



**KSCS 2009
PROGRAMME
&
CD OF ABSTRACTS**



MAY 24 - 28, 2009

**FROM CORROSION TO
SEMICONDUCTORS**



5TH KURT SCHWABE SYMPOSIUM FROM CORROSION TO SEMICONDUCTORS MAY 24 – 28, 2009

This Symposium is co-sponsored by:

DFG
ECS
ISE
Zahner
AMETEK GmbH
Belltec

Organization:

Friedrich-Alexander University Erlangen-Nürnberg
Department of Materials Science and Engineering (WW4)
Chair for Surface Science and Corrosion

Conference Venue:

Erlangen castle, center of Erlangen
Friedrich-Alexander University Erlangen-Nürnberg
Schlossplatz 4
91054 Erlangen

Correspondence and Registration

Chair for Surface Science and Corrosion
Department of Materials Science and Engineering
University of Erlangen-Nürnberg
Martensstr. 7
91058 Erlangen
<http://www.kscs2009.uni-erlangen.de/>
E-mail KSCS2009@ww.uni-erlangen.de
Telephone: +9131 85-27576
Fax: +9131 85-27582



Chairs of the Symposium:

Prof. Dr. Patrik Schmuki (Chair)

Prof. Dr. Hans-Henning Strehblow (Co-Chair)

Scientific Organizing Committee:

Dr. Julia Kunze (Scientific Secretary)

Dipl.-Ing. Robert Hahn (Adjunct Scientific Secretary)

Dipl.-Ing. Steffen Berger (Adjunct Scientific Secretary)

Dipl.-Ing. Johannes Brunner (Web Master)

Ms Helga Hildebrand (Event Coordinator)

Dipl.-Ing. Felix Schmidt-Stein (Event Coordinator)

International Scientific Committee:

Janusz Flis, Poland

Olof Forsén, Finland

Sachiko Ono, Japan

Waldfried Plieth, Dresden, Germany

International Advisory Board

Agladze Tamaz

Jacek Banas

Kyösti Kontturi

Anders Hagfeld

Shinji Fujimoto

Derck Schlettwein

Hideaki Takahaschi

Nobuyoshi Koshida

Galina Tsirlina

Registration to the conference (Reception Desk):

Sunday, May 24:

15:00-19:00 Erlangen castle, Schlossplatz 4, Erlangen

Monday, May 25 to Thursday, May 28:

8:00-17:00 Erlangen castle, Schlossplatz 4, Erlangen



SOCIAL EVENTS:

Sunday, May 24:

Welcome Reception

17:30 All congress participants and accompanying persons are invited to take part in the informal welcome party. The welcome reception will be held in the Erlangen castle, which is located in the center of Erlangen.

Monday, May 25:

Poster Reception

Tuesday, May 26:

Poster Reception

Wednesday, May 27:

Conference Dinner

17:30 Buses depart from Erlangen bus terminal
Hugenottenplatz

Thursday, May 28:

Erlanger Bergkirchweih

Starting at 14:00 Departure from the castle and walk to the 'Berg' through Downtown Erlangen.



WORDS OF WELCOME

The 5th Kurt Schwabe Symposium continues a series of very successful meetings, in Tata, Hungary, 1993, Dresden, Germany, 1997, Zakopane, Poland, 2000 and Helsinki-Espoo, Finland, 2004. The main topics are Corrosion, Semiconductors and Solar Cells which are contributing vitally to progress of our modern society. Electrochemistry and its application to the various fields of technology was in the center of the important work of Kurt Schwabe. In past few years, electrochemistry became again the center of attention in many research fields. It is being realized that countless problems in contemporary materials conservation and application, energy production and storage, development of modern technologies and the preparation and conservation of surfaces cannot be successfully tackled without a thorough understanding of the underlying electrochemical principles. The meeting concentrates on traditional and modern developments of electrochemistry including in situ surface science, nanotechnology and solar energy conversion. It provides a platform for intense discussion of specialists with expertise in different fields like surface science, materials science, energy production and storage, all related to electrochemistry and to the investigation of electrode surfaces. The meeting is located in the lovely Franco-Bavarian town of Erlangen in its impressive castle as the center of its university. On behalf of the Scientific Committee we like to welcome our guests from Europe and all over the world. We are sure that the contributions of the participants will continue the tradition to present interesting results and to stimulate fruitful discussions. The meeting will be also a forum to meet old friends and to start new friendships and interactions. In this sense social events will help to intensify scientific and personal contacts. We like to express our thanks to all who have helped to organize this meeting and to the authors who contribute with their work to the success of the symposium. We wish all participants an interesting and successful meeting and a pleasant stay.

Hans-Henning Strehblow Patrik Schmuki

INDEX

SOCIAL EVENTS:	4
WORDS OF WELCOME	5
INDEX	6
SCIENTIFIC PROGRAMME	7
SUNDAY, MAY 24	7
<i>Welcome Party</i>	7
MONDAY, MAY 25 MORNING	8
<i>Session 1 (Nanotechnology Fundamentals)</i>	8
<i>Session 2 (Corrosion I)</i>	9
MONDAY, MAY 25 AFTERNOON	10
<i>Session 3 (Corrosion II)</i>	10
<i>Session 4 (Nanoscale modification)</i>	11
TUESDAY, MAY 26 MORNING	12
<i>Session 5 (Nanotechnology for solar cell research I)</i>	12
<i>Session 6 (Corrosion III)</i>	13
TUESDAY, MAY 26 AFTERNOON	14
<i>Session 7 (Nanotechnology for solar cell research II)</i>	14
<i>Session 8 (Corrosion IV)</i>	15
WEDNESDAY, MAY 27 MORNING	16
<i>Session 9 (Nanostructures)</i>	16
<i>Session 10 (Corrosion V)</i>	17
WEDNESDAY, MAY 27 AFTERNOON.....	18
<i>Session 11 (Oxides characterization and stability)</i>	18
<i>Session 12 (Nanoarchitectures)</i>	19
THURSDAY, MAY 28	20
<i>Session 13 (Advanced Materials)</i>	20
<i>Session 14 (Advanced Techniques)</i>	21
POSTERS	22
GETTING TO KSCS 2009	27
THE VENUE	29
THE BERGKIRCHWEIH	32
LIST OF PARTICIPANTS	34
SPONSORS DETAILS	38
CD OF ABSTRACTS	40



SCIENTIFIC PROGRAMME

Sunday, May 24

Welcome Party

17:30: Prof. Dr. Patrik Schmuki;
Prof. Dr. Hans-Henning Strehblow

Program: Julia Kunze

Monday, May 25 Morning

8:30 Opening of the Symposium
Prof. Dr. Patrik Schmuki

Session 1 (Nanotechnology Fundamentals)

Room 1: Aula

Chair persons: N. Koshida, R. Boukherroub

9:00	R. Boukherroub	Silicon oxide and silicon dissolution in sodium tetrafluoroborate aqueous solution
9:20	A.W. Hassel	Preparation, Properties and Applications of Iso-oriented Gold Single Crystal Nanobelts
9:40	S. Ono	Effect of Nitrogen Doping on Dielectric Property and Photoresponse of Anodic Oxide Films Formed on Niobium
10:00	J. Salonen, E. Mäkilä	Stabilization of porous silicon by thermal carbonization for optical applications
10:20	N. Koshida	Operation of nanosilicon ballistic electron emitter in aqueous solutions as an active electrode

10:40 Coffee Break

11:00	M. Wark	Insight into Proton Conductivity of Ordered Mesoporous Materials Containing Aluminium
11:20	T. Homma T. Ouchi	Fabrication of bit patterned media for ultra-high density magnetic recording by electrochemical approaches
11:40	K. Rumpf	Synthesis of metal filled double-sided porous silicon samples by electrodeposition
12:00	J. Grzanna	Model for Current Oscillations at the Si/Electrolyte Contact: Formation of Oxide Nanopores

12:20 Lunch Break



Session 2 (Corrosion I)

Room 2: Senatssaal

Chair persons: O. Forsen, J. Hedberg

9:00	L. Anicai	Ni and Ni Alloys Coatings Electrodeposited from Choline Chloride Based Ionic Liquids – Evaluation of Corrosion Behaviour
9:20	H. Krawiek	The use of local electrochemical impedance and microcapillary techniques to investigate the passive properties of metallic alloys
9:40	A. Altube	Evaluation of the corrosion behaviour of Ni/Cr multilayers
10:00	J. Kleperis	Corrosion Problems of Steel Electrodes for Water Electrolysis and Resistive Heating
10:20	L. Tsygankova	Efficiency of the «EM» series inhibitors against carbon steel corrosion in the media containing hydrogen sulfide and carbon dioxide

10:40 Coffee Break

11:00	C.-W. Lee	Change in surface structure of steel in contact with water at high temperature and pressure
11:20	P. Refait	Corrosion of carbon steel in methanoate solutions
11:40	J. Hedberg	In situ studies of initial atmospheric corrosion of zinc induced by organic acids probed by infrared vibrational spectroscopy

12:20 Lunch Break

Monday, May 25 Afternoon

Session 3 (Corrosion II)

Room 1: Aula

Chair persons: E. McCafferty, H. Takahashi

14:00	J. Flis	Corrosion behaviour of iron nitrides in borate and chloride solutions
14:20	K. Azumi	Principle and Application of Multichannel Electrode System In Corrosion Research
14:40	V. Vignal	The use of mechanical simulation, Auger electron spectroscopy and microcapillary techniques to investigate the microelectrochemical behavior of duplex stainless steels in sodium chloride media.
15:00	H. Takahashi	Effects of Sn on Alkoxide Reaction of Aluminum Alloys with Alcohol at High Temperature

15:20 Coffee Break

15:40	E. McCafferty	Comparison of Percolation and Graph Theory Approaches in the Passivity of Fe-Cr Alloys
16:00	J. Banas	Anodic behavior of low alloyed iron chromium alloys in geothermal water
16:20	D. Mandler	Corrosion Inhibition of Magnesium and Aluminium by Sol-Gel Films
16:40	R. Hillman	Deposition of Aluminium Coatings Using Ionic Liquids
17:00	O. Forsen	Corrosion of copper in the initial phase of final disposal of spent nuclear fuel

17:30 Poster Session 1 (all posters)



Session 4 (Nanoscale modification)

Room 2: Senatssaal

Chair persons: R. Hillman, J. Salonen

14:00	E. Astrova	Technological aspects of deep trench formation under photo-electrochemical etching of silicon
14:20	K. Fukami	Filling of Mesoporous Silicon with Copper by Electrodeposition from An Aqueous Solution
14:40	T. Perova	Optical Properties of One-dimensional Photonic Crystals Fabricated by Electrochemical Etching of Silicon
15:00	C. Kvarnstrom	Formation of ionic liquid functionalized multi-walled carbon nanotube arrays

15:20 Coffee Break

15:40	E. Krasicka-Cydzik	Anodic oxidation of titanium in fluoride containing phosphoric acid solutions for surgical applications
16:00	R. Gómez	Rutile and Anatase Thin Film Electrodes formed by Quantum-Sized Nanowires
16:20	A. Jarosik	Conductivity and stability of oxide particle networks in composite non-aqueous electrolytes
16:40	S. Mentus	NaX Zeolite-Nickel Composite: from Encapsulated toward External Nickel Nanoclusters
17:00	A. Vaskevich	Preparation of Graded Materials by Laterally Controlled Template Electrodeposition

17:30 Poster Session 1 (all posters)



Tuesday, May 26 Morning

Session 5 (Nanotechnology for solar cell research I)

Room 1: Aula

Chair persons: A. Hagfeldt, D. Schlettwein

9:00	T. Dittrich	Solar cells with extremely thin absorber based on ZnO nanorod arrays
9:20	D. Schlettwein	Electrochemical growth of porous ZnO on textile substrates for application in dye-sensitized solar cells
9:40	T. Nychporuk	Porous silicon Bragg mirrors as a rear surface reflector for Silicon solar cells
10:00	G.M. Haarberg	Electrochemical Deposition of Silicon for Solar Cells
10:20	V. Depauw, J. Hoeymissen	Towards a low-cost ultra-thin silicon solar cell by annealing of macroporous silicon

10:40 Coffee Break

11:00	R. Beranek	Photoelectrochemistry with Surface-Modified TiO ₂
11:20	A. Hagfeldt	DSC tool-box – an integrated approach
11:40	T. Lana-Villareal	TiO ₂ photoanodes modified with CdSe Quantum Dots: Effects of QD coverage and attachment mode
12:00	S. Morin	Photo-sensitization of nanocrystalline TiO ₂ thin films with CdSexS(1-x) quantum dots

12:20 Lunch Break

Session 6 (Corrosion III)

Room 2: Senatssaal

Chair persons: J. Charlier, A. Sagués

9:00	L. Kwiatkowski	On the phosphatibility of high-strength aluminium alloys.
9:20	G. Bereket	Electrodeposition of Polymers Including Reactive Amine Group on Mild Steel and Copper
9:40	A. Królikowski	The efficiency of calcium nitrite as penetrating corrosion inhibitor for steel in concrete
10:00	A. Legat	Characterisation of an Organic Inhibitor on Steel Corrosion Using a Combination of Various Electrochemical Techniques
10:20	O. Schneider	Corrosion of commercial and synthetic aluminum alloys

10:40 Coffee Break

11:00	S. Virtanen	Corrosion and biocompatibility of biodegradable magnesium alloys
11:20	N. Boshkov	Environmentally friendly conversion layers on zinc based nanocomposites – obtaining, types and protective properties
11:40	A. Sagués	Challenges in Incorporating Potential-Dependent Threshold in Predictive Models for Corrosion of Steel in Concrete
12:00	J. Charlier	Main strategies to direct localized organic grafting on semiconducting substrates.

12:20 Lunch Break

Tuesday, May 26 Afternoon

Session 7 (Nanotechnology for solar cell research II)

Room 1: Aula

Chair persons: P. Schmuki, J. Hoeymissen

14:00	J. Elias	Electrodeposition ZnO Nanowires and Nanotubes with Tailored Dimensions for Nanostructured Solar Cells
14:20	J. Hammond	Depth Profiling of Organic Electronics
14:40	T. Oekermann	Preparation of ZnO films by pulsed electrodeposition
15:00	A. Kontos	Polymer redox electrolytes filled with anodic titania nanotubular powder: application in dye-sensitized solar cells.

15:20 Coffee Break

15:40	P. Schmuki	TiO ₂ nanotubes for DSSCs
16:00	E. Pereira	Morphological effects on photocatalytic degradation of methyl orange dye using anodic TiO ₂ porous films
16:20	N. Baram	Enhanced Photo-Efficiency of Immobilized TiO ₂ Catalyst
16:40	J. Hoeymissen	Electrochemically etched multilayer porous silicon stack used as intermediate Bragg reflector in thin film solar cells
17:00	A.G. Munoz	Nanosopic Junctions of Catalytic Metals for Photoelectrochemical Energy Conversion

17:15 – 18:00 Round table discussion on nanotechnology for solar cell research

17:30 – 18:00 Advisory Board meeting

18:00 Poster Session 2 (all posters)



Session 8 (Corrosion IV)

Room 2: Senatssaal

Chair persons: I. Flis-Kabulska, S. Virtanen

14:00	R.M. Souto	Study of pitting corrosion mechanism using scanning electrochemical microscopy
14:20	Q. Van Overmeere	In-situ gravimetric studies of aluminium anodising
14:40	F. Ezginer	Lifetime prediction of the painted car body via coating permeation resistance
15:00	A. Gajek	Transport of hydrogen through gas nitrated iron

15:20 Coffee Break

15:40	I. Flis-Kabulska	Enhanced hydrogen entry into iron from NaOH solution at potentials of cathodic and anodic polarisations
16:00	S. Schmachtel	Hydrogen diffusion in high strength steels during pickling
16:20	Z. Wolarek	Absorption of hydrogen by gas nitrated iron
16:40	T. Zakroczymski	Electrochemical determination of hydrogen solubility and trapping in metals and alloys
17:00	I. Voloshchuk	Hydrogen entry into iron coated with zirconia sol-gel coating

17:15 – 18:00: Round table discussion on nanotechnology for solar cell research

17:30 – 18:00 Advisory Board meeting

18:00 Poster Session 2 (all posters)



Wednesday, May 27 Morning

Session 9 (Nanostructures)

Room 1: Aula

Chair persons: K. Hebert, S.Ono

9:00	X.-H. Xia	Porous anodic alumina films preparation and applications
9:20	K. Hebert	Coupled Ion Migration and Stress-Driven Transport in Anodic Oxide Films
9:40	H. Tsuchiya	Self-Organized Lamellar Nanostructures by Anodization of TiAl Alloy
10:00	A. Valota	Influence of applied potential and water content on anodic titania nanotubes formed in fluoride/glycerol electrolytes
10:20	M. Bojinov	Mechanism of formation of nanoporous oxides on niobium and tungsten

10:40 Coffee Break

11:00	D. LeClere	Experimental and Simulated Analysis of Oxide Flow
11:20	E. Sutter	Electrochemical aspects of light-induced TiO ₂ super-hydrophilicity
11:40	J.-J. Xu	Dopamine Sensitized Nanoporous TiO ₂ Film on Electrodes: Photoelectrochemical Sensing of NADH under Visible Irradiation
12:00	T. Berger	Adsorption and Reaction of Organic Molecules on Rutile Nanowire Electrodes

12:20 Lunch Break



Session 10 (Corrosion V)

Room 2: Senatssaal

Chair persons: S. Fujimoto, J. Banas

9:00	S. Grushevskaya	The structural parameters of anodic Ag(I) and Cu(I) oxide
9:20	N.B. Luque	Island dynamics on charged silver electrodes: Kinetic Monte-Carlo simulations
9:40	G. Grundmeier	pH-dependent structure and stability of zinc oxide surfaces in aqueous solutions
10:00	E. Pereira	Microstructure changes during anodic breakdown in ZrO ₂
10:20	J. Banas, K. Banas	Anodic behavior of iron in alcohol solutions of electrolytes

10:40 Coffee Break

11:00	C. Savall	Influence of the microstructure of high purity electrodeposited nickel coatings on their electrochemical reactivity
11:20	V. Lazaresku	Surface States- and Field Effects at Thiolate-Covered GaAs(110) Electrodes
11:40	M. Sakairi	Repassivation Behavior of Ti in Hanks Solution with PRM
12:00	Q. Van Overmeere	In situ monitoring of mechanical and electrical breakdown during Zr thin film anodising

12:20 Lunch Break



Wednesday, May 27 Afternoon

Session 11 (Oxides characterization and stability)

Room 1: Aula

Chair persons: H.-H. Strehblow, J. Kelly

14:00	S. Fujimoto	Role of Semiconductor Property of Oxide Films of Metals and Alloys on Corrosion Behaviour
14:20	V.M. Diamanti	Effect of AC anodizing on titanium oxide morphology
14:40	G. Tsirlina	Durability of nanoheterogeneous electrode materials
15:00	H. Baltruschat	Influence of Potential, Anionic Adsorbates, and metallic Monolayers on Friction Forces Studied by AFM

15:20 Coffee Break

15:40	J. Kelly	SiC: a photocathode for water splitting and hydrogen storage
16:00	H.-H. Strehblow	Passive Layers on Sn and CuSn Alloys Studied by XPS

17:30 Departure to Conference Diner in Chateau Atzelsberg:

Best poster award; Laudatio Prof. Kaesche: H. Mughrabi

Session 12 (Nanoarchitectures)

Room 2: Senatssaal

Chair persons: H.-Y. Chen, G. Lacconi

14:00	S. Bliznakov	Development of 3D Nanoporous Ag Architectures by Selective Electrochemical Dissolution and Potential-Controlled Displacement
14:20	G. Lacconi	Influence of picolinic acid on the electrochemical formation of silver nanostructures
14:40	K. Napolskii	Templating of Electrodeposited Metals as a Tool to Control Functional Properties of Nanostructured Materials
15:00	W. Plieth	Nucleation, nucleus growth, death of the nucleus: The process chain of electrodeposition

15:20 Coffee Break

15:40	P. Kryszinski	Synthesis, surface modifications and size-sorting of mixed, nickel-zinc ferrite colloidal magnetic nanoparticles
16:00	M. Santa	In-situ backside surface enhanced Raman study on the reactive wetting process at noble metal-monolayer interfaces supported by SKP, XPS and ToF-SIMS

17:30 Departure to Conference Diner in Chateau Atzelsberg:

Best poster award; Laudatio Prof. Kaesche: H. Mughrabi

Thursday, May 28

Session 13 (Advanced Materials)

Room 1: Aula

Chair persons: T. Agladze, K. Murakoshi

9:00	A. Bund	Electrostatic gating at conical nanopores
9:20	S. Pronkin	Ordered layer of vertically aligned TiOx nanotubes as the substrates for electrocatalysis
9:40	H.Y. Chen	Distance-Dependent Quenching and Enhancing of Electrochemiluminescence from CdS:Mn Nanocrystals Film by Au Nanoparticles for highly sensitive detection of DNA
10:00	S. Bastide	Highly localized Si etching catalyzed by metal nanoparticles
10:20	K. Murakoshi	Observation and Manipulation of a Small Number of Molecules at Plasmon Active Ultra-Small Nanostructure

10:40 Coffee Break

11:00	T. Aglaadze	Electrosynthesis of Metal Nanoparticles at Three - Phase Boundary
11:20	P. Granitzer	Mesoporous silicon as base material for a ferromagnetic semiconductor

11:45 – 12:15 Farewell

Starting at 14:00: Departure from the castle and walk to the ‘Berg’ through Downtown Erlangen.

15:30 Meeting at the Bergkirchweih – open end.

Session 14 (Advanced Techniques)

Room 2: Senatssaal

Chair persons: A. Vaskevich, K. Rumpf

9:00	M. Hüppe	Modification Of Functional Diamond-Like-Carbon Thin Films By Electron-Beam-Lithography
9:20	M. Mahdavian	Imidazole derivatives as possible corrosion inhibitors of mild steel in neutral solution: Electrochemical study
9:40	J. Kovac	Detection and characterization of intergranular SCC by means of electrochemical noise and complementary measuring techniques
10:00	G. Carac	Structural and Electrochemical Investigations of the Fungi Behavior at the Disinfectant Solutions
10:20	E. Dmitrieva	The influence of the phenazine structure on the polaron formation in polyaniline: An in situ ESR-UV-Vis-NIR spectroelectrochemical study

10:40 Coffee Break

11:00	Y. Ullmann	Metal release from iron- and chromium-based particles in artificial sweat and artificial tear fluid
11:20	E. Gyenge	Surfactant assisted electrodeposition of catalyst nanostructures on 3-D supports: Application for PEM fuel cells

11:45 – 12:15 Farewell

Starting at 14:00: Departure from the castle and walk to the ‘Berg’ through Downtown Erlangen.

15:30 Meeting at the Bergkirchweih – open end.

POSTERS

Michael	Ahlers	Heterogeneous distribution of reactivity at the passive film of the biphase Ti alloy Ti6Al7Nb
Vesna	Alar	Corrosion protection testing of waterborne coatings by electrochemical methods
Sergiu P.	Albu	Formation and Characterization of Double-Walled TiO ₂ Nanotubes.
Liana	Anicai	Corrosion Behaviour of Composite Films Based on Polypyrrole Applied onto Aluminum Substrates
Ekatarina	Astrova	Nanoporous Silicon-Pt Composite for Fuel Cells
Tine Claudia	Brülle Baier	SPM Techniques in Electrochemical Surface Science
Alexandra	Banu	A Comparison of Corrosion Properties between Cast and Sintered Aluminum-nickel Bronzes in Chloride Containing Electrolytes at Different pH Values
Sebastian	Bauer	Anodic TiO ₂ nanotube surfaces: 15 nm – an optimal length scale of surface topography for cell adhesion and differentiation
Steffen	Berger	A lithographic approach to determine volume expansion factors during initiation and growth of TiO ₂ nanotubes
Mirtat	Bouroushian	Sensitization of porous Titania electrodes by CdSe electrodeposition
Debajeet K.	Bora	Changes in the oxygen (1s) absorption spectra on WO ₃ /TiO ₂ (001,110,100) epitaxial films and polycrystal-line sol gel WO ₃ /ITO films



Mathias	Breimesser	Electrochemical noise of SCC in stainless steels: A combined macro- and micro-electrochemical approach
Johannes	Brunner	Corrosion behaviour of ultra-fine grained Al-Mg model alloys
Abdelhak	Cheriet	Effect of metal diffused into SiC prior anodization on luminescence response
Jessica	Denayer	Molecular self-assembly of alkanethiol mono and bipode on copper.
Jessica	Denayer	Self-Assembled Monolayers of Organophosphonic Acids on Native Tantalum Oxide. Towards Improved Biocompatibility and Corrosion Protection of Stents.
Margarita	Dergecheva	Electro reduction of Se (IV) ions from sulfosalicylic acid
Armen	Durgaryan	Influence of hydrogen adsorption on low-frequency noise and CV characteristics of porous silicon structures
Mohamed M	Ghoneim	Inhibition of Corrosion of Iron in Sodium Hydroxide Solution by Hydantion Compounds
Robert	Hahn	RBA-TiO ₂ -nanotubes: Growth and Modification of Electronic Properties.
Milena	Jankulovska	An Electrochemical Study of Trap States in TiO ₂ films: Nanowires, Microtubes and Nanoparticles
Florian	Kellner	The influence of WC grain size on the corrosion behavior of WC-Co hardmetals in alkaline solutions
Manuela	Killian	Investigation of the nature of adsorption of porphyrin SAMs on TiO ₂ and SiO ₂ surfaces by ToF-SIMS
Doohun	Kim	TiO ₂ Nanotubes for Dye-Sensitized Solar Cells



Athanassios	Kontos	Photo-induced reactivity of self-organized TiO ₂ nanotube arrays prepared by electrochemical anodization
Tadeja	Kosec	Investigation of various patinas on copper and bronze by various electrochemical methods
Gabriela	Lacconi	Electrodeposition of copper onto organic functionalized and hydrogen-terminated Si(111) surfaces
Mohamed	Lassaad Chourou	Metal-assisted electrochemical pore formation of Si deposited with Ag, Pt, and Pd
Jooyul	Lee	Physicochemical Characterization of Electrochemically Prepared Ni-B Layers
Paul	Linhardt	Application of the EPR-Test to 13% chromium steel for non destructive quality assessment
Robert	Lynch	Induced in-situ Ag deposition on TiO ₂ by electron-beam bombardment of ionic liquids
Sanja	Martinez	Effect of tartrate ions on the protective properties of oxide film formed on steel in alkaline media
Slavko	Mentus	NaX Zeolite-Nickel Composite: from Encapsulated toward External Nickel Nanoclusters
Georgia	Obigodi	Electrochemical investigations on the behavior of high temperature oxides grown on Ni-based alloys
Indhumati	Paramasivam	Decoration of TiO ₂ Nanotube layers with WO ₃ nanocrystals and High-Electrochromic activity
Alexander	Pavlikov	Optical properties of thermally oxidized layers of mesoporous silicon.
Natalya	Penkova	Electrodeposition of CdTe Nanoparticles from Ethylene Glycol Electrolyte

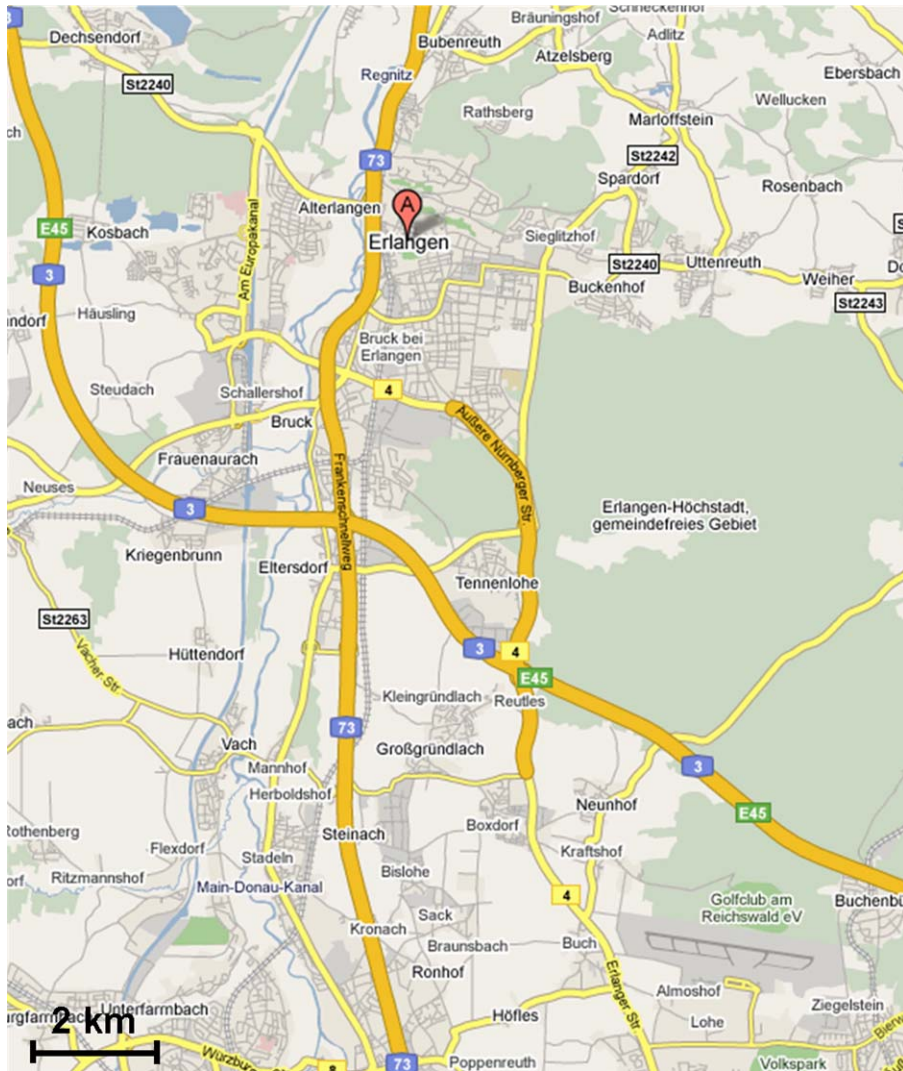
Poulomi	Roy	Improved efficiency of TiO ₂ nanotubes in dye sensitized solar cells by decoration with TiO ₂ nanoparticles
Felix	Schmidt-Stein	UV-induced Photocatalysis of TiO ₂ nanotubes for cancer treatment
Ali	Sepehri Fard	Application of new ruthenium complexes in the preparation of dye-sensitized nanocrystalline TiO ₂ solar cells
Viktoriia	Shevchenko	Sensitivity of nanoporous silicon photoluminescence to the processes of corrosion in a nanoporous silicon/ water/ polynucleotide system
Yan-Yan	Song	Amphiphilic TiO ₂ Nanotube Arrays: An Actively Controllable Drug Delivery System
Liudmila	Tsygankova	Protection of carbon steel in atmosphere containing SO ₂
Metehan C.	Turhan	Effect of "Peeling-Off" etching mechanism and fluoride treatment on corrosion performance in Mg AZ91D Alloy
Jay	Wadhawan	Quantifying two-dimensional diffusion anisotropy in liquid crystals using dc electrolysis
Norbert	Wagner	Electrochemical Study of Interaction of Nickel and Alkaline Solutions
Wei	Wei	Hexagonal self-organization of anodic oxide nanotube -nanopores on Ti-Ta alloy
Benjamin	Wilson	Towards Oscillating and Active Enzyme Surfaces
Tine Holger	Brülle Wolfschmidt	Effect of Substrate Material on Hydrogen Related Reactions for Pt Based Electrocatalysts
Tine Holger	Brülle Wolfschmidt	Hydrogen, Oxygen and Methanol Reactions on Nanostructured Pt/Au(111) and Pd/Au(111) Surfaces



Vadim	Yalishev	Influence of switching resistance states on photoluminescence properties of anodic oxide alumina films.
-------	----------	---

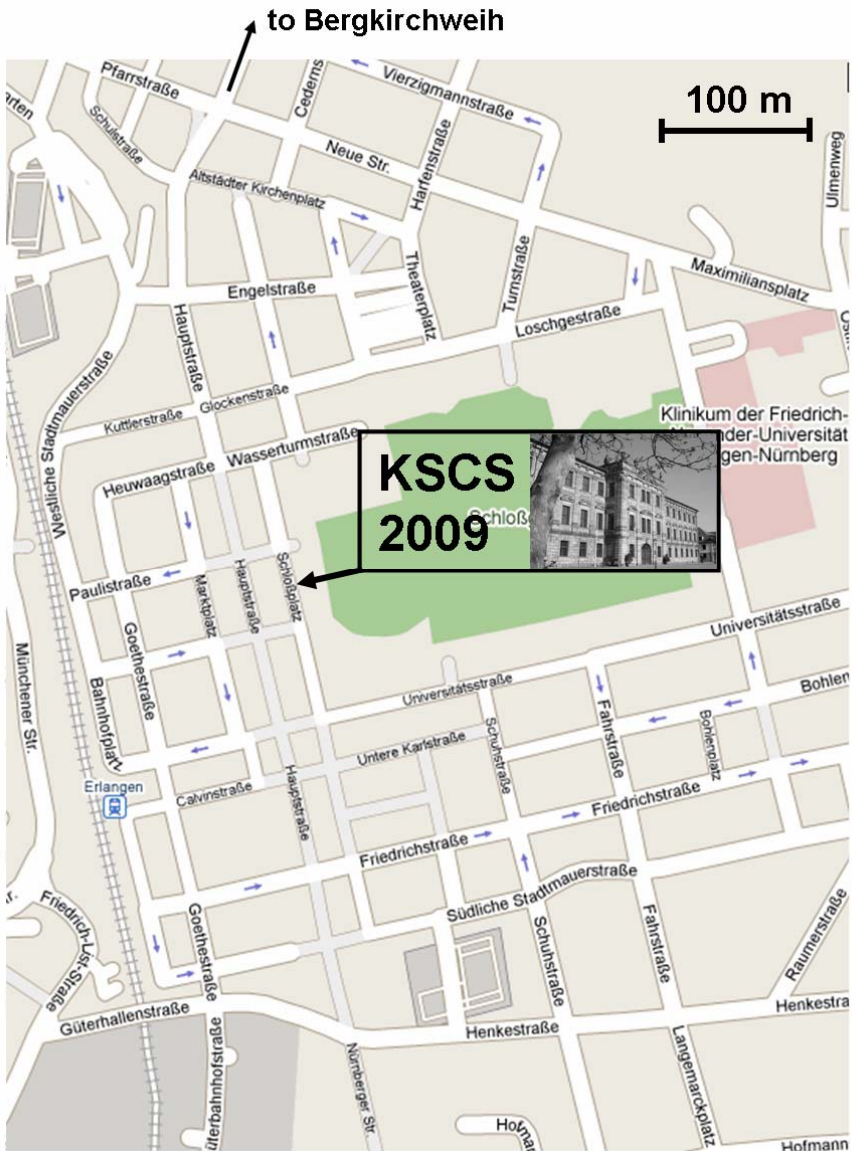
GETTING TO KSCS 2009

Map of metropolitan area Erlangen



Map taken from Google Maps (www.maps.google.de)

Map of Erlangen city centre



Map taken from Google Maps (www.maps.google.de)

THE VENUE

Erlangen

Erlangen was first mentioned officially in 1002 under the name of "villa erlangon". In 1361, the village was sold to Emperor Karl IV. Three years later, a city was built close to the village, which in 1374 got its own coining station. In 1398, the municipal rights were confirmed. In 1402, the city was vested to the Hohenzollern as part of the principality of Brandenburg-Kulmbach (from 1603 on Bayreuth), staying under their rule until 1806. Erlangen was the capital of the so-called "Low County" (Unterland) of the principality, encompassing the area until Neustadt an der Aisch and separated from the "High County" (Oberland) by a land corridor. After a four-year French occupation, it finally became part of the Kingdom of Bavaria, together with the Bayreuth principality.

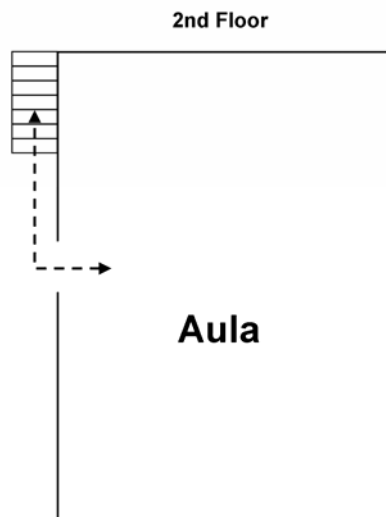
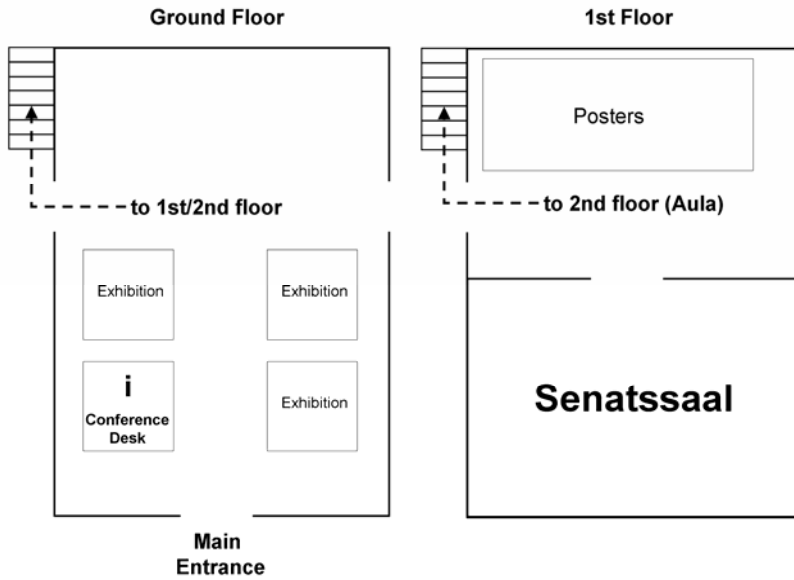
While being part of the Bayreuth county, the first French Huguenot refugees arrived in Erlangen in 1686. The Bayreuth count Christian Ernst built a "new town" (Neustadt) for them. In 1706, the old town (just below the site of the annual Bergkirchweih) was almost completely destroyed by a fire, but soon rebuilt. In 1812, the old and new towns were finally merged into one. In 1742, Count Friedrich of Bayreuth founded a university for the residency town Bayreuth, but due to the rebelliousness of the local students, the university was transferred to Erlangen. Only later did it obtain the name of "Friedrich-Alexander-University" and become a Prussian state university. Famous students of these times were Johann Ludwig Tieck and Wilhelm Heinrich Wackenroder. Already during the Bavarian municipal reform of 1818, the city was endowed with its own administration. In 1862, the canton administration Erlangen was founded, from which later on arose the administrative district of Erlangen. In 1972, this district was merged with the administrative district of Höchstadt. Erlangen became the capital of this newly founded district Erlangen-Höchstadt. During this municipal reform, Erlangen was effectively enlarged considerably, so that by 1974 it had more than 100,000 inhabitants.

The Conference Site

The symposium will be held in the historical Erlangen castle, which is located in the center of Erlangen. Erlangen castle was built 1702 as the residence of the margrave Friedrich, who is also the founder of the University. Today Erlangen castle is the head office of the University administration and features several halls which are used for official receptions and conferences.



The symposium will take place on all three floors. Please find below the map of the conference site.





THE BERGKIRCHWEIH

The Bergkirchweih is an annual beer festival similar to the Oktoberfest in Munich, but smaller in scope, and therefore more intimate. It takes place during the twelve days before and after Pentecost, under the spring trees of the "Berg" and draws more than one million visitors each year. American soldiers from the former Ferris Barracks in Erlangen called it the "Strawberry Fest", although it is much more commonly known by local residents as "Bergkerwa" (pronounced "baig'-care-va" in english). The Bergkirchweih 2009 will be opened on Thursday May 28th.

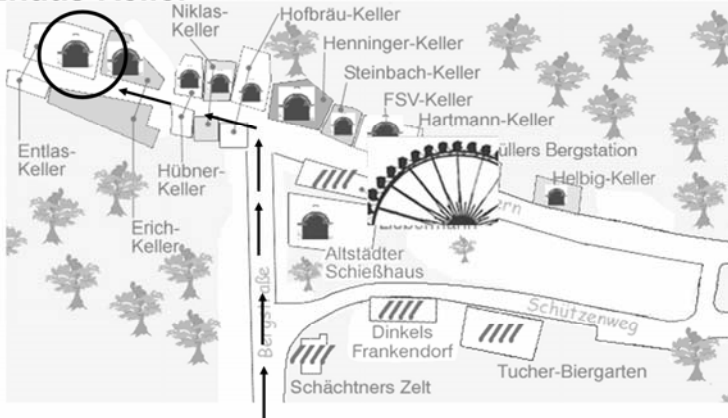
KSCS 2009 at The Bergkirchweih

We will meet on Thursday at 14:00 in front of Erlangen Castle to walk together to the Bergkirchweih.

We booked tables at the "Entlas Keller". The route to the "Entlas Keller" and the KSCS 2009 tables is given on the next page.

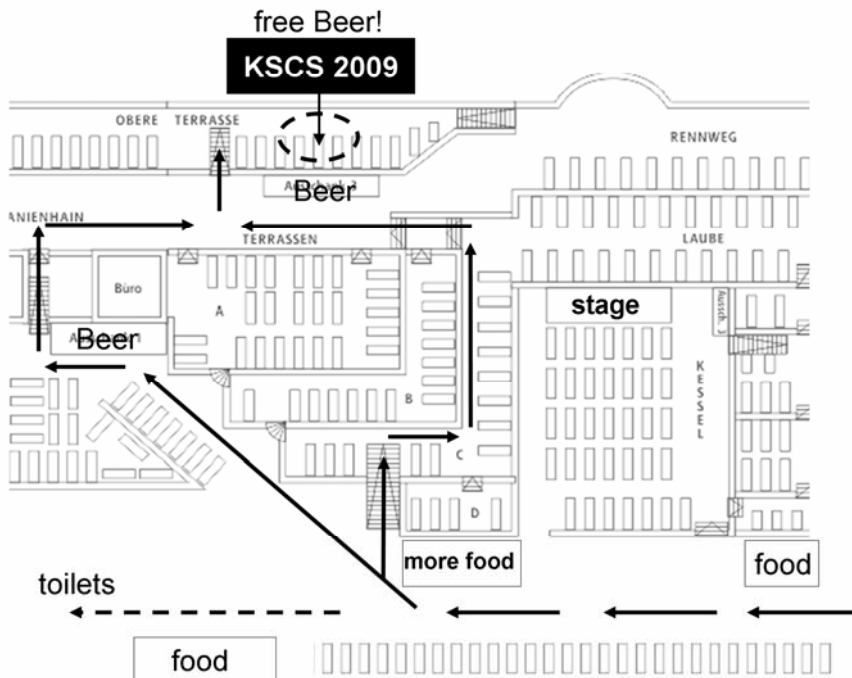


Entlas Keller



from City
(follow the people)

Entlas Keller





LIST OF PARTICIPANTS

Agladze	Tamaz	Chourou	Mohamed Lassaad
Ahlers	Michael	Denayer	Jessica
Alar	Vesna	Dergacheva	Margarita
Albu	Sergiu P.	Diamanti	Maria Vittoria
Ali	Rania	Dittrich	Thomas
Altube	Ainhoa	Dmitrieva	Evgenia
Anicai	Liana	Doan	Nguyet
Arkadiusz	Gajek	Dorosheva	Olga
Astrova	Ekaterina	Drechsel	Peter
Azumi	Kazuhisa	Durgaryan	Armen
Baltruschat	Helmut	Elias	Jamil
Banas	Jacek	Ezginer	Funda
Banu	Alexandra	Flis	Janusz
Baram	Nir	Flis-Kabulska	Iwona
Bastide	Stéphane	Forsén	Olof
Bauer	Sebastian	Fromondi	Iosif
Beranek	Radim	Fujimoto	Shinji
Bereket	Gözen	Fukami	Kazuhiro
Berger	Steffen	Geta	Carac
Berger	Thomas	Ghoneim	Mohamed M.
Betz	Wolfgang	Gómez	Roberto
Bliznakov	Stoyan	Granitzer	Petra
Boguslaw	Mazurkiewicz	Grundmeier	Guido
Bojinov	Martin	Grushevskaya	Svetlana
Bora	Debajeet	Grzanna	Jürgen
Boshkov	Nikolai	Gyenge	Elod
Boukherroub	Rabah	Haarberg	Geir Martin
Bouroushian	Mirtat	Hagfeldt	Anders
Breimesser	Mathias	Hahn	Robert
Brunner	Johannes	Hammond	John
Brülle	Tine	Hassel	Achim Walter
Bund	Andreas	Hebert	Kurt
Charlier	Julienne	Hedberg	Jonas
Chen	Hong-Yuan	Hillman	Robert
Cheriet	Abdelhak	Homma	Takayuki
		Hueppe	Michael
		Jankulovska	Milena



Jarosik	Anna	Morin	Silvie
Kelly	John	Munoz	Andres G.
Kellner	Florian	Murakoshi	Kei
Killian	Manuela	Nah	Yoon-Chae
Kim	Doohun	Napolskii	Kirill
Kiyong	Lee	Niwano	Michio
Kleperis	Janis	Nychyporuk	Tetyana
Kontos	Athanassios	Obigodi	Georgia
Kontturi	Kyösti	Oekermann	Torsten
Kosec	Tadeja Kosec	Ono	Sachiko
Koshida	Nobuyoshi	Paramasivam	Indhumati
Kovač	Jaka	Pavlikov	Alexander
Krasicka-Cydzik	Elzbieta	Penkova	Nataliya
Krawiec	Halina	Pereira	Ernesto
Królikowski	Andrzej	Perova	Tatiana
Krysinski	Pawel	Plieth	Waldfried
Kunze	Julia	Pronkin	Sergey
Kvarnström	Carita	Refait	Philippe
Kwiatkowski	Lech	Ritter	Stefan
Lacconi	Gabriela	Roy	Poulomi
Lana	Teresa	Rumpf	Klemens
Lazarescu	Valentina	Sagues	Alberto
LeClere	Darren	Sakairi	Masatoshi
Lee	Chi-Woo	Salonen	Jarno
Lee	Joo Yul	Santa	Monika
Legat	Andraž	Saval	Catherine
Linhardt	Paul	Schlettwein	Derck
Luque	Noelia Beatriz	Schmachtel	Sönke
Lynch	Robert	Schmidt-Stein	Felix
Mäkilä	Ermei	Schmuki	Patrik
Mahdavian	Mohammad	Schneider	Oliver
Mandler	Daniel	Sepehri Fard	Ali
Martinez	Sanja	Shevchenko	Viktorii
McCafferty	Mary	Shrestha	Nabeen Kumar
McCafferty	Edward	Solarski	Wojciech
Mentus	Slavko	Song	Yan-Yan
Min	Yang		



Souto	Ricardo M.
Strehblow	Hans-Henning
Sutter	Eliane
Takahaschi	Hideaki
Tighinanu	Alexei
Tsirlina	Galina
Tsuchiya	Hiroaki
Turhan	Metehan C.
Tsygankova	Liudmila
Ullmann	Yolanda
Vadim	Yalishev
Valota	Anna
Van Hoeymissen	Jan
Van Overmeere	Quentin
Vaskevich	Alexander
Vignal	Vincent
Virtanen	Sannakaisa
Voloshchuk	Iryna
Wadhawan	Jay
Wagner	Norbert
Wang	Lidong
Wark	Michael
Wei	Wei
Wilson	Benjamin
Wolarek	Zofia
Xia	Xinghua
Xu	Jing-Juan
Yalishev	Vadim
Yliniemi	Kirsi
Zakroczymski	Tadeusz



Notes



SPONSORS DETAILS

This symposium is sponsored by:

Deutsche Forschungsgemeinschaft (DFG)

Kennedyallee 40

53175 Bonn

Tel: 0228/885-1

Fax: 0228/885-2777

E-Mail: postmaster@dfg.de

URL: <http://www.dfg.de>

The Electrochemical Society (ECS)

65 South Main Street, Building D

Pennington, New Jersey 08534-2839, USA

Tel: 1.609.737.1902

Fax: 1.609.737.2743

ecs@electrochem.org

ISE Office

International Society of Electrochemistry

Rue de Sébeillon 9b

CH-1004 Lausanne

Switzerland

Fax: +41 (0)21 648 39 75

E-mail: info@ise-online.org



ZAHNER-Elektrik GmbH & CoKG
Thuringer Strasse 12
96317 Kronach
Germany
Tel: +49-(0)9261-962119-0
Fax: +49-(0)9261-962119-99
E-mail: support@zahner.de

AMETEK GmbH
Rudolf-Diesel-Str. 16
40670 Meerbusch
Tel: +49 2159 9136-0
Fax: +49 2159 9136-39
E-mail: info@ametek.de

Belltec
Hubertusstr. 1
46485 Wesel
Tel: 0281 - 85 49 598
Fax: 0281 - 53 06 29
E-mail: info@belltec.de



CD OF ABSTRACTS

Please find the abstracts of all talks and posters on the attached CD.

The abstracts are also available online at:

<http://www.kscs2009.uni-erlangen.de>

Password: KSCS2009