2nd ELSICS workshop and International Bunsen Discussion Meeting

September 26-28, 2022

Energy Landscapes and Structure in Ion Conducting Solids

Conference location

Alte Mensa Göttingen

Wilhelmsplatz 3, 37073 Göttingen, +49 551 3924763

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Deadline for registration: July 30th, 2022

supported by

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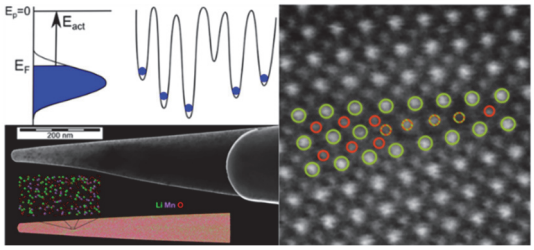
CRC 1073 ATOMIC SCALE CONTROL OF ENERGY CONVERSION

DFG Research Unit FOR 5065



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 in December 2020 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.

The 1st ELSICS workshop was held in Marburg (DE) in September 2021.

The 2nd workshop will take place in Göttingen (DE) in September 2022. This 2nd workshop will collect presentations from invited speakers as well as contributed presentations (both oral and posters).

Key topics for progress reports are

- Ion transport in amorphous, crystalline and poly-crystalline solids
- Short range versus long-range transport as seen by NMR, CAIT and IS
- Energy landscapes in ion conducting solids: site energy distribution, populated vs. unpopulated sites
- Interrelation between atomically resolved structure and energy landscapes
- Predictive methods for correlating energy landscapes to material structure and function

At the point of this announcement, the workshop is planned as a meeting in presence. We expect being able to host up to 80 participants. For those with travel restrictions we will consider offering participation via a Video platform. Conditions are subject to Corona regulations being operative. There will be a small fee to cover costs incurring for catering (lunch and coffee breaks) and conference material.

Call for Abstracts

The program will include 12 invited speakers. There is the possibility to present contributed talks subject to the number of slots available (approximately 24). We also intend to hold a Poster-Session.

For further details contact the chairperson (weitzel@chemie.uni-marburg.de. or elsics@uni-marburg.de) or the www page at https://www.uni-marburg.de/en/fb15/for5065/meetings/second-elscis-meeting.

Travel Information

Göttingen can easily be reached by all means of transportation.

Arriving by plane
The nearest airport to Göttingen is Hannover. For international flights we recommend to go to Frankfurt International Airport. There are regular train connections to Göttingen from both Hannover and Frankfurt.

Arriving by train
Göttingen can conveniently be reached by train. It is a major stop of the German ICE train system (Deutsche Bahn).

Arriving by car
Göttingen is located at the German Autobahn A7. It is approximately 250 km north of Frankfurt, and 120 km south of Hannover.

Invited Speakers

Prof. Steve Martin (Ames, Iowa, USA)

Prof. Hellmut Eckert (Sao Carlos, Brazil / Münster, DE)

Prof. Martin Wilkening (Graz, Österreich)

Prof. Sossina Haile (Evanston, USA)

Prof. Tong Li (Bochum, DE)

Prof. Baptiste Gault (Düsseldorf, DE)

Prof. Shirley Meng (Chicago, USA)

Prof. Neil Allan (Bristol, UK)

Prof. Alfonso Pedone (Modena, Italy)

Prof. Harald Schmidt (Clausthal-Zellerfeld, DE)

Prof. Yuichi Ikuhara (Tokyo, Japan)

Prof. Ainara Aguadero (Madrid / London)