



## ICMCTF 2017 – Preface

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The 44th International Conference on Metallurgical Coatings and Thin Films (ICMCTF), sponsored by the Advanced Surface Engineering Division (ASED) of the American Vacuum Society, Science and Technology of Materials, Interfaces, and Processing, was held April 24 to 28, 2017, in San Diego, California.

The week's technical program consisted of 36 technical sessions, which were organized into eight concurrent technical symposia and two topical symposia. The conference opened with a Plenary Lecture prepared by Dr. Chris Chuh, Department Head and the Danae and Vasilis Salapatas Professor of Metallurgy in the Department of Materials Science and Engineering at the Massachusetts Institute of Technology, Cambridge, MA, USA, on "Grain Boundary Segregation: A Key Tool for Stabilizing Nanostructure in Next-Generation Coatings." The plenary lecture was presented by Prof. Yip-Wah Chung, Northwestern University of Evanston, Illinois, USA. The Exhibition Keynote Lecture was presented by Dr. Chris Engdahl, Vice President of Technology, Crystallume. Santa Clara, CA, USA, on "Success and Failure in the Commercialization of CVD Diamond."

During the conference week, a well subscribed poster session was attended by a large and appreciative attendee audience. An expansive large two-day interactive industrial exhibition, with more than 60 booths, was held in which companies displayed their most recent developments in vacuum science and plasma-based deposition technologies. In addition to the technical symposia sessions, there were two focused topical sessions, and six specialized short courses.

Dr. John Woollam of J.A. Woollam, Co, Inc., Lincoln, NE, USA, was the recipient of the 2017 ASED R.F. Bunshah Annual Award; he presented the Honorary Lecture, "History and Basics of Ellipsometry with Examples." He is recognized for seminal contributions to the development and application of ellipsometry as a primary technique for determining thin-film optical properties. The ASED Annual ICMCTF Graduate Student Awards were presented to Chia-Chu Yu (Gold Medal) from the National Taiwan University of Science and Technology,

Taiwan; Marcus Hans (Silver Medal) from RWTH Aachen University, Germany; and Deniz Polat-Karahan (Bronze Medal) from Istanbul Technical University, Turkey.

The electronic submission and handling of manuscripts via the Elsevier Editorial System (EES), including the selection of reviewers and evaluation of manuscripts, were identical to the procedures applied to manuscripts submitted as regular contributions for publication in international scientific journals. Following the tradition practiced since 1987, the accepted manuscripts are published in two archival journals: *Surface and Coatings Technology* and *Thin Solid Films*. Current ICMCTF proceedings are open-access for one year via the Elsevier journals' web sites.

The organization of this conference and the preparation of proceedings volumes would have been impossible without the tremendous effort and dedication of many individuals, which include: the General Chair Prof. Christian Mitterer, University of Leoben, Leoben, Austria, and the Program Chair Prof. Yip-Wah Chung, Northwestern University of Evanston, Illinois, USA, who oversaw the organization of the conference and the program; the large team of symposia and session chairs that made possible the realization of an exciting technical program; and the support of hundreds of reviewers with their timely submission of quality reports. We express our sincere thanks to all authors and presenters for their contributions and to all reviewers for their help evaluating these manuscripts. To our sponsors, we acknowledge, appreciate, and thank these companies for their most generous and continuing support.

The 45th International Conference on Metallurgical Coatings and Thin Films (ICMCTF 2018) will be held in San Diego, California, April 23–27, 2017 with Prof. Yip-Wah Chung, Northwestern University of Evanston, Illinois, USA, as the General Chair and Dr. Michael Stüber, Karlsruhe Institute of Technology, Karlsruhe, Germany, as the Program Chair.

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