

Curriculum Vitae

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- since 2019 Dean of the Faculty of Natural Sciences, University of Ulm
- 2015 – 2019 Vice-Dean and Dean of Studies, Faculty of Natural Sciences, University of Ulm.
- since 2005 Professor of Physical Chemistry at the University of Ulm, Germany.
- 2006 Habilitation in Experimental Physics,
Physics Department, Free University of Berlin, Germany.
- 2000 – 2005 Research Associate, Physics Department, Free University of Berlin, Germany,
with Prof. Dr. Ludger Wöste.
- 1997 – 1999 Post-Doctoral Scholar, California Institute of Technology, Pasadena, USA,
with Prof. Dr. Ahmed H. Zewail.
- 1992 – 1997 Doctoral Thesis in Physical Chemistry,
Humboldt University of Berlin with Prof. Dr. Klaus Rademann.
- 1992 Diploma in Physical Chemistry, Philipps University Marburg, Germany.
Diploma Thesis with Prof. Dr. Friedrich Hensel.
- 1987 – 1992 Studies of Chemistry in Marburg, Germany, and in Lille, France.

Awards/Fellowships

- Guest-Lecturer at Kyushu University, Fukuoka, Japan, 2018.
- Guest-Professorship at the University of Tokyo, Japan, 2016.
- Visiting-Fellowship of the Japanese Society for the Promotion of Science (JSPS) 2013.
- University of Ulm Teaching Award 2012.
- Feodor Lynen-Fellowship of the Alexander von Humboldt-Foundation 1997 – 1999.
- Erasmus Fellowship of the European Union, studies in Lille, France, 1990 – 1991.

Research Interests

- Chemical reaction kinetics and catalysis of gas-phase metal clusters.
- Photo-induced chemical reactions and femtosecond laser spectroscopy.
- Infrared spectroscopy of free cluster complexes.
- Scanning tunnelling microscopy of deposited clusters and nanostructures on surfaces.

Selected Recent Publications

- A. Mravak, M. Krstić, S. M. Lang, T. M. Bernhardt, V. Bonačić-Koutecký:
Intrazeolite CO methanation by small ruthenium carbonyl complexes: Translation from free clusters into the cage,
Chem. Cat. Chem. **12**, 3857 (2020).
- S. Mauthe, I. Fleischer, T. M. Bernhardt, S. M. Lang, R. N. Barnett, U. Landman:
A gas phase $Ca_nMn_{4-n}O_4^+$ cluster model for the oxygen evolving complex of photosystem II,
Angew. Chem. Int. Ed. **58**, 8504 (2019).
- K. Jochmann, T. M. Bernhardt:
The influence of metal cluster lattices on the screening of image potential state electrons on graphene,
J. Chem. Phys. **149**, 164706 (2018).
- S. M. Lang, T. M. Bernhardt, V. Chernyy, J. M. Bakker, R. N. Barnett, U. Landman:
Selective C-H bond cleavage in methane by small gold clusters,
Angew. Chem. Int. Ed. **56**, 13406 (2017).
- M. E. Vaida, T. M. Bernhardt:
Tuning the ultrafast photodissociation dynamics of CH_3Br on ultrathin MgO films by reducing the layer thickness to the 2D limit,
Chem. Phys. Lett. **688**, 106 (2017).
- H. Heim, T. M. Bernhardt, S. M. Lang, R. N. Barnett, U. Landman:
The interaction of iron-sulfur clusters with N_2 : Biomimetic systems in the gas phase,
J. Phys. Chem. C **120**, 12549 (2016).
- S. M. Lang, T. M. Bernhardt, Denis M. Kiawi, Joost M. Bakker, R. N. Barnett, U. Landman:
The interaction of water with free $Mn_4O_4^+$ clusters: Deprotonation and adsorption-induced structural transformations,
Angew. Chem. Int. Ed. **54**, 15113 (2015)
- S. M. Lang, T. M. Bernhardt, M. Krstić, V. Bonačić-Koutecký:
Revealing the origin of the selectivity and activity of Ru cluster catalysts for fuel cell feed gas purification: A gas phase approach,
Angew. Chem. Int. Ed. **53**, 5467 (2014).
- S. M. Lang, I. Fleischer, T. M. Bernhardt, R. N. Barnett, U. Landman:
Dimensionality dependent water splitting mechanisms on free manganese oxide clusters,
Nano Lett. **113**, 5549 (2013)
- M. E. Vaida, T. M. Bernhardt:
Surface-aligned femtochemistry: Photoinduced reaction dynamics of CH_3I and CH_3Br on $MgO(100)$,
Faraday Disc. **157**, 437 (2012).
- S. M. Lang, I. Fleischer, T. M. Bernhardt, R. Barnett, U. Landman:
 $Pd_6O_4^+$: An oxidation resistant yet highly catalytically active nano-oxide cluster
J. Am. Chem. Soc. **134**, 20654 (2012).
- S. M. Lang, T. M. Bernhardt, R. N. Barnett, U. Landman:
Methane activation and catalytic ethylene formation on free Au_2^+ ,
Angew. Chem. Int. Ed. **49**, 980 (2010).
- M. E. Vaida, T. M. Bernhardt:
Surface-aligned femtochemistry: Real-time dynamics of photoinduced I_2 formation from CD_3I on $MgO(100)$,
ChemPhysChem **11**, 804 (2010).