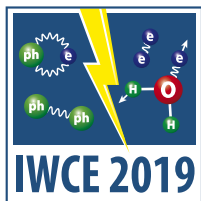
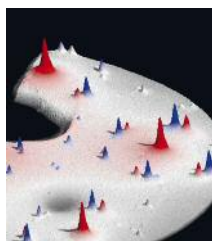
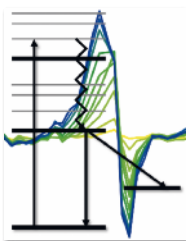
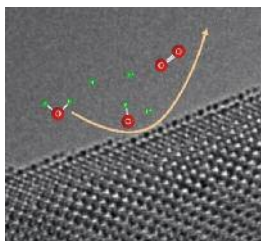


# International Workshop on Correlated Dynamics in Energy Conversion IWCE 2019



September 2-4, 2019  
Göttingen, Germany



Contact: [info@iwce2019.org](mailto:info@iwce2019.org)

Register under <http://www.iwce2019.org/>

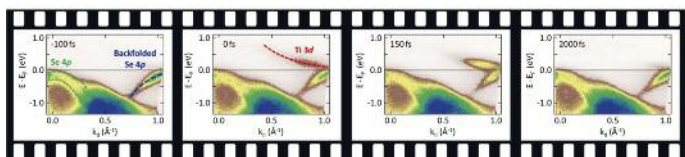
Registration: February 18, 2019 to July 31, 2019

Deadline for abstract submission: July 1, 2019

Venue: »Alte Mensa«  
Wilhelmsplatz 3  
37073 Göttingen



GEORG-AUGUST-UNIVERSITÄT  
GÖTTINGEN



T < 200 K

T > 200 K

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# International Workshop on Correlated Dynamics in Energy Conversion – IWCE 2019

The fundamental mechanisms underlying energy conversion in a material are the generation, transport, and transformation of excitations. These processes are determined by the interaction of excitations in the electron, spin and atom degrees of freedom. Until now, our understanding of excitation dynamics in materials is based on single particle descriptions, but these break down entirely for systems with strong correlations between the different degrees of freedom. At the same time, strongly correlated processes offer exceptional and unexpected new properties, so that a deeper understanding of their dynamics is a very promising direction to optimize energy conversion steps.

The aim of this interdisciplinary workshop is to identify and present some of the most fascinating examples of strongly correlated energy conversion steps. The dialectical and interactive format of the workshop will allow for comprehensive discussions in the following topical areas:

- ▶ Impact of electron-electron and electron-spin correlations on excitations and transient states.
- ▶ Correlated electron dynamics in 2D materials.
- ▶ Polaron excitations and dynamics in energy conversion.
- ▶ Proton-coupled electron transfer.
- ▶ Electron transfer induced processes at interfaces.
- ▶ Role of phonon interactions on energy dissipation and heat transport.

Presentations from outstanding experimentalists and theorists in physics, chemistry, and materials science are planned and will include invited tandem talks, invited and contributed presentations, flash sessions, and posters.

We welcome your contribution to IWCE 2019 and promise you an exciting workshop, identifying and discussing new paradigms for energy conversion.

Looking forward to seeing you in Göttingen!

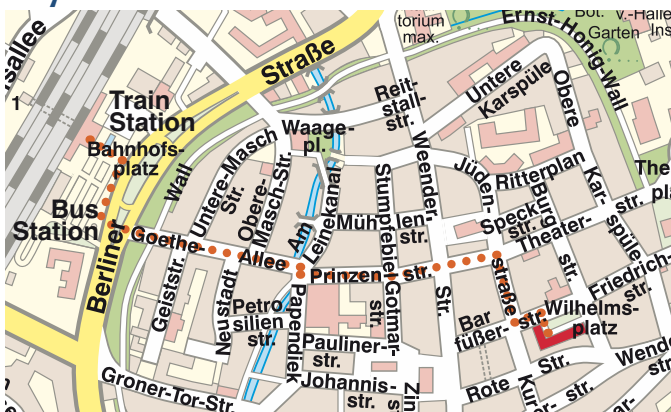
Christian Jooss

On behalf of the IWCE 2019 Scientific Committee:

Fabian Heidrich-Meisner, Christian Jooss, Stefan Mathias, Claus Ropers, Sven Schneider, Inke Siewert, Cynthia Volkert.



## City Plan



## Travel Information

### Arriving by plane

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

### Arriving by train

Göttingen can conveniently be reached by train. The train station is located close to the city centre.

### Arriving by car

Göttingen can be reached via motorway A7 from either the north or south

# Invited Speakers

## Electronic Correlation

**Paul van Loosdrecht**

University of Cologne, Germany

**Tobias Donner**

Institute for Quantum Electronics, ETH Zürich, Switzerland

**Sangeeta Sharma**

Max-Born-Institute for Non-linear Optics, Berlin  
Germany

## Polarons

**Xiaoyang Zhu**

Dep. of Chemistry, Columbia University, N.Y., USA

**Mona Berciu**

Dep. of Physics and Astronomy, University of British Columbia,  
Vancouver, Canada

**Geoff Thornton**

Dep. of Chemistry, University of London, UK

## Proton-coupled electron transfer

**James M. Mayer**

Dep. of Chemistry, Yale University, USA

**Tanja Cuk**

University of Colorado, Boulder, USA

**Cyrille Costentin**

University of Paris, France

## Charge transfer induced correlations at interfaces

**Ellen Backus**

University of Vienna, Austria

**Axel Groß**

Institute for Theoretical Chemistry, University of Ulm, Germany

**Thierry Epicier**

Chemistry of Materials, Nanomaterials and Processes,  
Université de Lyon, France

**Ethan J. Crumlin**

Lawrence Berkeley Laboratory, California, USA

## Interactions and transport of phonons/vibrations

**Olivier Delaire**

Dep. of Mechanical Engineering and Materials Science,  
Duke University, USA

**David G. Cahill**

Materials Science and Engineering,  
University of Urbana Illinois, USA

**Paul Erhart**

Chalmers University of Technology, Gothenburg, Sweden