Virtual DPG-Frühjahrstagung (DPG Spring Meeting) of the Surface Science Division

1st - 4th March 2021

Symposium

Frontiers of Electronic-Structure Theory: Focus on Electron-Phonon Interactions

Electronic-structure calculations from first principles have become an indispensable and ubiquitous tool in materials modeling, design, and discovery. Learn about the outstanding challenges towards a realistic description of materials – including materials properties at finite temperature, phonon-assisted excitations, non-adiabatic coupling, out-of equilibrium phenomena, and more.

Invited Speakers

Xavier Gonze
Renormalization of electronic energies: predominance of non-adiabatic effects and other outcomes of a polaronic approach
Université catholique de Louvain, Belgium

Ion Errea
Electron-phonon interactions in strongly anharmonic systems
University of the Basque Country, Spain

Fabio Caruso
Out-of-equilibrium lattice dynamics in two-dimensional materials
Kiel University, Germany

Nicole Benedek
Ultrafast optical control of complex oxide functional properties: New insights from theory and first-principles calculations
Cornell University, USA

Additionally, we expect several posters

This 2 x 2-hour event will provide a forum to report on the most recent developments in the field. It will feature 4 invited talks by authoritative experts. These invited talks are complemented by short "poster teaser" presentations and a panel discussion.

Organizers

Claudia Draxl (Humboldt-Universität zu Berlin), Feliciano Giustino (University of Texas at Austin), and Matthias Scheffler (Fritz-Haber-Institut der Max-Planck-Gesellschaft, Berlin)

The symposium is hosted by the Surface-Science Divison of the DPG, but the topics of the talks will cover the full spectrum of electronic-structure theory of materials science.

The symposium is endorsed by the Psi-k Network.