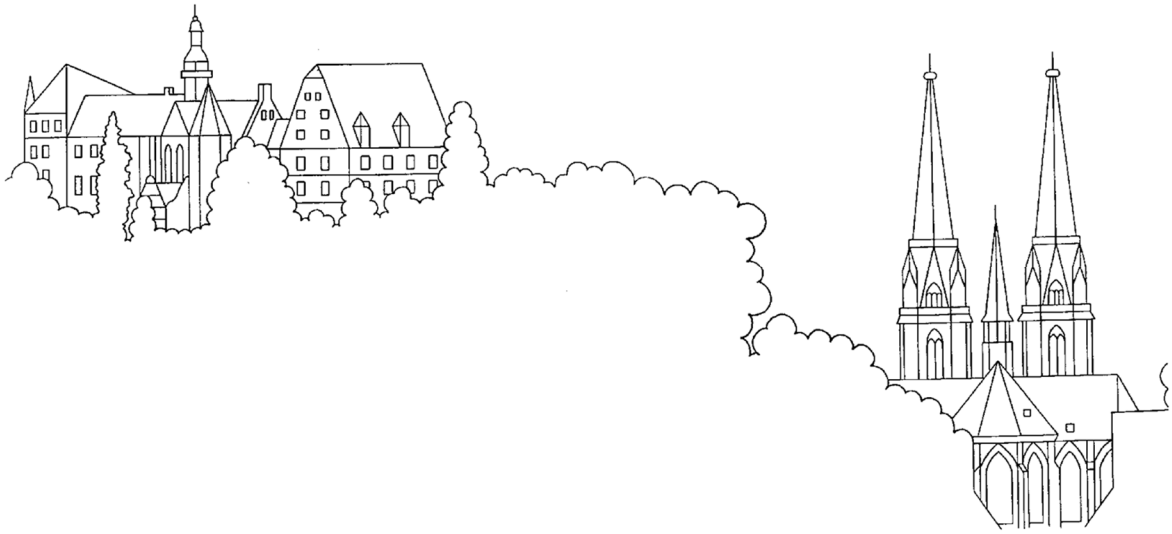


1st ELSICS workshop and Bunsen-Kolloquium September 13-14, 2021

Energy Landscapes and Structure of Ion Conducting Solids

Conference location

VILA VITA Rosenpark (Marburg)

Contact:

Prof. Dr. Karl-Michael Weitzel
Philipps-Universität Marburg, Department of Chemistry
Phone: +49 6421-282-2360 (weitzel@chemie.uni-marburg.de)
http://www.uni-marburg.de/fb15/ag-weitzel/for-5065

Deadline for registration: August 15th, 2021

Philipps Universität Marburg

Deutsche Bunsen-Gesellschaft für physikalische Chemie

Invited Speakers

Prof. Dr. Paul Heitjans

University of Hannover

Prof. Dr. Jürgen Horbach

Heinrich-Heine-University Düsseldorf

Prof. Dr. Manfred Martin

RWTH Aachen

Dr. Rotraut Merkle

Max Planck Institute for Solid State Research Stuttgart

Prof. Dr. Christina Scheu

Max-Plank-Institut für Eisenforschung GmbH Düsseldorf

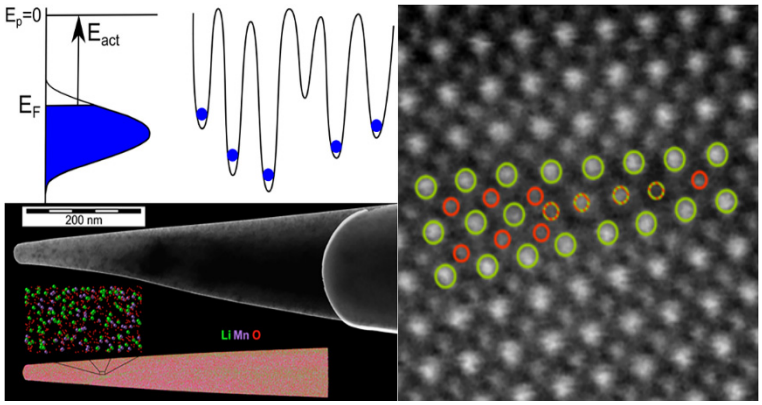
Prof. Dr. Dr. h.c. Guido Schmitz

University of Stuttgart

Prof. Dr. Eckhard Spohr

University of Duisburg-Essen

Energy Landscapes and Structure in Ion Conducting Solids (ELSICS)



The potential energy landscape of mobile ions in solid-state materials and the atomic scale structure are intimately interrelated. This interrelation and the resultant properties, e.g. the mobility of the ions, is of paramount interest in contemporary material science with direct applications in energy storage and conversion. Understanding the interplay of structure, energy landscape and ionic transport of ionic solids is of crucial importance for a knowledge-based development of improved and new functionalities of these materials.

The DFG Research Unit ELSICS (FOR 5065) has been founded with the goal to quantify the energy distribution of ionic sites in solids on the basis of atomically resolved structures and in conjunction with ionic transport properties with a truly concerted effort of experimental and theoretical research groups. This joint effort involves state-of-the-art expertise from diverse experiments [charge attachment induced transport (CAIT), time-of-flight secondary ion mass spectrometry (ToF-SIMS), solid-state nuclear magnetic resonance (NMR), atom probe tomography (APT) and analytical and high-resolution transmission electron microscopy (HR-TEM)], as well as dedicated solid-state matter theory for crystalline and amorphous materials.

This 1st ELSICS workshop will collect presentations on the current state of knowledge in the field and most recent progress.

Key topics are

- Ion transport in amorphous, crystalline and poly-crystalline solids
- Short range versus long-range transport
- Quantification of energy landscapes in ion conducting solids
- Interrelation between atomically resolved structure and energy landscapes
- Concentration dependence of Fermi energies
- Predictive methods for correlating energy landscapes to material structure and function

The workshop will be organized as a hybrid meeting, with part of the participants being physically present and others taking part via a video platform. Conditions are subject to Corona regulations being operative.

Call for Abstracts

There is a limited number of slots available for contributed talks. We also intend to hold a Poster-Session. For further details contact the chairman (weitzel@chemie.uni-marburg.de) no later than August 15th, 2021.

Travel Information

Arriving by plane

The nearest airport to Marburg is Frankfurt. For international flights we recommend Frankfurt am Main, Airport. There are regular train connections to Marburg.

Arriving by train

Marburg can conveniently be reached by train. ICE system station.

Arriving by car

Via A5 / B3 from south, 95 KM, 1 hr, from Frankfurt Intl. airport. Via A49 / B3 from north.