

Invitation

The third **International Symposium on ElectroChemical Machining Technology INSECT 2006** continues the series of successful conferences started in Düsseldorf 2004 and in Freiburg in 2005. This European symposium brings together researchers and engineers involved in Electrochemical Machining Technology. It focuses on basic research such as the fundamental understanding of the processes at the electrolyte / electrode interface as well as on technical aspects like quality and efficiency. The conference language is English.

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- R. Förster, Berliner Glas KGA
- H. Reinecke, IMTEK, Albert-Ludwigs-Universität Freiburg

Conference Organizers

Prof. A. Michaelis, Fraunhofer Institute for Ceramic Technologies and Systems, Winterbergstraße 28, 01277 Dresden, Germany

Dr. M. M. Lohrengel, Heinrich-Heine University Düsseldorf, Institute of Molecular Physical Chemistry, Universitätsstraße 1, 40225 Düsseldorf, Germany

Registration Fees

	Before Sept. 28	From Sept. 28
Participants	Euro 170,-	Euro 200,-
Students	Euro 70,-	Euro 100,-

The registration fee includes coffee, two lunches, the conference dinner and the abstract booklet. Students must show an adequate document at the conference desk.

Please send your registration until **October 5th, 2006** to our participant service: insect2006@ikts.fraunhofer.de
In case of your cancellation before October 5th, 2006 the total fee will be refunded. After that date, a refund is not possible.

Program

October 26th

9:00 Registration

9:30 Greetings
A. Michaelis, Fraunhofer IKTS Dresden

Session 1 - Fundamentals

Chairperson A. Michaelis

9:45 M. M. Lohrengel, AGEF e.V. Düsseldorf
Influence of crystallographic orientation on the anodic dissolution of iron

10:15 B. Walther, Technische Universität Dresden
ECM of hard metals

10:45 H. Bettermann, Heinrich-Heine-Universität Düsseldorf
Raman microscopy - a tool for molecular surface investigations

11:15 - 12:00 Coffee Break

Session 2 - Simulation and Modeling

Chairperson M. M. Lohrengel

12:00 I. M. Purcar, Vrije Universiteit Brussel
Advanced modeling of 3D electrochemical machining with time dependent imposed current or potential

12:30 M. Amkreutz, Fraunhofer IFAM Bremen
Structures of supersaturated iron nitrates

13:00 N. Smets, Vrije Universiteit Brussel
Calculation of temperature transients in Pulse Electrochemical Machining (PECM)

13:30 - 14:30 Lunch Break

Session 3 - Applications, Part I

Chairperson J. Hackenberg

14:30 L. Stämmler, Universität Stuttgart
ECF processing of tool steels

15:00 M. Hackert, Technische Universität Chemnitz
Electrochemical drilling of deep microholes with bulk electrodes

15:30 - 16:00 Coffee Break

16:00 T. Mäder, IMTEK, Albert-Ludwigs-Universität Freiburg
Electrochemical μ -wire cutting

16:30 H. Reinecke, IMTEK, Albert-Ludwigs-Universität Freiburg
Machining of titanium structures

19:00 Symposium Dinner at the Restaurant »Schillergarten«

October 27th

Session 4 - Anodic Dissolution and Passivation

Chairperson J. Deconinck

9:00 P. J. Plath, Universität Bremen
Dynamics of electropolishing and electrostructuring of stainless steel

9:30 A. K. Mölleken, Heinrich-Heine-Universität Düsseldorf
Influence of hydrogen evolution on passivation of iron and nickel

10:00 - 10:30 Coffee Break

Session 5 - Applications, Part II

Chairperson M. Schneider

10:30 M. Baumgärtner, Leitz Turbomaschinen Technik, Nürnberg
ECM for manufacturing of aero-engine components

11:00 K. Nestler, Beckmann-Institut für Technologieentwicklung e.V. Lichtenstein
Plasma polishing of metallic surfaces - effects and models

11:30 Wrap-up

12:00 - 13:00 Lunch Break

13:15 Visitor tour through IKTS / Ceramics Meeting Point