



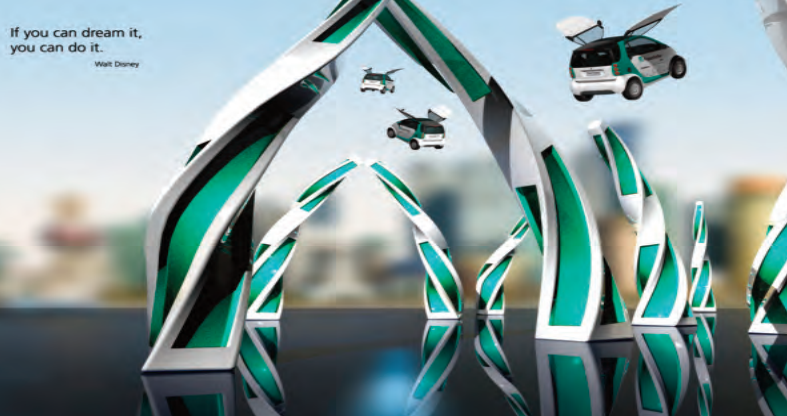
FRAUNHOFER-INSTITUT FÜR
WERKSTOFF- UND STRAHLTECHNIK IWS

3rd WORKSHOP
»LITHIUM-SULFUR-BATTERIES«



**November 12 - 13,
2014**
**Fraunhofer IWS
Dresden**

PROGRAM



Ladies and Gentlemen,

Lithium-sulfur batteries are the most promising choice for future energy storage systems. Novel materials such as nanostructured carbon/sulfur composite cathodes, solid electrolytes and alloy-based anodes are expected to significantly enhance the cell's performance.

Following the great success of our previous Lithium-Sulfur Battery Workshop in 2013, this year's symposium will again bring together an international audience of scientists and industrial customers. Renowned experts will present the latest results, new materials, processes and applications in the field of lithium-sulfur batteries. We are looking forward to welcoming you at Dresden.

Eckhard Beyer
Executive Director

Stefan Kaskel
Head of Department
Chemical Surface and
Reaction Technology

Fraunhofer IWS Dresden

PROGRAM

November 12, 2014

10:30 Registration

Session I Materials and cell design

Chair: Prof. Dr. Stefan Kaskel,
Fraunhofer IWS, TU Dresden

11:00 Welcome and opening
*Prof. Dr. Eckhard Beyer,
Fraunhofer IWS, TU Dresden*

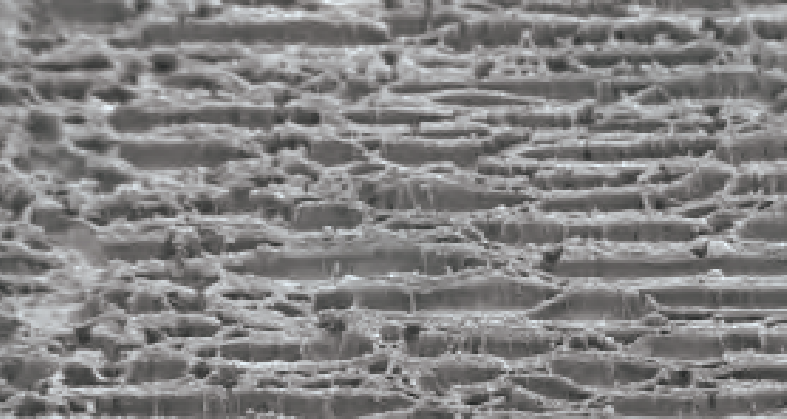
11:15 Development of lithium-sulfur batteries
*Prof. Donghai Wang, The Pennsylvania State
University*

12:00 Recent developments on sulfur batteries with
silicon anodes and a comparison to commercial
available NMC based batteries
Oliver Gröger, Volkswagen AG

12:30 Cathode design and processing for enhanced
Li-S-Batteries
Dr. Holger Althues, Fraunhofer IWS

13:00 Lunch break

14:15 Solid electrolyte membranes and thin films as
polysulfide shuttle barriers for Li/S-cells
Martin R. Busche, Justus-Liebig-Universität Gießen



- 14:45 Stabilization of sulfur & lithium sulfide cathodes by tuning particle architecture and electrolyte composition
Prof. Gleb Yushin, Georgia Institute of Technology
- 15:30 Coffee break
- 16:00 Structure and morphology of carbon black and graphite
Dr. Dario Cericola, imerys
- 16:30 Choosing the cathode binder: How much difference can it make?
Dr. Matthew Lacey, Uppsala University
- 17:00 Thermally coupled model for the dynamic performance of Li-S cells
Dr. Monica Marinescu, Imperial College London
- 17:45 Poster session and dinner at Fraunhofer IWS

PROGRAM

November 13, 2014

Session II Applications/Trends

Chair: Dr. Holger Althues, *Fraunhofer IWS*

- 9:00 Overview post-Li-Ion
Prof. Kristina Edström, Uppsala University
- 9:45 Better or worse than lithium? – A research overview on low temperature sodium-sulfur batteries
Dr. Philipp Adelhelm, Justus-Liebig-Universität Gießen
- 10:15 Coffee break
- 10:45 Lithium sulfur vs. lithium ion - chances and challenges
Dr. Stefan Koller, VARTA Micro Innovation GmbH
- 11:15 Li-S cells – requirements for high energy density compared to the state-of-the-art, and Li-S cell safety tests
Dr. Markus Hagen, Fraunhofer ICT
- 11:45 Lithium sulfur batteries for space applications
David Ainsworth, Oxis Energy LTD
- 12:15 Concluding remarks
Prof. Dr. Stefan Kaskel, Fraunhofer IWS, TU Dresden
- 12:30 Lunch break
- 13:30 Tour through the labs of the Fraunhofer IWS (1h)



ORGANIZATION

Location

Fraunhofer IWS Dresden
01277 Dresden, Winterbergstr. 28
Phone +49 351 83391-0
www.iws.fraunhofer.de

Workshop language: **English**

Workshop fee: **290 €**
(payable on receipt of the invoice)
The fee includes the conference documents and refreshments.

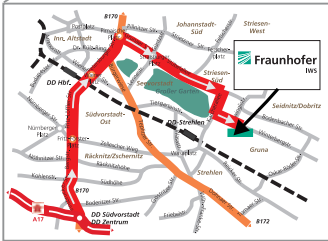
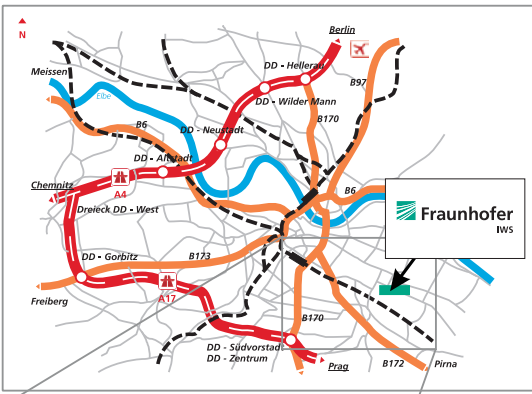
Registration deadline: **October 17, 2014**
Cancellation of registration is possible by October 31, 2014.
After this date the full costs will be charged.

Contact

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Fraunhofer IWS Dresden
Winterbergstr. 28
01277 Dresden, Germany

Further information (online registration/accomodation)
is available at www.iws.fraunhofer.de/en/events.html



Directions

by car (from Autobahn / Highway)

- take Autobahn A4 or A13 to inter section Dresden-West, follow new Autobahn A17 to exit Südvorstadt / Zentrum
- follow road B170 in direction Stadtzentrum (city center) to Pirnaischer Platz (about 6 km)
- at Pirnaischer Platz turn right towards "Gruna / VW-Manufaktur"
- continue straight until the end of the "Großer Garten" (Great Garden) and then turn right onto Karcherallee
- at the next traffic light turn left onto Winterbergstraße and continue straight until IWS

by railway and tram

- from Dresden main railway station line #10 to Straßburger Platz
- change to line #1 or #2 heading out from the city (towards Prohlis or Kleinzschachwitz); exit at Zwinglistraße stop
- 10 minutes to walk from there (in the direction of Grunaer Weg) or one station by bus # 61 (direction Löbtau)

by air plane

- from Airport Dresden-Klotzsche by taxi to Winterbergstraße 28 (distance is approximately 7 miles or 10 km)
- or with public transportation (shuttle train) to the main railway station (Hauptbahnhof), and continue by tram

**3rd Workshop
»Lithium-Sulfur-Batteries«**

November 12 - 13, 2014

Fraunhofer-Institut
für Werkstoff- und Strahltechnik IWS

Manja Hanke
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01277 Dresden
Germany



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Participation in a lab visit at IWS after workshop (duration 1 hour)

Lab visit interest yes no

Registration (in block letters)

Last name

First name

Company / Institution

Billing address

Phone / Fax

E-mail

Place / Date

Signature

Firm stamp