrey W. Sowards
NIST
Materials Reliability Division
Boulder, CO
and
Boian T. Alexandrov and John C. Lippold

The Ohio State University
Columbus, OH

Honorable Mention

A Statistical Method to Quantify the Microstructure Homogeneity - an Answer to the Simple Question Regarding the Homogeneity Degree

Dr. Zhiping Luo
Texas A&M University
College Station, TX

Class 7 Undergraduate Student Entries - Metal and Metal Alloys Only - sponsored by Precision Surfaces International

First Place

(there was a tie for first, so two were awarded)

Metallographic Examination of an Endoprosthetic Knee

Daniel Grande, Nickolas Greybush, Bryan Hernandez, and Kiely Ford
Lehigh University
Bethlehem, PA

First Place

(there was a tie for first, so two were awarded)

Metallographic Analysis of a Trumpet Valve

Paul Sihelnik, Anthony Spizzirri, MariAnne Sullivan, Ukrit Thamma
Lehigh University
Bethlehem, PA

Second Place

None awarded

Third Place

Metallographic Investigation of Audio Connector

Austin Baker, Tiffany Chen, Chris Chew, Jacob Bumgardner
Lehigh University
Bethlehem, PA

Honorable Mention

Magnetic Field-Induced Alignment of Hexagonal Platelets in a Mg_{0.97}Sb_{0.03} Alloy

Thomas Ott, Jason Cooley, Tim Tucker

Los Alamos National Laboratory
Los Alamos, NM

Class 8 Undergraduate Student Entries - All Other Materials

No Entries

Class 9 Artistic Microscopy - Black and White Only

First Place

Flowers (SEM)

NT Saenz, JE Coleman, Todd Schaefer
PNNL
Richland, WA

Second Place

Schwarzwald

Mathilde Bonneborgne
CEA Centre de Marcoule
France

Third Place

2010 World Cup

Mathilde Bonneborgne
CEA Centre de Marcoule
France

Honorable Mention

Apricot

Mathilde Bonneborgne
CEA Centre de Marcoule
France

Class 10 Artistic Microscopy - Color Only

First Place

Duplex Steel Etched With LBI

Lukasz Boron
Foundry Research Institute
Krakow, Poland

Second Place

Brush Strokes

Samuel J. Lawrence
Lehigh University
Bethlehem, PA

Third Place

Micropillar Fabricated From a Dense Carbon Nanotube Brush

William M. Mook
EMPA
Thun, Switzerland

Honorable Mention

Wood Pile (SEM)

JE Coleman, Todd Schaef
PNNL
Richland, WA

Class 11 Digital Microscopy Artistic

First Place

Metallic Meteorite Fragment

J. Corbett
IMR Metallurgical Services
Louisville, KY

Second Place

None awarded

Third Place

None awarded

Honorable Mention

None awarded