



GESELLSCHAFT DEUTSCHER CHEMIKER
ORTSVERBAND HANNOVER

Einladung zum GDCh-Colloquium des Ortsverbandes Hannover

Das Colloquium findet um 17 c.t. im [Hörsaal Organische Chemie \(Raum 056, Gebäude 2505\)](#) der Leibniz Universität Hannover, [Organische Chemie, Schneiderberg 1B](#), D-30167 Hannover statt.

Wilhelm-Jost-Gedächtnismedaille

der Deutschen Bunsengesellschaft mit der Akademie der Wissenschaften zu Göttingen

24.10.2024 **Dr. Nils Hansen**,
SANDIA National Laboratories, Livermore, USA

Chemical Kinetics in Multiphase Chemical Transformation

Wilhelm Jost is particularly renowned for his contributions to the field of chemical kinetics and reaction dynamics. He has made significant advancements in understanding of how chemical reactions occur during combustion. His work continues to support today's development of and transition to clean and energy-efficient chemical transformations.

Continuing and expanding of the foundational principles established by Wilhelm Jost, we have applied mass spectrometric approaches to provide basic insights into chemical kinetics of reaction networks of complex environments and applications. The first part of the talk focuses on new chemical insights into molecular-weight growth and soot formation chemistry in combustion processes by reactions of resonantly stabilized radicals. The second part of the talk focuses on reaction networks found in catalytic heterogeneous chemical transformations. Specifically, we will highlight new insights into gas-surface interactions during catalytic partial oxidation of methanol and oxidative coupling of methane with soft oxidants. The last part highlights how non-equilibrium plasma can initiate chemical conversion through the generation of charged species, radicals, and excited-state species. We will discuss examples from plasma-assisted chemical looping combustion and methane dry reforming.

Prof. Dr. Jens-Uwe Grabow
Vorsitz OV Hannover

Vor dem Colloquium findet ab ca. 16 c.t. eine ‚Kaffeerunde‘ mit dem Vortragenden in der [Bibliothek des Instituts für Physikalische Chemie, Callinstraße 3A](#) statt.

www.gdch.de