

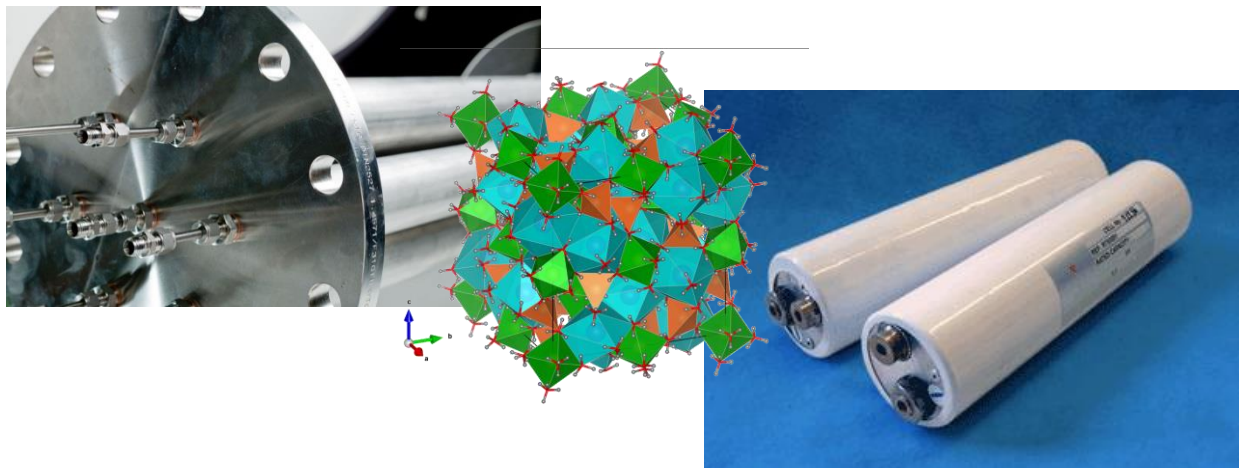


Call for Papers
E-MRS Fall Meeting
Warsaw, 18.-21.9.2017

SYMPOSIUM C
Multifunctionality of Metal Hydrides for Energy Storage
– Developments and Perspectives

Principal organisers:

- Dr. Klaus Taube, Helmholtz-Zentrum Geesthacht klaus.taube@hzg.de
- Prof. Torben R. Jensen, Aarhus University, Denmark trj@chem.au.dk
- Dr. Georgia Charalambopoulou, National Centre for Scientific Research “Demokritos”, Athens, Greece gchar@ipta.demokritos.gr



© from left: Helmholtz-Zentrum Geesthacht, Aarhus University, SAFT Batteries SA

Selected high quality papers to be published in a special issue of the *International Journal of Hydrogen Energy*



Supported by the *International Association for Hydrogen Energy*



Introduction

Metal hydrides are of significant interest for both, hydrogen storage, and electrochemical energy storage as solid state ion conductors and anode conversion materials. They exhibit superior hydrogen and electrochemical energy storage capacities as well as high ionic conductivities at ambient temperatures.

Scope

The urgent need for a transition towards sustainable, carbon-free and reliable energy technologies pushes towards the development of advanced and efficient energy storage systems. Hydrides based on metals and alloys have proven to play a central enabling role to this direction. Metal hydrides clearly offer a quite attractive and versatile platform of materials, which encompass a quite broad array of structures and combine interesting and tunable properties useful for a breadth of energy applications spanning from solid-state hydrogen storage, to ion conductors for batteries or thermal energy storage.

Symposium C aspires to bring together ambitious young and established leading scientists from around the world not only to present the latest advances of the intense worldwide research in the field but also exchange ideas and identify major challenges and hot-topics for future developments towards efficient solutions for energy applications.

The symposium will be supported by the Marie Curie Initial Training Network ECOSTORE (<http://www.ecostore-itn.eu>), fostering joint research and training on novel metal hydride materials and systems for both hydrogen and electrochemical energy storage.

Hot topics to be covered by the symposium

- Novel hydride based materials for hydrogen storage
- Novel hydride based materials for solid state ion conductors
- Novel metal hydride conversion materials for battery electrodes
- Novel metal hydrides for solar thermal heat storage
- Design of novel structures based on computational chemistry methods
- Design and application of hydrogen storage systems, based on these material classes
- Design and application of battery systems, based on novel materials – systems performance
- Challenges for industrial implementation

Publication

Selected papers will be published in a special peer reviewed issue of the International Journal for Hydrogen Energy.

Financial Support

A limited amount of grants is available for supporting the participation of students and scientists from less developed countries to the symposium. Please contact the organizers directly, if you want to apply for such a grant.

Tentative list of invited speakers

- Kondo Francois AGUEY ZINSOU, University of New South Wales [AUS]
- José Ramón ARES FERNÁNDEZ, Universidad Autonoma de Madrid [S]
- Darren BROOM, Hiden [UK]
- Fermin CUEVAS, ICMPE CNRS [F]
- Yaroslav FILINCHUK, Leuven University [BE]
- Sebastiano GARRONI, University of Sassari [I]
- David GRANT, Nottingham University [UK]
- Roman KEDER, Katchem [CR]
- Guanqiao LI, Tohoku University [J]
- Haiwen LI, Kyushu University [JP]
- Ian MORRISON, Salford University [UK]
- Carlo NERVI, University of Turin [I]
- Mark PASKEVICIUS, Curtin University, Perth [AUS]
- Luca PASQUINI, University of Bologna [I]
- Marek POLANSKI, Warsaw Military University of Technology [PO]
- Julia RINCK, Karlsruhe Institute of Technology [D]
- Magnus SØRBY, Institute for Energy Technology [NO]
- Drew SHEPPARD, Curtin University, Perth [AUS]
- Veronica SOFIANOS, Curtin University, Perth [AUS]
- Jim WEBB, Griffith University, Brisbane [AUS]
- Ulrich WIETELMANN, Rockwood Lithium [D]
- Petra de YONGH [NL]

Former ECOSTORE fellows:

- Nicola BERTI [I]
- Alberto BIANCOLI [I]
- Matteo BRIGHI [I]
- Anh Ha DAO [Vietnam]
- Efi HADJIXENOPHONTOS [Cyprus]
- Michael HEERE [D]
- Patricia HUEN [China]
- Thi Thu LE [Vietnam]
- Pedro LÓPEZ-ARANGUREN [S]
- Seyed PAYANDEH GHARIBDOUST [Iran]
- Yinzhe LIU [China]
- Filippo PERU [I]
- Antonio SANTORU [I]
- Ahmed TALAAT [Egypt]
- Anna WOLCZYK [PO]

Members of scientific committee

- Etsuo AKIBA [JP]
- Marcello BARICCO [I]
- David BOOK [GB]
- Craig BUCKLEY, University of Perth [AUS]
- Radovan CERNY [CH]
- Martin DORNHEIM [D]
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