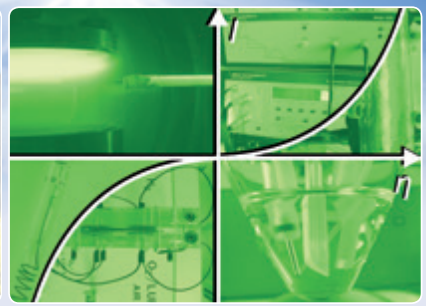
GDCh

Gesellschaft Deutscher Chemiker

ELECTROCHEMISTRY 2016

innovative, interdisciplinary, essential


HOTEL DER ACHTERMANN, GOSLAR
SEPTEMBER 26 – 28, 2016

TU Clausthal
Clausthal University of Technology

efzn
Energie-Forschungszentrum Niedersachsen

Supported by

Elektrochemie
Fachgruppe Elektrochemie

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Arbeitskreis Elektrochemische Analysenmethoden (ELACH, GDCh)

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www.gdch.de/electrochemistry2016

SECOND CIRCULAR & PROGRAM

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Claudia Weidlich	Frankfurt/Main
Gunther Wittstock	Oldenburg

LOCAL ORGANIZING COMMITTEE

Frank Endres	Clausthal-Zellerfeld
Thomas Turek	Clausthal-Zellerfeld

Dear colleagues,

the organizing committee of the conference ELECTROCHEMISTRY 2016 has the pleasure to invite you to visit Goslar, Germany, on September 26 – 28, 2016.

“Innovative, interdisciplinary, essential” is the theme of the meeting in Goslar. The conference will cover essential topics in modern electrochemistry combining multiple disciplines in actual research and development. The meeting aims to serve as a platform to discuss new results in the light of temporary challenges in different fields of science and engineering. Different sessions will deal with batteries, bioelectrochemistry, corrosion, electrocatalysis, electroplating, energy storage, engineering, ionic liquids, sensors, and water treatment in electrochemistry.

Goslar is a small city at the foot of the Harz Mountains. In the Middle Ages Goslar was an imperial city (for instance the “Road to Canossa” started here) and is famous for the Rammelsberg ore mine with the largest copper, lead and zinc ore deposits in the world. Even the conceptual artists Christo and Jean-Claude wrapped the last ore wagon and called it “Package on a hunt”. Both the old town of Goslar where the conference center “Der Achtermann” is located and the mine Rammelsberg where the conference dinner will take place belong to the UNESCO World Heritage. Additionally, the Clausthal University of Technology in the Upper Harz (distance to Goslar 20 km) has its roots in the early mining. The “Oberharzer Wasserregal” an outstanding evidence for engineering in mining belongs to the UNESCO World Heritage.

The conference ELECTROCHEMISTRY 2016 wants to carry on the spirit of the successful meetings 2008 in Gießen, 2010 in Bochum, 2012 in Munich, and 2014 in Mainz. As before, the meeting will be held in English, thus opening it to the international scientific community.

Frank Endres and Thomas Turek
(Conference Chairs)

Monday, September 26, 2016

11:00 **Registration**

Großer Saal

13:00 **WELCOME**
F. Endres, Clausthal-Zellerfeld/DE
T. Turek, Clausthal-Zellerfeld/DE

13:15 PLENARY LECTURE
Constant-Phase Elements in Corrosion: a way to get physical information
B. Tribollet, Paris/FR

14:05 PLENARY LECTURE
PEM type fuel cell flow field geometry optimisation: Largely solved problem or still an interesting challenge?
K. Bouzek, Prague/CZ, M. Drakselová, Prague/CZ, A. Giurg, Prague/CZ, M. Paidar, Prague/CZ

14:55 COFFEE BREAK


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Monday, September 26, 2016

Großer Saal

Batteries and electrochemical energy storage devices 1

15:30 **Effect of $AlPO_4$-Coating on the Electrochemical Performance of $LiMn_2O_4$ Thin Films in Aqueous Lithium-Ion Batteries**
A. Dushina, Bochum/DE, R. Trocoli, Bochum/DE, S. Borhani-Haghighi, Bochum/DE, A. Ludwig, Bochum/DE, F. La Mantia, Bremen/DE

15:55 **Investigation of flexible thin film lithium ion batteries under mechanical stress**
J. Glenneberg, Bremen/DE, I. Bardenhagen, Bremen/DE, F. Langer, Bremen/DE, R. Kun, Bremen/DE

16:20 **Gas Formation Processes in Lithium-Ion Batteries Studied by *In Situ* DEMS-DEIRS**
B. B. Berkes, Eggenstein-Leopoldshafen/DE, A. Schiele, Eggenstein-Leopoldshafen/DE, B. Michalak, Eggenstein-Leopoldshafen/DE, H. Sommer, Eggenstein-Leopoldshafen/DE, T. Brezesinski, Eggenstein-Leopoldshafen/DE, J. Janek, Eggenstein-Leopoldshafen/DE

16:45 **Studies of Phase Formation and Degradation during Lithiation and Delithiation using Stress Measurements in Lithium Ion Battery Electrodes**
D. Kramer, Karlsruhe/DE, A. Al-Obeidi, Cambridge/US, R. Mönig, Karlsruhe/DE, C. V. Thompson, Cambridge/US

17:10 ***In Situ* and Operando Atomic Force Microscopy of Silicon Composite Anodes**
B. Breitung, Karlsruhe/DE, P. Baumann, Ludwigshafen/DE, H. Sommer, Ludwigshafen/DE, J. Janek, Eggenstein-Leopoldshafen/DE, T. Brezesinski, Eggenstein-Leopoldshafen/DE

17:45 **AWARD LECTURES** Großer Saal

19:00 **POSTER SESSION**

Monday, September 26, 2016

Barbarasaal

Electroanalysis and sensors 1

15:30 **Anodically pretreated boron-doped diamond electrode for the determination of cytostatic drug imatinib**
K. Kaczmarska, Lodz/PL, M. Brycht, Lodz/PL, S. Skrzypek, Lodz/PL

15:55 **Molecularly Imprinted Poly(Methyl Orange) modified Carbon Paste Electrode for Voltammetric Determination of Dopamine**
I. Noviandri, Bandung/ID, N. Komala Eka Sari, Bandung/ID

16:20 **Applied Electrochemistry on Monolayer Graphene for Label-free Electronic Biosensing**
K. Balasubramanian, Stuttgart/DE, L. Zuccaro, Stuttgart/DE, R. M. Iost, Sao Paulo/BR, F. N. Crespilho, Sao Paulo/BR, B. R. Knudsen, Aarhus/DK, A. Desideri, Rome/IT, K. Kern, Stuttgart/DE

16:45 **Electrochemical Activation of Halogen Bonding in Solution**
B. Schöllhorn, Paris/FR, C. Fave, Paris/FR, S. Groni, Paris/FR, M. Branca, Paris/FR, F. Mavré, Paris/FR

17:10 **Novel insight to investigate the visible-light-driven water oxidation reaction at polarized liquid-liquid interfaces**
S. Rastgar, Oldenburg/DE

17:45 **AWARD LECTURES** Großer Saal

19:00 **POSTER SESSION**

Monday, September 26, 2016

Marmorsaal

Electrosynthesis and electrocatalysis 1

15:30 **The salt in the electrolysis soup: How supporting electrolytes and buffer capacity determine the performance of aqueous Kolbe-electrolysis**
C. Stang, Leipzig/DE, F. Harnisch, Leipzig/DE

15:55 **Synthesis of OCO-Pincer Ligands by Anodic C,C Cross-coupling Reactions**
S. Lips, Mainz/DE, S. R. Waldvogel, Mainz/DE, K. M. Dyballa, Marl/DE, R. Franke, Marl/DE

16:20 **Boron-Doped Diamond Electrodes for the Electrochemical C,H Amination of Non-Activated Arenes**
S. Herold, Mainz/DE, S. Möhle, Mainz/DE, M. Zirbes, Mainz/DE, F. Richter, Leverkusen/DE, H. Nefzger, Leverkusen/DE, S. R. Waldvogel, Mainz/DE

16:45 **Electrosynthesis: Electrochemical decarboxylation of carboxylic acids to higher value compounds**
H. J. Schäfer, Münster/DE, E. Klocke, Münster/DE, D. Hermeling, Münster/DE, U. Müller, Münster/DE

17:10 **Highly Selective Synthesis of 1,4-benzoxazin-3-ones by Electrochemical C,H-Amination**
L. Wesenberg, Mainz/DE, S. Herold, Mainz/DE, S. R. Waldvogel, Mainz/DE, J.-I. Yoshida, Kyoto/JP

17:45 **AWARD LECTURES** Großer Saal

19:00 **POSTER SESSION**

Tuesday, September 27, 2016 — Morning

Großer Saal

09:00 PLENARY SPEAKER
Materials and Electrocatalysis for energy storage and conversion
P. Strasser, Berlin/DE

09:50 COFFEE BREAK

Großer Saal

Batteries and electrochemical energy storage devices 2

10:20 KEYNOTE LECTURE
Microstructure resolved modeling and simulations of batteries as tool for understanding structure-function relations
A. Latz, Ulm/DE

10:55 **Determination of Physico-Chemical Parameters for Simulation of Lithium Ion Batteries**
J. Landesfeind, Garching/DE, A. Ehrl, Garching/DE, W. A. Wall, Garching/DE, H. A. Gasteiger, Garching/DE

11:20 **Non-linear frequency response analysis of Lithium-Ion-Batteries**
N. Harting, Braunschweig/DE, N. Wolff, Braunschweig/DE, U. Krewer, Braunschweig/DE

11:45 **Clarification of the mechanism of the formation of surface films on $LiMn_2O_4$ cathodes via a kinetic DRT-assisted approach**
T. P. Heins, Braunschweig/DE, N. Harms, Braunschweig/DE, N. Schlüter, Braunschweig/DE

12:10 **Li^+ Transference Numbers in Liquid Battery Electrolytes obtained by Very-low-frequency Impedance Spectroscopy at Variable Electrode Spacing**
B. Roling, Marburg/DE, F. Wohde, Marburg/DE, M. Balabajew, Marburg/DE

12:30 LUNCH BREAK

PROGRAM

Tuesday, September 27, 2016 — Morning

Großer Saal

09:00 PLENARY SPEAKER
Materials and Electrocatalysis for energy storage and conversion
P. Strasser, Berlin/DE

09:50 COFFEE BREAK

Barbarasaal

Fundamental and theoretical electrochemistry 1

10:20 KEYNOTE LECTURE
The revival of bipolar electrochemistry: from materials science to electroanalysis and back
A. Kuhn, Bordeaux/FR

10:55 **Efficient "On-the-Fly" Calculation of Raman Spectra from Ab-Initio Molecular Dynamics: Application to Lithium-Sulfur Batteries**
P. Partovi-Azar, Berlin/DE, P. Kaghazchi, Berlin/DE, T. D. Kühne, Paderborn/DE

11:20 **Ab initio based calculation of ionic conductivity inionic solids**
A. Moradabadi, Berlin/DE, P. Kaghazchi, Berlin/DE

11:45 **Size-dependent Site Effect in CO Adsorption on Platinum Nanoparticles**
S. Panahian Jand, Berlin/DE, C. Brieger, Berlin/DE, J. Melke, Berlin/DE, C. Roth, Berlin/DE, P. Kaghazchi, Berlin/DE

12:10 **Noble metals dissolution/corrosion**
S. Cherevko, Erlangen/DE, S. Geiger, Düsseldorf/DE, O. Kasian, Düsseldorf/DE, E. Pizzutilo, Düsseldorf/DE, A. Mingers, Düsseldorf/DE, N. Kulyk, Düsseldorf/DE, K. J. J. Mayrhofer, Erlangen/DE

12:30 LUNCH BREAK

Tuesday, September 27, 2016 — Morning

Großer Saal

09:00 PLENARY SPEAKER
Materials and Electrocatalysis for energy storage and conversion
P. Strasser, Berlin/DE

09:50 COFFEE BREAK

Marmorsaal

Electrosynthesis and electrocatalysis 2

10:20 KEYNOTE LECTURE
Laccase immobilized on a mixed thiol monolayer on Au(111) – a scanning probe study of structure-dependent activity towards oxygen reduction
J. Kunze-Liebhäuser, Innsbruck/AT

10:55 **Boosting Performance of Carbon-Supported Pt Catalysts for Fuel Cell Catalysis through Ionic Liquid Modification**
G. Zhang, Darmstadt/DE, M. Munoz, Erlangen/DE, B. Etzold, Darmstadt/DE

11:20 **Enhanced Electrocatalytic Oxidation of Formic Acid at Pt Nanoparticles Modified GC Electrode in the Presence of Hydrocarbon Impurities**
M. S. El-Deab, Cairo/EG, G. El-Nagar, Cairo/EG, A. Mohammad, Cairo/EG, B. El-Anadouli, Cairo/EG

11:45 **Formic Acid Electrooxidation at a Polycrystalline Au film Electrode studied by Simultaneous *in situ* ATR-FTIRS and online DEMS**
Z. Jusys, Ulm/DE, R. J. Behm, Ulm/DE

12:10 **Electrochemical Degradation of Shape-controlled Platinum Nanoparticles for PEFC Application**
I. A. Safo, Oldenburg/DE, M. Oezaslan, Oldenburg/DE, J. S. Haverkamp, Oldenburg/DE, R. Meinen, Oldenburg/DE

12:30 LUNCH BREAK

Tuesday, September 27, 2016 — Afternoon

Großer Saal

Batteries and electrochemical energy storage devices 3

14:00 KEYNOTE LECTURE
Ion conductor membranes for electrochemical energy technologies
P. Knauth, Marseille/FR

14:35 **Aqueous Ionic Liquid Electrolytes for High Voltage Redox Flow Batteries**
R. Chen, Saarbrücken/DE

15:00 **State of Charge Monitoring for Vanadium Redox-Flow-Batteries**
C. Weidlich, Frankfurt (Main)/DE, P. Pyka, Frankfurt (Main)/DE, K.-M. Mangold, Frankfurt (Main)/DE

15:25 **The Soluble Zinc Electrode in Zinc/Air Redox Flow Batteries**
B. Gollas, Graz/AT, C. Zelger, Graz/AT

15:45 COFFEE BREAK

Batteries and electrochemical energy storage devices 4

16:15 **Carbon Xerogels as Cathode Material in the Aprotic Li/O_2-Battery**
I. Bardenhagen, Bremen/DE, D. Fenske, Oldenburg/DE, A. Wittstock, Bremen/DE, M. Bäumer, Bremen/DE

16:40 **Towards Magnesium-Sulfur Batteries**
G. Bieker, Münster/DE, M. Winter, Münster/DE, P. Bieker, Münster/DE

17:05 **On the Way of Improving Zinc-Ion Batteries Based on Copper Hexacyanoferrate for Grid-Scale Energy Storage**
A. Bani Hashemi, Bremen/DE, G. Kasiri Bidhendi, Bremen/DE, F. La Mantia, Bremen/DE

17:30 **Development of an Aluminum Ion Battery**
W. Peters, Frankfurt (Main)/DE, J.-F. Drillet, Frankfurt (Main)/DE

17:50 **GENERAL MEETING**

19:00 Bus Transfer to Rammelsberg

19:30 **CONFERENCE DINNER**

Tuesday, September 27, 2016 — Afternoon

Barbarasaal

Electroanalysis and sensors 2

14:00 KEYNOTE LECTURE
Electrochemistry – the flexible tool box for hyphenation with instrumental analytical techniques
F.-M. Matysik, Regensburg/DE

14:35 **High-resolution imaging on micro-patterned electrodes by PeakForce AFM-SECM**
A. Mark, Bayreuth/DE, S. Goedrich, C. Stelling, Bayreuth/DE, H. Stadler, Karlsruhe/DE, Z. Huang, Goleta/US, M. Retsch, G. Papastavrou, Bayreuth/DE

15:00 **Scanning electrochemical microscopy with forced convection**
C. Iffelsberger, Regensburg/DE, F.-M. Matysik, Regensburg/DE

15:25 **Voltammetric test cell, corrosion test cell**
H.-J. Kohnke, Kassel/DE

15:45 COFFEE BREAK

Bioelectrochemistry

16:15 **A sub-molecular level response of DNA double helix to electric potentials: in situ spectroelectrochemical study**
I. Brand, Oldenburg/DE, L. Kekedy-Nagy, E. Ferapontova, Aarhus/DK

16:40 **Controlled release of ROS using polymer-modified microelectrode in the cell environment: Investigation of local oxidative stress**
S. Dongmo, Oldenburg/DE, J. Leyk, C. Richter-Landsberg, C. Dosche, G. Wittstock, Oldenburg/DE

17:05 **Application of localized electrochemical methods to the analysis of microbiologically influenced corrosion**
M. Hampel, Berlin/DE, O. Ozcan, Berlin/DE

17:30 **Enzyme electrodes based on multilayer polymer systems for the protection against oxygen and interfering substances**
A. Ruff, Bochum/DE, F. Lopez, J. Szczesny, Bochum/DE, S. Zacarias, I. C. Pereira, Oeiras/PT, W. Lubitz, Mülheim an der Ruhr/DE, R. Ludwig, Vienna/AT, N. Plumeré, W. Schuhmann, Bochum/DE

17:50 **GENERAL MEETING**

19:00 Bus Transfer to Rammelsberg

19:30 **CONFERENCE DINNER**

Tuesday, September 27, 2016 — Afternoon

Marmorsaal

Electrosynthesis and electrocatalysis 3

14:00 KEYNOTE LECTURE
Recent development in the preparation of Me-N-C catalysts for the oxygen reduction reaction
U. I. Kramm, Darmstadt/DE

14:35 **Polyaniline Derived N-doped Carbon Nanofiber Catalysts for the OxygenReduction Reaction**
J. Melke, Berlin/DE, C. Roth, Berlin/DE, B. Peter, J. Ziegler, Darmstadt/DE, A. Nefedov, C. Wöll, H. Ehrenberg, H. Sezen, Karlsruhe/DE

15:00 **Structure-Reactivity-Interaction of Metal Oxide Based Fuel Cell Catalysts Studied by Surface Interrogation Scanning Electrochemical Microscopy**
J. Behnken, Oldenburg/DE, A. Dyck, Oldenburg/DE, H. Tüysüz, Mühlheim an der Ruhr/DE, G. Wittstock, Oldenburg/DE

15:25 **Hierarchical porous carbon foams for fuel cell applications**
H. Natter, Saarbrücken/DE

15:45 COFFEE BREAK

Electrosynthesis and electrocatalysis 4

16:15 **Tin rich ITO derived composites for electroreduction of CO_2 to formate**
L. C. Pardo Perez, Berlin/DE, A. Guiet, C. Goebel, D. Teschner, R. Kraehnert, M. Driess, Berlin/DE, A. Fischer, Freiburg/DE

16:40 **Cyclopentadienone iron complexes as catalysts for the electroreduction of CO_2**
R. Francke, Rostock/DE, A. Rosas, M. Römelt, S. Fischer, R. Ludwig, H. Junge, M. Beller, Rostock/DE

17:05 **Spectroelectrochemical insights into the formation of robust interfaces for the immobilization of biological and molecular electrocatalysts**
T. G. A. A. Harris, Berlin/DE, N. Heidary, P. Hildebrandt, I. Zebger, Berlin/DE, A. Fischer, Freiburg/DE

17:30 **On the origin of the improved ruthenium stability in the RuO_2–IrO_2 mixed oxide anodes for water electrolysis**
O. Kasian, Düsseldorf/DE, S. Geiger, G. Polymeros, Düsseldorf/DE, A. Savan, A. Ludwig, Bochum/DE, S. Cherevko, K. J. J. Mayrhofer, Erlangen/DE

17:50 **GENERAL MEETING**

19:00 Bus Transfer to Rammelsberg

19:30 **CONFERENCE DINNER**

Wednesday, September 28, 2016 Morning

Großer Saal

09:00 PLENARY LECTURE
Electrodeposition using deep eutectic solvents
A. Abbott, Leicester/GB, K. Ryder, Leicester/GB

09:50 COFFEE BREAK

Großer Saal

Ionic Liquids

10:20 KEYNOTE LECTURE
Speciation Control and Oxidation Mechanisms for Applications in Ionometallurgy
G. Frisch, Freiberg/DE, J. Hartley, Freiberg/DE, E. Cruces, Antofagasta/CL, L. Velásquez, Santiago/CL

10:55 **Strategies for the electrodeposition of dendrite-free zinc deposits in ionic liquids**
Z. Liu, Clausthal-Zellerfeld/DE

11:20 **Decomposition of the Ionic Liquid [BMP][TFSA] on Gold and Glassy Carbon Studied by Differential Electrochemical Mass Spectrometry (DEMS)**
D. Alwast, Ulm/DE, J. Schnaidt, K. Hancock, R. J. Behm, Ulm/DE

11:45 **Ionic liquid based Electrolyte Systems for Metal-Air Batteries**
T. J. S. Schubert, Heilbronn/DE, M. Ahrens, M. Großhauser, Heilbronn/DE

12:10 **Development of a rechargeable Al-air battery with ionic liquid electrolyte**
N. Bogolowski, Frankfurt (Main)/DE, O. Ngaleu, J.-F. Drillet, Frankfurt (Main)/DE

12:30 LUNCH BREAK

Wednesday, September 28, 2016 Morning

Großer Saal

09:00 PLENARY LECTURE
Electrodeposition using deep eutectic solvents
A. Abbott, Leicester/GB, K. Ryder, Leicester/GB

09:50 COFFEE BREAK

Barbarasaal

Fundamental and theoretical electrochemistry 2 / Solid state electrochemistry and photoelectrochemistry 1

10:20 KEYNOTE LECTURE
STM Studies in Ionic Liquids of Electrochemical Single Molecule Transistors and Molecular Wires
R. Nichols, Liverpool/GB, H. M. Osorio, P. Cea, Zaragoza/ES, J. B. G Gluyas, Perth/AU, F. Hartl, Reading/GB, S. J. Higgins, E. Leary, Liverpool/GB, P. J. Low, Perth/AU, S. Martín, Zaragoza/ES, J. Tory, Reading/GB, J. Ulstrup, Lyngby/DK, A. Vezzoli, D. C. Milan, Liverpool/GB, Q. Zeng, Reading/GB, S. Catarelli, Liverpool/GB, W. Schwarzacher, Bristol/GB, B. W. Mao, J. W. Yan, Xiamen/CN, J. O. Jeppesen, J. Lycoops, Odense/DK, W. Haiss, G. Sedghi, Liverpool/GB

10:55 **Theoretical model for the mixed ionic-electronic transport during electro-thermal poling**
M. Schäfer, Marburg/DE, K.-M. Weitzel, Marburg/DE

11:20 **Transport of ions in a mixed Na^+/K^+ ion conducting glass – electrodiffusion profiles and electrochemical interphase formation**
K.-M. Weitzel, Marburg/DE, J. Martin, S. Mehrwald, M. Schäfer, Marburg/DE, T. Kramer, C. Jooss, Göttingen/DE

11:45 **Revealing Electronic Coupling in Semiconductor Nanoparticle Networks by Electrochemistry**
M. Weber, Tübingen/DE, M. Scheele, Tübingen/DE

12:10 **Low iridium catalyst loading challenges in PEM water electrolysis**
S. Geiger, Düsseldorf/DE, O. Kasian, J.-P. Grote, A. M. Mingers, Düsseldorf/DE, T. Oellers, A. Ludwig, Bochum/DE, K. J. J. Mayrhofer, S. Cherevko, Erlangen/DE

12:30 LUNCH BREAK

Wednesday, September 28, 2016 Morning

Großer Saal

09:00 PLENARY LECTURE
Electrodeposition using deep eutectic solvents
A. Abbott, Leicester/GB, K. Ryder, Leicester/GB

09:50 COFFEE BREAK

Marmorsaal

Electrosynthesis and electrocatalysis 5

10:20 KEYNOTE LECTURE
Replacing critical elements in electrocatalysis: New catalysts for ORR and OER
A. Fischer, Freiburg/DE, L. Pardo, M. Rohloff, B. Bouabadi, P. Elsässer, J. Melke, I. Zaharieva, H. Dau, Freiburg/DE

10:55 **Lanthanum Cobaltate Nanomaterials as Bifunctional Catalysts in Metal-Air Battery Systems**
S. Zellmer, Braunschweig/DE, D. Schröder, Gießen/DE, M. Fiebig, R. McClain, U. Krewer, G. Garnweitner, Braunschweig/DE

11:20 **The catalytic effect of Fe on nanocrystalline Ni-base alloys on the oxygenevolution reaction under technical conditions**
T. Rauscher, Dresden/DE, C. I. Müller, M. Ihrig, B. Kieback, L. Röntzsch, Dresden/DE

11:45 **Stability of Octahedral-Shaped PtNi Nanoparticles for Electrochemical Oxygen Reduction – *ex situ* and *in situ* TEM study**
S. Kühl, Berlin/DE, M. Gocyla, Jülich/DE, H. Heyen, V. Beermann, Berlin/DE, M. Heggen, R. E. Dunin-Borkowski, Jülich/DE, P. Strasser, Berlin/DE

12:10 **Activity vs. stability. Design of electrocatalysts for the oxygen evolution reaction and oxygen reduction reaction in alkaline media**
W. Schuhmann, Bochum/DE, J. Masa, B. Konkena, K. Elumeeva, S. Barwe, C. Andronescu, D. Morales, A. Botz, S. Möller, E. Ventosa, Bochum/DE

12:30 LUNCH BREAK

Wednesday, September 28, 2016 Afternoon

Großer Saal

Batteries and electrochemical energy storage devices 5

14:00 **Structure-Capacitance Relationship of Carbonaceous Supercapacitor Electrodes**
I. Lederer, Würzburg/DE, M. Wiener, G. Reichenauer, Würzburg/DE

14:25 **Nano-structured nickel electrodes for ultra-high power aqueous asymmetric double layer capacitors**
O. Böse, Ulm/DE, J. B. Asante, L. Jörissen, Ulm/DE

14:50 **Understanding the binder effect on the long-term cycling stability of activated carbon based supercapacitors in Li-salt containing electrolytes**
H. Y. Tran, Ulm/DE, M. Wohlfahrt-Mehrens, S. Dsoke, Ulm/DE

15:15 **Electrochemical water oxidation with Phtalocyanine based porous carbons**
C. Broicher, Aachen/DE, J. Artz, P. Hausoul, S. Palkovits, R. Palkovits, Aachen/DE

15:35 COFFEE BREAK

Batteries and electrochemical energy storage devices 6

16:00 **Transition metal dissolution and deposition in Li-ion batteries investigated by *operando* Xray absorption spectroscopy**
J. Wandt, Munich/DE, A. Freiberg, R. Thomas, Y. Gorlin, A. Siebel, R. Jung, H. A. Gasteiger, Munich/DE, M. Tromp, Amsterdam/NL

16:25 **Investigation of lithium ion transport processes in a composite electrolyte**
F. Langer, Bremen/DE, I. Bardenhagen, J. Glenneberg, R. Kun, Bremen/DE

16:50 **10-Methylphenothiazine- and Thianthrene-functionalised Polymers As Organic Cathode Materials In Dual-Ion Batteries**
M. Kolek, Münster/DE, P. Schmidt, M. Speer, B. Esser, Freiburg/DE, M. Winter, P. M. Bieker, Münster/DE

17:15 **Molecular Solvents in Ionic Liquid containing Li salts as electrolytes for Li-ion battery: Influence on the battery performance and solid-electrolyte interphase**
A. Lahiri, Clausthal-Zellerfeld/DE, M. Olschewski, F. Endres, Clausthal-Zellerfeld/DE

17:40 CLOSING REMARKS
F. Endres, Clausthal-Zellerfeld/DE
T. Turek, Clausthal-Zellerfeld/DE

Wednesday, September 28, 2016 Afternoon

Barbarasaal

Solid state electrochemistry and photoelectrochemistry 2

14:00 **Oxygen Electrocatalysis with Epitaxial Oxide Thin Films**
M. Risch, Göttingen/DE, K. A. Stoerzinger, Cambridge/US, J. Scholz, C. Jooss, Göttingen/DE, Y. Shao-Horn, Cambridge/US

14:25 **Solid Electrolytes for Supercapacitors – a reasonable Idea?**
K. Anneser, Würzburg/DE, S. Braxmeier, J. Reichstein, G. Reichenauer, Würzburg/DE

14:50 **Photoelectrochemical screening of water splitting catalysts**
D. Kimmich, Oldenburg/DE, C. Dosche, D. Hailu Taffa, M. Wark, G. Wittstock, Oldenburg/DE

15:15 **Electrochemical removal of NOx using solid oxide cells**
P. Holtappels, Roskilde/DK, K. K. Hansen, M. L. Traulsen, Roskilde/DK

15:35 COFFEE BREAK

Electrochemical water treatment / Electroplating

16:00 **Removal of iodinated X-ray contrast media by electrochemical treatment**
A.-L. Schneider, Karlsruhe/DE, H. Schell, Karlsruhe/DE, S. Hild, K.-M. Mangold, Frankfurt (Main)/DE, A. Tiehm, Karlsruhe/DE

16:25 **Electrosorption of organic molecules on activated carbon**
S. Hild, Frankfurt (Main)/DE, J. Schuster, R. Simon, J. Tchangou, Frankfurt (Main)/DE, A.-L. Schneider, H. Schell, A. Tiehm, Karlsruhe/DE, K.-M. Mangold, Frankfurt (Main)/DE

16:50 **Improvement of electrochemical performance of a microbial fuel cell anode by continuous cell operation with a high power potassium ferricyanide cathode**
B. Jiang, Clausthal-Zellerfeld/DE, U. Kunz, Clausthal-Zellerfeld/DE

17:15 **Make it efficiently – energy savings for the electro-galvanizing process**
M. Debeaux, Salzgitter/DE

17:40 **CLOSING REMARKS** Großer Saal
F. Endres, Clausthal-Zellerfeld/DE
T. Turek, Clausthal-Zellerfeld/DE

PROGRAM

Wednesday, September 28, 2016 Afternoon

Marmorsaal

Electrochemical engineering 1

14:00 **Electrosynthesis of hydrogen peroxide**
R. Bisselink, Zeist/NL

14:25 **Modelling and simulation of an alkaline water electrolyzer**
P. Haug, Clausthal-Zellerfeld/DE, T. Turek, Clausthal-Zellerfeld/DE

14:50 **Development and Optimization of Gas Diffusion Electrodes for Electrochemical CO_2 Reduction at High Current Density**
D. Kopljar, Stuttgart/DE, N. Wagner, E. Klemm, Stuttgart/DE

15:15 **Electrochemical Monitoring of N,N'-diethylthiourea in Electroless Copper Electrolytes**
P.-A. Wasner, Berlin/DE, R.-D. Zimmermann, E. Steinhäuser, L. Stamp, F. Brüning, C. Donner, Berlin/DE, N. Fréty, E. Anglaret, Montpellier/FR

15:35 COFFEE BREAK

Electrochemical engineering 2 / Corrosion science and electrochemical machining

16:00 ***In situ* Investigation of Local Corrosion Behavior of Zinc in Substitute Ocean Water at its Early Stages by SECM and SVET**
L. Veleva, Merida/MX, E. Mena, Merida/MX, R. M. Souto, La Laguna/MX

16:25 **Phosphorus zinc-based inhibitors as carbon steel corrosion mitigators**
A. L. Barbosa, Cartagena/CO, E. Lopez, Cartagena/CO

16:50 **Ti Gas Diffusion Layer Passivation During PEM Water Electrolyser Operation**
T. Bystron, Prague/CZ, J. Polonsky, K. Bouzek, Prague/CZ

17:15 **Temperature Effect of Start-Up / Shut-Down Damage in PEMFCs**
T. Mittermeier, Munich/DE, A. Weiß, F. Hasché, H. A. Gasteiger, Munich/DE

17:40 **CLOSING REMARKS** Großer Saal
F. Endres, Clausthal-Zellerfeld/DE
T. Turek, Clausthal-Zellerfeld/DE

POSTER

Batteries and electrochemical energy storage devices

A001 **Competition between V^{2+}/V^{3+} and hydrogen evolution reaction (HER) in all-Vanadium redox flow batteries at fresh and aged carbon felt electrodes**
C. Roth, Berlin/DE, I. Derr, Berlin/DE, J. Langner, Karlsruhe/DE, K. Schutjajew, Berlin/DE

A002 **Resistance build-up of lithium- and manganese-rich layered oxides depending on the lithium content**
T. Teufl, Ludwigshafen/DE, D. Pritzl, Munich/DE, S. Solchenbach, Munich/DE, F. F. Chesneau, Ludwigshafen/DE, H. A. Gasteiger, Munich/DE, M. A. Mendez, Ludwigshafen/DE

A003 **Application of Localized Electrochemical Impedance Spectroscopy to Lithium Ion Electrodes**
N. Schlüter, Braunschweig/DE, T. P. Heins, Braunschweig/DE, N. Harms, Braunschweig/DE

A004 **SECM Investigation on Fresh prepared Li Surfaces for Application as a Negative Electrode on Li-ion Batteries**
E. dos Santos Sardinha, Oldenburg/DE, M. Ding, Ulm/DE, S. Passerini, Ulm/DE, G. Wittstock, Oldenburg/DE

A005 **Development of Tests for Lithium-Ion Cell Characterization**
A. Dreizler, Stuttgart/DE, J. Sattler, Stuttgart/DE, M. Steinhauer, Stuttgart/DE, C. Heim, Stuttgart/DE, N. Wagner, Stuttgart/DE, K. A. Friedrich, Stuttgart/DE

A006 **Proton exchange membranes from grafting polymerization of (meth)acrylate monomers on ETFE films – synthesis and fuel cell application**
M. Drache, Clausthal-Zellerfeld/DE, X. Ke, Clausthal-Zellerfeld/DE, X. Li, Clausthal-Zellerfeld/DE, U. Gohs, Dresden/DE, S. Beuermann, Clausthal-Zellerfeld/DE

A007 ***In situ* Observation of Electrode Wetting in Assembled Li-Ion Cells**
T. Echelmeyer, Hohenstein-Ernstthal/DE, M. A. Roscher, Hohenstein-Ernstthal/DE, M. Hirsemann, Hohenstein-Ernstthal/DE, M. Wolfram, Hohenstein-Ernstthal/DE

A008 **Investigations on an improved state-of-charge indicator for the all-vanadium redox flow battery**
J. Geiser, Saarbrücken/DE, H. Natter, Saarbrücken/DE, R. Hempelmann, Saarbrücken/DE

A009 **Reversible and Irreversible Degradation Rates Determined in PEM Fuel Cells**
J. Mitzel, Stuttgart/DE, P. Gazdzicki, Stuttgart/DE, I. Biswas, Stuttgart/DE, M. Schulze, Stuttgart/DE, K. A. Friedrich, Stuttgart/DE

A010 **Investigation of density and inhomogeneities of cubic $Li_7La_3Zr_2O_{12}$ samples**
J. Kirowitz, Vienna/AT, A. Welzl, Vienna/AT, R. Wagner, Salzburg/AT, D. Rettenwander, Massachusetts/US, S. Taibl, Vienna/AT, J. Amthauer, Salzburg/AT, J. Fleig, Vienna/AT

A011 **Characterization and improvement of the active materials in the vanadium redox flow battery**
K. Weißhaar, Saarbrücken/DE, H. Natter, Saarbrücken/DE, R. Hempelmann, Saarbrücken/DE

A012 **Silicon-nonmetal compounds as new promising electrode material**
R. Reinhold, Dresden/DE, U. Stoeck, Dresden/DE, S. Kaskel, Dresden/DE, L. Giebeler, Dresden/DE

A013 **Application of Porous Glass Membranes in Redox Flow Batteries - Influences of Membrane Thickness and Pore Structure**
H. Mögelin, Clausthal-Zellerfeld/DE, G. Yao, Clausthal-Zellerfeld/DE, A. Barascu, Leipzig/DE, R. Meyer, Leipzig/DE, D. Enke, Leipzig/DE, U. Kunz, Clausthal-Zellerfeld/DE

A014 **Do membranes determine the economic viability of redox flow batteries?**
C. Minke, Clausthal-Zellerfeld/DE, T. Turek, Clausthal-Zellerfeld/DE

A015 **Self-organized TiO_2 nanotubes as anode material for Li ion intercalation: insight into lithiation reaction kinetics, interface and surface chemistry**
A. Auer, Innsbruck/AT, D. Steiner, Innsbruck/AT, E. Portenkirchner, Innsbruck/AT, C. Valero-Vidal, Berkeley/USA, J. Kunze-Liebhäuser, Innsbruck/AT

A016 **Microwave synthesis of mesoporous SnO_2 as anode material for Li-ion batteries**
F. Meyer, Oldenburg/DE, M. Wark, Oldenburg/DE

A017 **Nanostructured carbon-titanium(oxy)nitride composite materials as highly active Pt-free oxygen reduction catalysts**
M. Eckardt, Ulm/DE, M. Wassner, Salzburg/AT, C. Gebauer, Ulm/DE, N. Hüsing, Salzburg/AT, R. J. Behm, Ulm/DE

A018 **Comparison of identically prepared PEM and AEM membrane electrode assemblies in the field of fuel cells**
S. Ackermann, Halle (Saale)/DE, N. Menzel, Halle (Saale)/DE, M. Bron, Halle (Saale)/DE

A019 **Experimentally validated flow rate model for a redox-flow battery**
A. R. dos Santos, Goslar/DE, E. Prumbohm, Goslar/DE, U. Kunz, Goslar/DE, T. Turek, Goslar/DE

A020 **Triiodide redox flow battery**
M. Piescheck, Braunschweig/DE, N. Heiland, Braunschweig/DE, U. Schröder, Braunschweig/DE

A021 **Investigating the effect of electrode composition on the electrochemical performance of tin nanoparticle based anode materials in lithium-ion batteries**
O. Joos, Münster/DE, M. Winter, Münster/DE, T. Placke, Münster/DE

A022 **Bifunctional electrocatalysts for reversible fuel cells characterized by DRIFTS**
A. Schätz, Halle (Saale)/DE, A. Hartmann, Halle (Saale)/DE, M. Bron, Halle (Saale)/DE

A023 **Electrolytes for the Rechargeable Magnesium Ion Battery**
B. Gollas, Graz/AT, D. Schloffer, Graz/AT

A024 **Comparative Performance Study of Different Cathode Materials for Lithium-Ion-Batteries**
D. Becker, Münster/DE, R. Klöpsch, Münster/DE, T. Placke, Münster/DE, M. Winter, Münster/DE

A025 **Rod Like Ni Doped $LiMn_2O_4$ Nanorods for Enhanced Electrochemical Properties**
A. Guler, Sakarya/TR, M. Guzeler, Sakarya/TR, D. Nalci, Sakarya/TR, S. Ozcan, Sakarya/TR, E. Bulut, Sakarya/TR, M. O. Guler, Sakarya/TR, H. Akbulut, Sakarya/TR

A026 **Free-Standing Si-C/Graphene Papers for High-Stability Li-Ion Battery Anodes**
D. Nalci, Sakarya/TR, M. Guzeler, Sakarya/TR, A. Guler, Sakarya/TR, M. O. Guler, Sakarya/TR, H. Akbulut, Sakarya/TR

A027 **Improved Electrochemical Performance of Cu_6Sn_5 -Graphene Anode Materials for Lithium Ion Batteries**
M. Guzeler, Sakarya/TR, D. Nalci, Sakarya/TR, A. Guler, Sakarya/TR, M. O. Guler, Sakarya/TR, H. Akbulut, Sakarya/TR

A028 **Investigating Electrochemical Performance of Yolk-Shell Tin/Carbon/Graphene Anode Materials for Lithium Ion Batteries**
M. O. Guler, Sakarya/TR, M. Guzeler, Sakarya/TR, D. Nalci, Sakarya/TR, A. Guler, Sakarya/TR, H. Akbulut, Sakarya/TR

A029 **Alkaline or Acidic? Characteristics and Efficiencies of Water Electrolysis**
M. Schalenbach, Düsseldorf/DE, S. Cherevko, Düsseldorf/DE, M. Carmo, Jülich/DE, W. Lueke, Jülich/DE, D. Stolten, Jülich/DE, K. J. J. Mayrhofer, Düsseldorf/DE

A030 **Performance and efficiency optimization of PEMFC stacks during operation**
J. Mitzel, Stuttgart/DE, P. Piela, Warsaw/PL

A031 **Polymer electrolyte membranes for vanadium redox-flow battery applications prepared by pre-irradiation induced graft copolymerization on ETFE**
X. Ke, Clausthal-Zellerfeld/DE, A. dos Santos, Goslar/DE, X. Li, Clausthal-Zellerfeld/DE, M. Drache, Clausthal-Zellerfeld/DE, U. Gohs, Dresden/DE, U. Kunz, Clausthal-Zellerfeld/DE, T. Turek, Clausthal-Zellerfeld/DE, S. Beuermann, Clausthal-Zellerfeld/DE

A032 **The implications of inhomogeneities in $Li_7La_3Zr_2O_{12}$ ceramics**
A. Welzl, Vienna/AT, J. Kirowitz, Vienna/AT, R. Wagner, Salzburg/AT, S. Smetaczek, Vienna/AT, M. Bonta, Vienna/AT, D. Rettenwander, Massachusetts/US, G. Amthauer, Salzburg/AT, A. Limbeck, Vienna/AT, J. Fleig, Vienna/AT

A033 **Hydrothermal Flow Reactors for Electrochemical Energy Storage Devices**
M. Lübke, London/GB, I. Johnson, London/GB, D. Howard, London/GB, Z. Liu, Singapore/SG, J. Darr, London/UK

A034 **Theoretical study of the solid electrolyte interphase layer in Na-ion batteries**
L.-Y. Kuo, Berlin/DE, M. Ashkan, Berlin/DE, H. Hsin-Fu, Taipei/TW, H. Bing-Joe, Taipei/TW, K. Payam, Berlin/DE

A036 **Determination of influencing factors for transport processes through membranes in vanadium redox-flow batteries**
K. Schafner, Clausthal/DE, M. Becker, Dortmund/DE, N. Tenhumberg, Dortmund/DE, N. Bredemeyer, Dortmund/DE, G. Polcyn, Dortmund/DE, U. Kunz, Clausthal/DE, T. Turek, Clausthal/DE

A037 **Activity and Stability of Bifunctional GDE in Ionic Liquid for Zn–Air Battery**
M. Sakthivel, Frankfurt (Main)/DE, P. Ingale, Frankfurt (Main)/DE, J.-F. Drillet, Frankfurt (Main)/DE

A038 **Investigating the Astonishing Difference in Capacity of Various GDLs as Positive Electrodes in LiO_2 cells**
M. Piana, Garching/DE, K. U. Schwenke, Garching/DE, R. Schweiss, Meitingen/DE, D. Auras, Garching/DE, P. W. Lim, Garching/DE, H. A. Gasteiger, Garching/DE

A039 **Electrochemistry Driven Structural Transition of VO_2F into Disordered Rock-Salt Nanophase**
R. Chen, Saarbrücken/DE, R. Hempelmann, Saarbrücken/DE

A040 **Spectroscopic and Electrochemical Investigations of the SEI Formation on Graphite Model Electrodes**
I. Weber, Ulm/DE, J. Schnaidt, Ulm/DE, M. Bozorgchenani, Ulm/DE, F. Buchner, Ulm/DE, T. Diemant, Ulm/DE, R. J. Behm, Ulm/DE

A041 **Model based and experimental analysis of sulfur reduction**
P. Schön, Braunschweig/DE, U. Krewer, Braunschweig/DE

Bioelectrochemistry

B001 **An alcohol dehydrogenase/alcohol oxidase-horseradish peroxidase based biofuel cell for a self-powered ethanol sensing system**
P. Pinyou, Bochum/DE, A. Ruff, Bochum/DE, F. Conzuelo, Bochum/DE, S. Alsaoub, Bochum/DE, W. Schuhmann, Bochum/DE

B002 **Investigation of the mechanisms of microbially induced corrosion on Fe/steel surfaces**
N. Wurzler, Berlin/DE, A. Buzanich, Berlin/DE, F. Emmerling, Berlin/DE, H.-J. Kunte, Berlin/DE, O. Ozcan, Berlin/DE

B003 **Biohydrometallurgical processing by an electro-bioleaching reactor**
C. Tanne, Hannover/DE, A. Schippers, Hannover/DE

B004 **Surface Modification by Self-Assembled Monolayers of Fluorescent Dyes**
A. Markovic, Oldenburg/DE, L. Freimuth, Oldenburg/DE, J. Christoffers, Oldenburg/DE, G. Wittstock, Oldenburg/DE

Corrosion science and electrochemical machining

C001 **Influence of different fluoride cocentrations on the electrochemical corrosion behavior of TCr_{20} compare to Ti**
C. Schille, Tübingen/DE, E. Schweizer, Tübingen/DE, Y. Oda, Chiba/JP, J. Geis-Gerstorfer, Tübingen/DE

C002 **Chemical and Electrochemical Interaction Mechanisms of Metal-Reducing Bacteria with Gold Surfaces**
E. Kastania, Berlin/DE, Ö. Özcan, Berlin/DE

C003 **Physico-chemical characterization of Colombian niobium ore and its possible use in anti-corrosion coatings**
A. L. Barbosa, Cartagena/CO, E. Estrada, Cartagena/CO, A. Jimenez, Cartagena/CO, E. Gonzalez, Cartagena/CO, L. Novoa, Cartagena/CO, L. E. Cortez, Cartagena/CO

C004 **Investigation of the silver corrosion on different metal substrates for medicalapplications**
A. El Arrassi, Bochum/DE, P. Belova, Bochum/DE, M. Köller, Bochum/DE, S. Memarjavid, Bochum/DE, C. Khare, Bochum/DE, Y. Motemani, Bochum/DE, A. Ludwig, Bochum/DE, C. Sengstock, Bochum/DE, K. Tschulik, Bochum/DE

Electroanalysis and sensors

D001 ***In Vitro* Tablet Dissolution Testing with Final Sample Analysis via Robotic Drug Voltammetry in Microplate Format**
W. Jaikaew, Nakhon Ratchasima/TH, A. Schulte, Nakhon Ratchasima/TH

D002 **Characterisation of barrier materials on semiconductor substrates by means of scanning electrochemical microscopy**
P. Hanekamp, Regensburg/DE, F. M. Matysik, Regensburg/DE

D003 **Capacitively coupled contactless conductivity measurements in separation science**
S. Piendl, Regensburg/DE, F.-M. Matysik, Regensburg/DE

D004 **Hyphenation of Electrochemistry – Capillary Electro-phoresis – Mass Spectrometry**
T. Herl, Regensburg/DE, F.-M. Matysik, Regensburg/DE

D005 **Development of an electrochemical flow cell for scanning electrochemical microscopy**
T. Raith, Regensburg/DE, C. Iffelsberger, Regensburg/DE, F. M. Matysik, Regensburg/DE

D006 **A Fast Electrochemical Quartz Crystal Microbalance, which Acquires Frequency and Bandwidth on Multiple Overtones**
A. Langhoff, Clausthal-Zellerfeld/DE, D. Johannsmann, Clausthal-Zellerfeld/DE, J. Löschmann, Clausthal-Zellerfeld/DE, J. Petri, Clausthal-Zellerfeld/DE

D007 **Disposable electrochemical sensor based on magnetic carbon coated cobalt nanoparticles for trace determinations of mercury in water**
S. Wang, Regensburg/DE, P. Vatsyayan, Regensburg/DE, B. Kastl, Regensburg/DE, O. Reiser, Regensburg/DE, F. M. Matysik, Regensburg/DE

D008 **Electrochemical sensor for simultaneous determination of uric acid and xanthine based on metal oxide nanoparticles modified glassy carbon paste electrode**
H. Ibrahim, Assiut/EG, Y. Temerk, Assiut/EG

D009 **Fabrication of Sn doped ceria nanoparticles modified glassy carbon past electrode for the selective determination of the anticancer drug dacarbazine in pharmaceuticals**
M. Ibrahim, Assiut/EG, Y. Temerk, Assiut/EG, H. Ibrahim, Assiut/EG

D010 **Investigation on nm-thin Ru layers by cyclic voltammetry and XPS**
V. Neumann, Dresden/DE, K. D. S. Reddy, Dresden/DE, S. Killge, Dresden/DE, M. Geidel, Dresden/DE, J. Bartha, Dresden/DE

D011 **Electrochmical sensor for 12-crown-4 ether and electrochemical properties by DFT method**
R. Razavi, Jiroft/IR

Electrochemical engineering

E001 **Influence of electrode aperture diameter and shape on oxygen evolution reaction in alkaline water electrolysis**
M. Koj, Clausthal-Zellerfeld/DE, T. Turek, Clausthal-Zellerfeld/DE

E002 **Electrically rechargeable zinc-oxygen flow battery with high power density**
M. Bockelmann, Clausthal-Zellerfeld/DE, U. Kunz, Clausthal-Zellerfeld/DE, T. Turek, Clausthal-Zellerfeld/DE

E003 **Towards scaling up 2,5-furandicarboxylic acid electrosynthesis**
R. J. M. Bisselink, Zeist/NL, R. Latsuzbaia, Delft/NL

E004 **Kinetics and rate limitations in a glycerol-fed microbial fuel cell**
F. Kubannek, Braunschweig/DE, B. Dziobek, Braunschweig/DE, U. Krewer, Braunschweig/DE

Electrochemical water treatment

F001 **Effective degradation of Pharmaceutical compound in acidic medium by Anodic oxidation using graphite and RuO_2/IrO_2/TaO_2 coated titanium anode**
P. Selvendiran, Coimbatore/IN, M. Muthukumar, Coimbatore/IN

F003 **Evaluation of microbial fuel cells with graphite/MnO_2 composite oxygen reduction cathode catalyst and their power generation performances in real waste water**
B. Jiang, Clausthal-Zellerfeld/DE, U. Kunz, Clausthal-Zellerfeld/DE

Electroplating

G001 **Developement of Pulse Electrodeposition for Removal of Hydrogen Bubbles Adhering to Cathode**
T. Kume, Tokyo/JP, G. Yamaguchi, Tokyo/JP, H. Mimura, Tokyo/JP

G002 **Electroplating of polyurethane foams**
S. Keck, Saarbrücken/DE, A. Jung, Saarbrücken/DE, R. Hempelmann, Saarbrücken/DE, H. Natter, Saarbrücken/DE

Electrosynthesis and electrocatalysis

H001 **An *in-situ* XRD and SAXS Study of the Morphological Stability of Platinum Nanoparticles on Oxide Supports for Oxygen Reduction Reaction**
H. Schmies, Berlin/DE, A. Bergmann, Berlin/DE, S. Kühl, Berlin/DE, J. Drnec, Grenoble/FR, G. Wang, Chicago/US, V. Ramani, Chicago/US, P. Strasser, Berlin/DE

H002 **Highly Active Pt-Ni Octahedral Nanoparticles for Oxygen Reduction Reaction – Correlation between Annealing Conditions, Activity and Stability**
V. Beermann, Berlin/DE, M. Gocyla, Jülich/DE, S. Kühl, Berlin/DE, M. Heggen, Jülich/DE, R. E. Dunin-Borkowski, Jülich/DE, P. Strasser, Berlin/DE

H003 **Enhancing Stability of Mixed Metal Oxide Catalysts for Electrochemical Water Splitting in Acidic Media**
C. Spöri, Berlin/DE, D. P. Wilkinson, Vancouver/CA, P. Strasser, Berlin/DE

H004 **Advances in Anodic C,C-Cross-Coupling Reactions of Phenols**
B. Riehl, Mainz/DE, S. R. Waldvogel, Mainz/DE

H005 **Reactivity and Selectivity of Nanoporous Copper for the Electrochemical CO_2 Reduction**
B. Hecker, Oldenburg/DE, M. Oezaslan, Oldenburg/DE

H006 **Selective Synthesis of Protected Non-Symmetric 2,2'-Diaminobiaryls by Anodic Aniline-Aniline Cross-Coupling Reactions**
L. Schulz, Mainz/DE, S. R. Waldvogel, Mainz/DE, K. M. Dyballa, Marl/DE, R. Franke, Marl/DE

H007 **Electrocatalytic hydrogenation of Hydroxyacetone**
W. Sauter, Braunschweig/DE, O. L. Bergmann, Braunschweig/DE

H008 **Investigation of Manganese-Cobalt Oxide Nano-particles as Electrocatalysts for the Oxygen-Evolution Reaction: Influence of Synthesis Conditions on Structure and Activity**
M. Gliech, Berlin/DE, M. Klingenhof, Berlin/DE, A. Bergmann, Berlin/DE, P. Strasser, Berlin/DE

H009 **Metal oxide-based Electrocatalysts for Oxygen Reduction Reaction (ORR)**
M. Lang, Oldenburg/DE, X. Deng, Mülheim an der Ruhr/DE, H. Tüysütz, Mülheim an der Ruhr/DE, M. Oezaslan, Oldenburg/DE

H010 **Nanostructured AuAg Yolk@Shell Electrocatalysts for Glucose Oxidation**
T. Unmüssig, Freiburg/DE, A. Guiet, Berlin/DE, A. Fischer, Freiburg/DE

H012 **Influence of the structural composition on the activity and stability of MeNC electrocatalysts for the Oxygen Reduction Reaction (ORR)**
I. Martinaiou, Darmstadt/DE, F. Grimm, Darmstadt/DE, A. Shahraei, Darmstadt/DE, S. Hesse, Darmstadt/DE, R. Stark, Darmstadt/DE, C. Wittich, Darmstadt/DE, H.- J. Kleebe, Darmstadt/DE, U. I. Kramm, Darmstadt/DE

H013 **On the role of metal species in Me-N-C catalysts for Hydrogen Evolution Reaction in alkaline environment**
A. Shahraei, Darmstadt/DE, U. I. Kramm, Darmstadt/DE

H014 **Influence of Mesoporous Carbon Support on Activity and Stability of Pt_3Pd/C for Oxygen Reduction Reaction**
M. Sakthivel, Frankfurt (Main)/DE, J.-F. Drillet, Frankfurt (Main)/DE

H015 **Electrochemical Synthesis of Aromatic Diamines via C,H-Amination**
S. Möhle, Mainz/DE, S. Herold, Mainz/DE, F. Richter, Leverkusen/DE, H. Nefzger, Leverkusen/DE, S. R. Waldvogel, Mainz/DE

H016 **Carbon supported IrSn alloys for the application as anode catalysts in fuel cells**
N. Erini, Darmstadt/DE, U. I. Kramm, Darmstadt/DE

H017 **Electro-oxidation of CO on Pt_xRu_{1-x}/Ru(0001) surface alloys – Structure-activity relationships at the atomic scale level**
J. Klein, Ulm/DE, S. Brimaud, Ulm/DE, R. J. Behm, Ulm/DE

Ionic Liquids

J001 **Towards IL-based electrolytes suitable for Li-O_2 batteries**
V. Huber, Innsbruck/AT, S. Oberparleiter, Innsbruck/AT, H. Schottenberger, Innsbruck/AT, J. Kunze-Liebhäuser, Innsbruck/AT

J002 **Self Assembly of Imidazolium Based Ionic Liquids at Mica Interfaces is Induced by Confinement and the Presence of Water**
J.-N. Dienemann, Krefeld/DE, H.-W. Cheng, Düsseldorf/DE, P. Stock, Düsseldorf/DE, C. Merola, Düsseldorf/DE, Y.-J. Chen, Düsseldorf/DE, M. Valtiner, Düsseldorf/DE

J003 **Influence of the Water Content in Proton Conducting Ionic Liquids on the Double Layer Capacitance and Oxygen Reduction Kinetics on Platinum**
K. Wippermann, Jülich/DE, J. Wackerl, Jülich/DE, S. Kuhri, Jülich/DE, C. Korte, Jülich/DE, W. Lehnert, Jülich/DE

J004 ***In situ* AFM studies of Ionic Liquids/Au(111) Interface**
T. Cui, Clausthal-Zellerfeld/DE, T. Carstens, Clausthal-Zellerfeld/DE, Z. Liu, Clausthal-Zellerfeld/DE, A. Lahiri, Clausthal-Zellerfeld/DE, G. Pulletikurthi, Clausthal-Zellerfeld/DE, N. Borisenko, Clausthal-Zellerfeld/DE, F. Endres, Clausthal-Zellerfeld/DE

J005 **A metal chloride based ionic liquid with a neutral substituted 1-butylpyrrolidine ligand for Electro-deposition of Aluminum, Zinc and Zinc-Aluminum alloy**
M. Shapouri Ghazvini, Clausthal-Zellerfeld/DE, G. Pulletikurthi, Clausthal-Zellerfeld/DE, F. Endres, Clausthal-Zellerfeld/DE

J006 **Electroless deposition in ionic liquids: Possibility of developing semiconductors and energy storage materials**
A. Lahiri, Clausthal Zellerfeld/DE, M. Olschewski, Clausthal Zellerfeld/DE, N. Borisenko, Clausthal Zellerfeld/DE, F. Endres, Clausthal Zellerfeld/DE

Fundamental and theoretical electrochemistry

K001 **Using Mott-Schottky equation for studing the influence of impurities in niobium on the properties of anodic niobium films**
L. Skatkov, Beer Sheva/IL

Solid state electrochemistry and photoelectrochemistry

L001 **Cobalt polypyridine complexes as redox electrolytes for ZnO-based dye-sensitized solar cells**
S. Scarabino, Oldenburg/DE, G. Wittstock, Oldenburg/DE

L002 **Mo-doped $BiVO_4$ thin films High photocatalytic performance achieved by tailored structure and morphology**
M. Rohloff, Berlin/DE, A. Fischer, Freiburg/DE

DEADLINES

August 7, 2016	Deadline for last-minute poster submission
August 14, 2016	Deadline for cancellation (full refund minus 25 € processing fee)

Last-minute poster submissions from all areas of electrochemistry and electrochemical engineering are possible till **August 7, 2016**.

The poster session will be on Monday from 19:00 to 21:00, but posters will be left mounted for viewing for the entire duration of the conference.

Abstracts for last-minute poster contributions need to follow the style guidelines published on the conference website:

www.gdch.de/electrochemistry2016

There are eleven sections with following topics:

- **Batteries and electrochemical energy storage devices**
- **Bioelectrochemistry**
- **Corrosion science and electrochemical machining**
- **Electroanalysis and sensors**
- **Electrochemical engineering**
- **Electrochemical water treatment**
- **Electroplating**
- **Electrosynthesis and electrocatalysis**
- **Fundamental and theoretical electrochemistry**
- **Ionic Liquids**
- **Solid state electrochemistry and photoelectrochemistry**

TRAVEL GRANTS

The GDCh Division Fachgruppe Elektrochemie (www.gdch.de/elektrochemie) offers a limited number of scholarships to student Division members in education presenting a scientific contribution (main author of an oral contribution or poster). Please send your application until June 3, 2016, latest to GDCh, Dr. Susanne Kühner, s.kuehner@gdch.de

SCIENTIFIC AWARDS

Promotion Prize in the Field of Applied Electrochemistry

The GDCh-Division of Electrochemistry awards a young chemist (less than 30 years of age). The prize is donated by BASF SE and consists of a certificate, € 1.000 and the invitation to the conference.

The price will be awarded during the conference dinner and the awardee is given the opportunity to present his/her results work in an award lecture.

Application for this prize is already closed.

Joachim Walter Schultze Prize of the AGEF

This prize will be awarded at the Electrochemistry 2016 to a young electrochemist who is at the beginning of her/his scientific carrier, has made a significant contribution to electrochemical research, and has demonstrated a visible independent profile.

Application for this prize is already closed.

The next Schultze prize will be awarded in 2018

Metrohm Poster Prize

Metrohm offers the Metrohm poster prize (introduced at ELACH conference 1993). Three excellent poster contributions will be awarded (€ 3000 in total) to young researchers who have not yet received their doctoral degree. Posters will be judged by the Award Committee appointed by the Scientific Advisory Board, and winners will be announced at the conference dinner.

Monday, September 26, 2016

19:00 – 21:00 **Poster Session**
with free drinks and snacks

Tuesday, September 27, 2016

The conference dinner will be held in Goslar at World Heritage “Rammelsberg” (a former mine).

Price p.P. (including beverages)*:
Regular Participants: € 60
Students/Postdocs: € 35

Booking required

* 19% VAT included

VENUE

The conference will be held at the Hotel “Der Achtermann” in Goslar.

Hotel der Achtermann
Rosentorstraße 20
38640 Goslar

TRAVEL INFORMATION

Directions to the hotel “Der Achtermann”
The hotel, located in the historic city center of Goslar, is reachable by train, car and plane.

By train
The venue is only 250 m from the Goslar train station. The next train stations with a connection to long-distance trains, Hanover and Göttingen, are circa 1 h away and can be reached hourly.

By car
When travelling by car, please ensure that you use the address Mauerstrasse 38, 38640 Goslar with your navigation device to reach the parking garage. The public car park ‘Parkhaus am Zentrum‘ provides 650 spaces and is directly connected to the hotel. Please note the height limit of 1.80 m for all vehicles.

By plane
The next airport is the Hanover Airport. From the Terminal C of the airport the suburban train S5 runs every 30 minutes to the Hanover main station. From there hourly trains take you to Goslar train station (duration from the airport to Goslar train station approx. 2 h).

DB **BAHN** “Deutsche Bahn” offers attractive conditions for travelling to GDCh events. Further information can be found at **http://en.gdch.de/railway**

ROOM RESERVATION

Rooms are reserved for the participants in various hotels throughout the city. The mainzplus CITYMARKETING will gladly assist you in booking accommodation in all categories. Please apply no later than **July 5, 2016**.

The link can be found on our homepage (Accommodation

www.gdch.de/electrochemistry2016

The customers will be held accountable for non-occupancy of reserved rooms.

REGISTRATION

Please register online via internet not later than **August 14, 2016** at:

www.gdch.de/electrochemistry2016

Deadline for early registration is June 30, 2016. All tickets and conference papers will be given to participants upon check-in at the registration desk.

Participants are requested to wear their conference badges at all times for identification and admittance to the conference rooms.

For online-registration, payment by credit card or direct debit (only with German bank account) is preferred. If you want to pay by bank transfer (free of bank commission) please do not forget to print out the invoice at the end of your online-registration.

Please pay the fees to the following account (free of bank commission):

Gesellschaft Deutscher Chemiker e.V.
Commerzbank AG, Frankfurt/Main
IBAN DE85 5008 0000 0490 0200 00
SWIFT-BIC DRESDEFFXXX
Code: 5200 36 / Electrochemistry 2016

REGISTRATION FEES**

	Early registration until June 30, 2016	From July 1, 2016
Member of joined scientific organizations	€ 240	€ 290
Non-member	€ 290	€ 340
Student/Postdoc (member)*	€ 120	€ 145
Student/Postdoc (non-member)*	€ 145	€ 195
Member, unemployed and retired	€ 120	€ 150
Gold member (with over 50 years of GDCh membership)	free of charge	free of charge
Conference Dinner (including beverages)	€ 60	€ 60
Conference Dinner for Student/Postdoc (including beverages)	€ 35	€ 35

* Fee applies to bachelor, master and Ph.D. students (valid student card or confirmation of supervisor required)

** The registration fees are not liable to value added tax (tax exemption additional § 4 Nr. 22a UstG.)

The coffee breaks, 2 snack buffets as well as the drinks & snacks during the poster session are included in the registration fee.

If fees are paid in advance, but after **September 9, 2016**, we kindly ask participants to show proof of payment when claiming their tickets and conference papers at the conference office. Credit cards (Amex, Mastercard, VISA) will be accepted.

CANCELLATION

Written cancellations received on or before **August 14, 2016** will be refunded less a € 25,- administration fee. After that date, the full amount of the invoice has to be paid. Requests for refund will not be accepted; however, registration may be transferred to another member of your organisation. In this case please send a note to tg@gdch.de.

If the conference is cancelled for whatever reason, fees paid will be refunded. Further recourse is excluded.

BEVERAGES

Coffee, tea and soft drinks will be provided for free during the breaks.

LUNCH

Two snack buffets in the hotel are included in the registration fee.

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INFORMATION CONCERNING THE SCIENTIFIC PROGRAM, ORGANIZATION AND OTHER GENERAL INFORMATION

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Local organizers can be reached via ec2016@tu-clausthal.de

INFORMATION BEFORE AND AFTER THE MEETING

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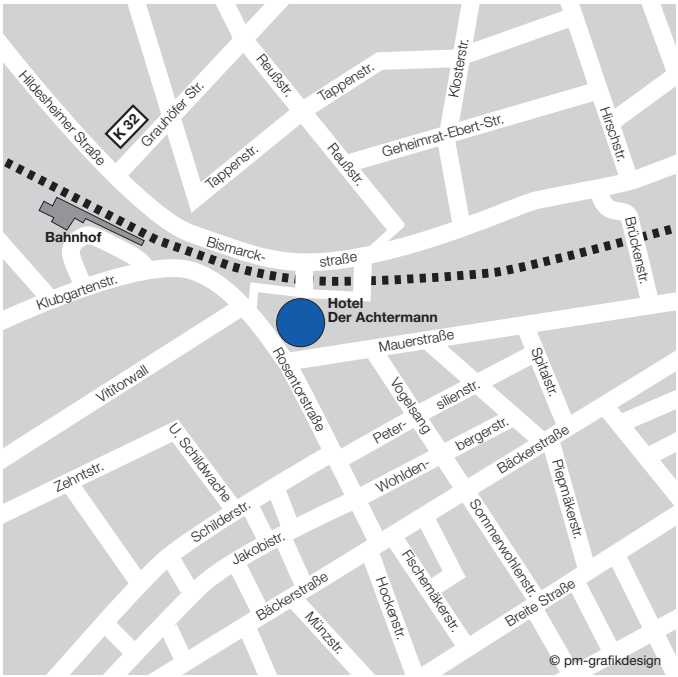
Internet: www.gdch.de/electrochemistry2016

Executive Director: Professor Dr. Wolfram Koch,
Registered charity no: VR 4453, Registergericht Frankfurt am Main

Date: June 24, 2016



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