

## Venue

The symposium will be held in the Auditorium of the Paul Scherrer Institut in Villigen. The location (bus stop Villigen PSI West) can be reached by public transport or by car via Baden or Brugg. Details may be found on the PSI website www.psi.ch.

## Registration

Please use the online registration form on http://ec14.psi.ch. The deadline is April 25, 2014. The registration fee has to be paid in **cash at the symposium**. The package includes the book of abstracts, lunch and beverages during the coffee breaks.
Registered attendees not showing up at the symposium will be charged the full registration fee, if we do not receive a cancellation notice at least 48 h before the start of the symposium.

## Registration fee

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|---|---|---|
| Regular | CHF 100 | EUR 80 |
| Student* | CHF 50 | EUR 40 |

* please produce student ID at the registration desk

## Abstracts for Poster Contributions

Abstracts must be submitted electronically using the Microsoft Word template provided on the internet site http://ec14.psi.ch.

The deadline for abstract submission is April 25, 2014.

## The Symposium on the Internet

http://ec14.psi.ch

## Accommodation

For the night of May 6/7, 2014, a set of rooms has been reserved at the following hotels:

**Hotel Schloss Böttstein,** 5315 Böttstein
Phone: +41 56 269 16 16
Fax: +41 56 269 16 66
info@schlossboettstein.ch
www.schlossboettstein.ch
at a rate of CHF 110, incl. breakfast.

**Best Western Hotel Du Parc,**
Römerstrasse 24, 5000 Baden
Phone: +41 56 203 15 15
Fax: +41 56 222 07 93
duparc@welcomehotels.ch
www.duparc.ch
rates starting at CHF 195, incl. breakfast.

Please make your reservation before April 15 directly with the hotel, mentioning the symposium and the code "ec14".

## Contact Addresses

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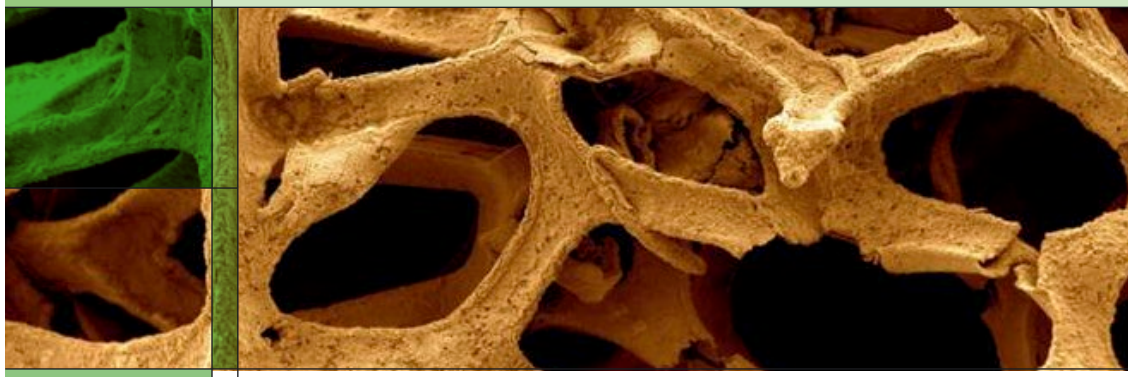
PAUL SCHERRER INSTITUT

# Oxygen: Airborne Energy Conversion and Storage



## 30th PSI Electrochemistry Symposium

May 7, 2014
Paul Scherrer Institut
5232 Villigen PSI, Switzerland

http://ec14.psi.ch

This Symposium is co-sponsored by The Electrochemical Society (ECS) and The International Society of Electrochemistry (ISE).



# Oxygen: Airborne Energy Conversion and Storage

Dear Guests,

Oxygen is the third most abundant element of the universe and makes up 21% of the earth's atmosphere. Without oxygen, life on earth would not be possible. The reasons for the importance of oxygen are manifold: on the one hand most of the living organisms need oxygen for their cell metabolism and to extract energy from nutrition. On the other hand, most of the energy conversion processes controlled by humans are based on combustion of fossil fuels and need oxygen as corresponding oxidant in order to provide heat and electricity.

Similarly also electrochemical conversion and storage devices rely on the presence of oxygen for efficient operation such as batteries and fuel cells. Oxygen or air electrodes, however, remain one of the biggest enigmas in electrochemical devices due to complicated reaction mechanisms and difficulties in splitting the oxygen-oxygen bond.

At the 30th PSI Electrochemistry Symposium, six leading experts will report about different aspects of oxygen in electrochemical systems from theory to applications.

We are looking forward to meeting you again on May 7th, 2014, at the Paul Scherrer Institut for discussions, sharing viewpoints or simply updating your state of knowledge.

*Paul Scherrer Institut's Electrochemistry Laboratory is the major institution of its kind in Switzerland. Our main research and development interests are directed towards energy conversion and storage at a technical scale (mobile, stationary, and portable applications of electrochemical systems), including many fundamental aspects of atomic and molecular electrochemistry.

# Program

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|---|---|
| 09.15 | **Welcome Coffee** |
| 09.45 | Thomas J. Schmidt, Paul Scherrer Institut, Villigen<br>Welcome & Introduction |
| 10.00 | Hubert A. Gasteiger, TU München, Germany<br>Reversible and irreversible reactions in Li-air batteries |
| 10.45 | Pascal Häring, Renata Batteries, Itingen<br>Primary zinc/air batteries, technology and market on the way to mercury free |
| 11.30 | Jennifer Rupp, ETH Zürich<br>New solid state energy conversion devices based on oxygen ionic transport under strain |
| 12.15 | **Buffet-Lunch** |
| 13.45 | Jan Rossmeisl, DTU Lyngby, Denmark<br>Electrocatalysis at the atomic scale |
| 14.30 | Peter Strasser, TU Berlin, Germany<br>Oxygen electrocatalysis – New materials for old problems |
| 15.15 | Katherine Ayers, Proton OnSite, Wallingford, CT, USA<br>Oxygen evolution in PEM and AEM electrolyzers |
| 16.00 | Thomas J. Schmidt, Paul Scherrer Institut, Villigen<br>Summary |
| | **Farewell Coffee** |

Photograph on front page
Nickel foam covered by Sb particles used for negative electrode in Li-ion batteries

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