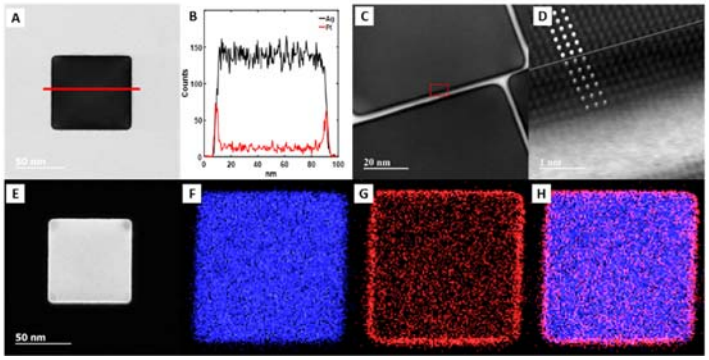
Institute for Advanced Study
Technical University of Munich



Workshop
Molecular Approaches to Heterogeneous Catalysis and Electrocatalysts

November 20-21, 2017

Organizing Committee

Suljo Linic (TUM-IAS Hans Fischer Fellow, University of Michigan, USA)

Karsten Reuter (TUM)

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European Commission

Program

MONDAY, NOVEMBER 20, 2017

Auditorium (ground floor)

1:00 – 1:15 p.m.	**Welcome Address** Ernst Rank (Director, TUM-IAS)
1:15 – 1:50 p.m.	**Technical analysis of the CO_2 emission impact and catalytic strategies for addressing the problem** Suljo Linic (TUM-IAS Hans Fischer Fellow, University of Michigan)
1:50 – 2:25 p.m.	**Catalysis for light alkanes – from methane functionalization to light olefins** Johannes A. Lercher (TUM)
2:25 – 3:00 p.m.	**Biomass conversion to fuels and chemicals** Will Medlin (University of Colorado Boulder)
3:00 – 3:30 p.m.	*Coffee Break (Foyer, ground floor)*
3:30 – 4:05 p.m.	**Introduction to electrocatalysis** Michael Janik (Pennsylvania State University)
4:05 – 4:40 p.m.	**Surface science and X-ray synchrotron methods applied to catalysis** Beatriz Roldan Cuenya (Fritz-Haber Institute of Max Planck Society)
4:40 – 5:15 p.m.	**Catalysis of clusters in the non-scalable size regime I** Ulrich Heiz (TUM)
5:15 – 5:50 p.m.	**Multiscale modeling of catalysis** Karsten Reuter (TUM)

TUESDAY, NOVEMBER 21, 2017 *Auditorium (ground floor)*

8:30 – 9:05 a.m.	***Operando* nanocatalysis: size, shape, composition, and chemical state effects** Beatriz Roldan Cuenya (Fritz-Haber Institute of Max Planck Society)
9:05 – 9:40 a.m.	**Catalysis of clusters in the non-scalable size regime II** Ulrich Heiz (TUM)
9:40 – 10:15 a.m.	**Refining first-principles photo-electrocatalysis** Karsten Reuter (TUM)
10:15 – 10:45 a.m.	*Coffee Break (Foyer, ground floor)*
10:45 – 11:20 a.m.	**Organic monolayers in heterogeneous catalysis: how "crowding" the reactants can improve catalyst specificity** Will Medlin (University of Colorado Boulder)
11:20 – 11:55 a.m.	**Lessons from enzymes - On the role of steric constraints and chemical environments for catalysis** Johannes A. Lercher (TUM)
11:55 – 12:30 p.m.	**Development of electrocatalytic materials guided by computational chemistry: fuel cells and electrolysis** Michael Janik (Pennsylvania State University)
12:30 – 13:05 p.m.	**Maximizing efficiencies of photocatalytic water splitting by engineering interfaces in multi-component photocatalysts** Suljo Linic (TUM-IAS Hans Fischer Fellow, University of Michigan)