



## Preface

## ICMCTF 2012—Preface

The 39th International Conference on Metallurgical Coatings and Thin Films (ICMCTF) sponsored by the Advanced Surface Engineering Division (ASED) of the American Vacuum Society (AVS) was held April 23 to April 27, 2012 in San Diego, California.

The technical program consisted of 57 technical sessions which were organized into 11 symposia. The conference included a Plenary Lecture, an Exhibition Keynote Lecture, a poster session, 6 focused topical sessions, 5 short courses, and an industrial exhibition. Exhibitors displayed in 50 booths the most recent developments in vacuum science and plasma based deposition technologies.

The conference opened with a Plenary Lecture by Prof. Peter Fratzl, Director of the Max Planck Institute of Colloids and Interfaces in Potsdam, Germany, on “How Interfaces Control the Mechanical Behavior of Biological Materials”. The Exhibition Keynote Lecture was given by Prof. Roger De Gryse, Ghent University, Belgium, on “Rotatable Magnetrons, Today and Tomorrow”.

Prof. Sture Hogmark from the Materials Science and Tribology Department at the Angström Laboratory of Uppsala University, Sweden, was the recipient of the ASED R.F. Bunshah Annual Award; he presented an Honorary Lecture on “Tribological Coatings: Novel Concepts and Conditions for Successful Applications”. He received this award to honor his pioneering work in the tribology of complex hard, wear-resistant coatings. The ASED Annual ICMCTF Graduate Student Awards were presented to Davide G. Sangiovanni (Gold Medal) from Linköping University, Sweden, Jessica Krogstad (Silver Medal) from the University of California, Santa Barbara, USA, and Moritz to Baben (Bronze Medal) from RWTH Aachen University, Germany.

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 a conference and the preparation of proceedings volumes would have been impossible without the tremendous efforts and dedication of many individuals, which include: the General Chair Dr. Ali Erdemir from Argonne National Laboratory, USA, and the Program Chair Prof. Paul Mayrhofer from Vienna University of Technology, Austria, 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.

The 40th International Conference on Metallurgical Coatings and Thin Films (ICMCTF 2013) will be held in San Diego, California, April 29–May 3, 2013 with Prof. Paul Mayrhofer, Vienna University of Technology, Austria, as the General Chair and Prof. Yip-Wah Chung, Northwestern University, Evanston, Illinois, USA as the Program Chair.

*Proceedings Editor*

Gregory Abadias

Samir Aouadi

Ivan Petrov

Claus Rebholz

Michael Stüber\*

Stan Veprek

\*Corresponding author. Karlsruhe Institute of Technology, Institute for Applied Materials, Hermann von Helmholtz-Platz 1,

D-76344 Eggenstein-Leopoldshafen, Germany.

Tel.: +49 721 608 23889; fax: +49 721 608 2 4567.

E-mail address: [michael.stueber@kit.edu](mailto:michael.stueber@kit.edu) (M. Stüber).



## ICMCTF 2012 – Preface

The 39th International Conference on Metallurgical Coatings and Thin Films (ICMCTF) sponsored by the Advanced Surface Engineering Division (ASED) of the American Vacuum Society (AVS) was held on April 23 to April 27, 2012 in San Diego, California.

The technical program consisted of 57 technical sessions which were organized into 11 symposia. The conference included a Plenary Lecture, an Exhibition Keynote Lecture, a poster session, 6 focused topical sessions, 5 short courses, and an industrial exhibition. Exhibitors displayed in 50 booths the most recent developments in vacuum science and plasma based deposition technologies.

The conference opened with a Plenary Lecture by Prof. Peter Fratzl, Director of the Max Planck Institute of Colloids and Interfaces in Potsdam, Germany, on “How Interfaces Control the Mechanical Behavior of Biological Materials”. The Exhibition Keynote Lecture was given by Prof. Roger De Gryse, Ghent University, Belgium, on “Rotatable Magnetrons, Today and Tomorrow”.

Prof. Sture Hogmark from the Materials Science and Tribology Department at the Ångström Laboratory of Uppsala University, Sweden, was the recipient of the ASED R.F. Bunshah Annual Award; he presented an Honorary Lecture on “Tribological Coatings: Novel Concepts and Conditions for Successful Applications”. He received this award to honor his pioneering work in the tribology of complex hard, wear-resistant coatings. The ASED Annual ICMCTF Graduate Student Awards were presented to Davide G. Sangiovanni (Gold Medal) from Linköping University, Sweden, Jessica Krogstad (Silver Medal) from the University of California, Santa Barbara, USA, and Moritz to Baben (Bronze Medal) from RWTH Aachen University, Germany.

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 a conference and the preparation of proceedings volumes would have been impossible without the tremendous efforts and dedication of many individuals, which include: the General Chair Dr. Ali Erdemir from Argonne National Laboratory, USA, and the Program Chair Prof. Paul Mayrhofer from Vienna University of Technology, Austria, 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.

The 40th International Conference on Metallurgical Coatings and Thin Films (ICMCTF 2013) will be held in San Diego, California, on April 29–May 3, 2013 with Prof. Paul Mayrhofer, Vienna University of Technology, Austria, as the General Chair and Prof. Yip-Wah Chung, Northwestern University, Evanston, Illinois, USA as the Program Chair.

Gregory Abadias  
Samir Aouadi  
Ivan Petrov  
Claus Rebolz  
Michael Stüber\*  
Stan Veprek

\*Corresponding author. Karlsruhe Institute of Technology, Institute for Applied Materials, Hermann von Helmholtz-Platz 1, D-76344 Eggenstein-Leopoldshafen, Germany.  
Tel.: +49 721 608 23889; fax: +49 721 608 24567.  
E-mail address: [michael.stueber@kit.edu](mailto:michael.stueber@kit.edu) (M. Stüber).