

## Thiophene surface chemistry

### Publications

- 129 *Desulfurization Related Surface Chemistry on Two-dimensional Silica Films: Adsorption of Thiophene and Short-chain Alkanes on Silicatene*,  
**Journal of Physical Chemistry C**, 2018, 122 (15), pp 8244–8253  
by M. T. Nayakasinghe, N. Sivapragasam, and U. Burghaus  
<http://dx.doi.org/10.1021/acs.jpcc.7b11957>
- 117 *Reactivity and morphology of MCM-48 supported Ni, Mo, MoNi towards thiophene hydrodesulfurization*,  
**Surface Review and Letters** 21 (2014) 1450060  
by Catherine Bartholomew, A. Chakradhar, U. Burghaus, Chia-Ming Wu, Rui Peng, Srujan Mishra, S. Phil Ahrenkiel, Ranjit T. Koodali, Jonas Baltrusaitis, Gautam Mishra
- 106 *Catalytic decomposition of thiophene by WS<sub>2</sub> nanotubes coated with Co nanoparticles*,  
**Materials Research Bulletin**, **47** (2012), 1653-1660  
by Y. Tsverin, R. Popovitz-Biro, Y. Feldman, R. Tenne, M. Komarneni, Z. Yu, A. Chakradhar, A. Sand, U. Burghaus
- 96 *Bond activation in thiophene and catalyst poisoning – nanosize Mo clusters supported on silica for desulfurization catalysis*,  
ACS proceedings division of fuel chemistry, Boston,  
**Am. Chem. Soc., Div. Fuel Chem.** **55** (2010) 594  
by E. Kadossov, M. Komarneni, J. Justin, U. Burghaus
- 94 *Adsorption of thiophene on silica supported Mo clusters*,  
**Surface Science** **604** (2010) 1221-1229  
by M. Komarneni, E. Kadossov, J. Justin, M. Lu, U. Burghaus
- 83 *Adsorption of thiophene on inorganics MoS<sub>2</sub> fullerene-like nanoparticles*,  
**Catalysis Letters** **129** (2009) 66-70  
by M. Komarneni A. Sand, u. Burghaus
- 79 *Reactive and non-reactive interactions of thiophene with WS<sub>2</sub> fullerene-like nanoparticles: an ultra-high vacuum surface science study*,  
**Catalysis Letters** **125** (2008) 236-242,  
DOI 10.1007/s10562-008-9565-7  
by J. Goering, U. Burghaus, B.W. Arey, O. Eidelman, A. Zak, R. Tenne  
funding DoE
- 75 *Adsorption kinetics and dynamics of small organic molecules on a silica wafer: Butane, pentane, nonane, thiophene, and methanol adsorption on SiO<sub>2</sub>/Si(111)*,  
**Applied Surface Science** **254** (2008) 5271-5275,  
by S. Funk, J. Goering, U. Burghaus  
funding DoE-EPSCoR state grant
- 70 *Adsorption kinetics of thiophene on single-walled carbon nanotubes (CNTs)*,  
**Chemical Physics Letters** **447** (2007) 121-126,  
by J. Goering, U. Burghaus

funding DoE-EPSCoR state grant

**Conference presentations**

- 2012 “*Synthesis and catalytic activity of WS<sub>2</sub> nanotube supported cobalt and nickel catalysts towards thiophene hydrodesulfurization*”, **AVS** meeting in Orlando, by M. Komarneni, Z. Yu, A. Chakradhar, U. Burghaus, Y. Tsverin, R. Popovitz-Biro, Y. Feldman, R. Tenne
- 2011 “*Molecular beam scattering of small molecules on supported cluster systems – the case of CO/Au-silica and thiophene/Mo-silica*”, **Gordon Research Conference** “Chemical Reactions at Surfaces”, in Ventura, CA, by E. Kadossov, M. Komarneni, J. Justin, M. Lu, S. Cabrini, U. Burghaus
- 2009 “*Reactive and non-reactive interactions of thiophene with WS<sub>2</sub> and MoS<sub>2</sub> fullere-like nanoparticles*”, **ACS** meeting in Salt Lake City, by A. Sand, J. Goering, U. Burghaus, B.W. Arey, O. Eidelman, A. Zak, R. Rosentsveig, R. Tenne, submitted
- 2018 “*Adsorption Kinetics of Thiophene and Alkanes on Two-Dimensional Crystalline Silica Films: An Ultra-High Vacuum Study*”, ND **EPSCoR** 2018 State Conference, Grand Forks, MINDIKA T NAYAKASINGHE & UWE BURGHAUS, North Dakota State University
- 2010 “*Adsorption and Dissociation of Thiophene on Silica-supported Mo and MoS<sub>x</sub> Clusters*”, 6th Annual **Minnesota Nanotechnology** Conference, by M. Komarneni, E. Kadossov, U. Burghaus