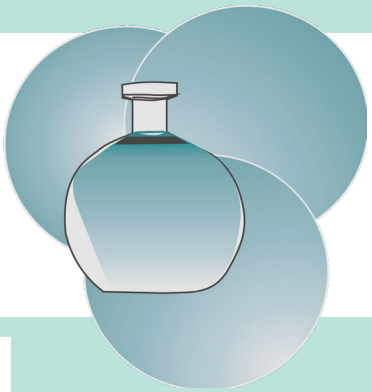
Fakultät für Naturwissenschaften

Institut für Chemie



lädt ein

gemeinsam mit der Gesellschaft Deutscher Chemiker zum

GDCh
GESELLSCHAFT DEUTSCHER CHEMIKER

Vortrag
von Herrn

Prof. Peter Strasser

Institut für Chemie
Technische Universität Berlin

"Electrocatalytic Materials and Interfaces for the production of e-Fuels and e-Chemicals"

am: 02. Mai 2024

um: 16:00 Uhr

wo: im Raum 1/232

Die kleine Kaffeerunde vor dem Vortrag beginnt um 15:30 Uhr im Raum 1/232.
Das Mitbringen von eigenen Trinkgefäßen ist erwünscht.

Gäste sind herzlich willkommen!

TECHNISCHE UNIVERSITÄT
IN DER KULTURHAUPTSTADT EUROPAS
CHEMNITZ

Prof. Dr. Michael Sommer
Telefon: 0371 / 531 32507
E-Mail: michael.sommer@chemie.tu-chemnitz.de

Fakultät für Naturwissenschaften

Institut für Chemie

Prof. Peter Strasser

Institut für Chemie
Technische Universität Berlin

Electrocatalytic Materials and Interfaces for the production of e-Fuels and e-Chemicals

Abstract: The rising share of renewable electricity is testament to the increasing importance of solar/wind-electric routes to harvest sunlight in form of free electrons. While some electricity is used directly or stored capacitively, an increasing portion calls for direct conversion into valuable chemical energy carrier (solar fuels or chemicals). This conversion in the dark is made possible by heterogeneous electrocatalysis on the surface of solid electrodes. More fundamental understanding of the origin of kinetic barriers alongside with more control of transport processes of charge and mass are needed for the design of efficient, tailor-made electrochemical interfaces and devices for the production of fuels and chemicals.

In this presentation, I will report on some of our recent advances in the design and understanding of electrocatalytic materials, interfaces and devices relevant to the electrochemical activation and conversion of small molecules into value-added molecular compounds using renewable power. New insights in the synthesis, geometric and electronic structure and the associated catalytic reactivity and selectivity were achieved using in-situ/operando X-ray spectroscopic, microscopic, scattering or spectrometric techniques. Focus will be placed on small molecules such as oxygen, water, CO_2, NO_x, for the electrochemical production of e-fuels and e-chemicals.

TECHNISCHE UNIVERSITÄT
IN DER KULTURHAUPTSTADT EUROPAS
CHEMNITZ

Prof. Dr. Michael Sommer
Telefon: 0371 / 531 32507
E-Mail: michael.sommer@chemie.tu-chemnitz.de