

## **UniCat Colloquium**

Please note updates of events on [www.unicat.tu-berlin.de](http://www.unicat.tu-berlin.de)

- Lecturer:** **Dr. habil. Detlef Schröder**, Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic, Prague
- Title:** **Mass Spectrometric Monitoring of Reactions in the Condensed Phase**
- Abstract:** Chemists usually consider mass spectrometry as a mere analytical methods which is used to obtain structural information, the molecular weight in particular. In the lecture, examples for solvated metal ions [1-3] and copper-mediated C-C- and C-S-coupling reactions [4,5] are given which demonstrate how modern mass spectrometric methods can be used to achieve insight into chemical reactions in the condensed phase. In addition to qualitative aspects concerning the type and intensities of certain species in solution, valuable mechanistic information can be achieved which bear relevance for preparative chemistry. In fortunate cases, it is even possible to link the chemistry in solution directly with that occurring in the gas phase and also in the transfer between the condensed and gaseous state [6,7]. In this context, we also propose the first quantitative correlations between gas-phase measurements and condensed-phase properties [3,8]. In the long run, these studies in the framework of an *ERC Advanced Grant* aim towards the implementation of electrospray mass spectrometry in synthesis optimization.
- [1] **B. Jagoda-Cwiklik, P. Jungwirth**, L. Rulišek, P. Milko, J. Roithová, J. Lemaire, P. Maitre, J. M. Ortega, D. Schröder *ChemPhysChem* **2007**, *8*, 1629.  
[2] N. G. Tsierkezos, J. Roithová, D. Schröder, I. E. Molinou, H. Schwarz *J. Phys. Chem. B* **2008**, *112*, 4365.  
[3] N. G. Tsierkezos, J. Roithová, D. Schröder, M. Ončák, P. Slavíček *Inorg. Chem.* **2009**, *48*, 6287.  
[4] J. Roithová, D. Schröder *Chem. Eur. J.* **2008**, *14*, 2180.  
[5] J. Šrogl, J. Hyvl, A. Révész, D. Schröder *Chem. Commun.* **2009**, 3463.  
[6] E.-L. Zins, C. Pepe, D. Schröder *Faraday Disc.* **2010**, *145*, 157.  
[7] D. Agrawal, E. L. Zins, D. Schröder *Chem. Asian J.* **2010**, *5*, 1667.  
[8] D. Agrawal, D. Schröder, G. C. Lloyd-Jones *Organometallics* **2010**, *29*, 3979.
- Date:** **Wednesday, 5 October 2011**
- Time:** **5:15 pm - around 6:45 pm**
- Location:** **TU Berlin; Institute of Chemistry  
Straße des 17. Juni 115; 10623 Berlin  
Building C; Lecture Hall C 243**
- Organiser:** **Prof. Helmut Schwarz (TUB)**

Coffee and tea will be served thirty minutes prior to the lecture start.  
**Guests are cordially invited to attend!**

Prof. Dr. Matthias Driess, Chair of the Cluster of Excellence UniCat