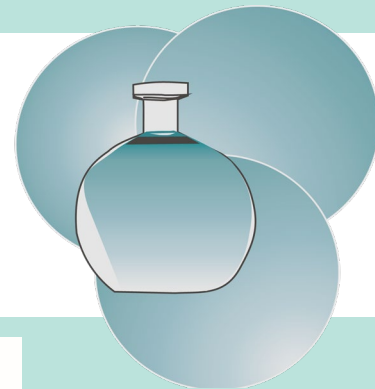


Fakultät für Naturwissenschaften

Institut für Chemie



lädt ein

gemeinsam mit der Gesellschaft
Deutscher Chemiker
zum

Vortrag
von Herr

**Prof. Fabian
Dielmann**

Institute for General, Inorganic
and Theoretical Chemistry

Universität Innsbruck



**“Phosphines, carbenes
and phosphorus cations
with exceptional
properties: New tools for
chemical bond activation
and catalysis”**

am: 06. Juli 2023
um: 16:00 Uhr
wo: im Raum 1/232

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



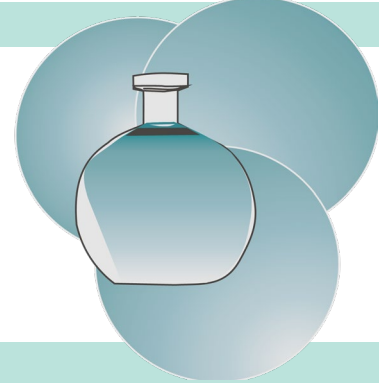
TECHNISCHE UNIVERSITÄT
IN DER KULTURHAUPTSTADT EUROPAS
CHEMNITZ

Gäste sind herzlich willkommen!

Prof. Dr. Michael Sommer

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E-Mail: michael.sommer@chemie.tu-chemnitz.de



Prof. Fabian Dielmann

Institute for General,
Inorganic and Theoretical
Chemistry

Universität Innsbruck



“Phosphines, carbenes and phosphorus cations with exceptional properties: New tools for chemical bond activation and catalysis”

Ligand design is key to important advances in materials science, coordination chemistry, and catalysis. Phosphines and N-heterocyclic carbenes are among the most versatile ligands in terms of the stereoelectronic tunability and their success story continues to be driven by their growing structural diversity. We recently reported an approach to significantly increase the electron donor properties of phosphines beyond that of alkylphosphines by using strong π -donor substituents. The resulting phosphines are powerful ligands in homogeneous catalysis and can activate and transform small molecules such as CO_2 and SF_6 into value-added products.

This lecture will focus on recent developments towards the design of superbasic phosphines, highly electrophilic phosphorus cations and novel carbenes. Applications of these reactive species for chemical bond activation and catalysis will be presented.

