# Proposal colloquium SPP 1178 Kloster Banz

## Wednesday, February 04<sup>th</sup>, 2009

- 12:00		Arrival	
12:00 – 12:10		Janssen Welcome from the DFG	
12:10 – 12:20		Stalke, Göttingen / Scherer, Augsburg / Luger, Berlin Welcome from the coordinators – Organizational remarks	
12:20 – 12:50		Stalke, Göttingen Coordination and instrumentation of the SPP 1178	
12:50 - 14:00		Lunch	
Chair: Luger, Berlin			
	Poster	Erker, Münster / Grimme, Münster (lecture by Ugolotti)	
14:00 – 14:20	1	Experimental Electron Density in Unusually Structured Organometallic Compounds	
	Poster	Strohmann, Dortmund	
14:20 – 14:40	2	The experimental charge density distribution as a key to the understanding of structure/reactivity patterns of alkyllithium and benzyllithium compounds	
	Poster	Stalke, Göttingen	
14:40 – 15:00	3	Electron density distribution in lithium organics	
	Poster	Lentz, Berlin / Paulus, Berlin	
15:00 – 15:20	4	Charge Density and Topological Properties of Boranes and their Lewis Acid Base Adducts	
	Poster	Braunschweig, Würzburg	
15:20 – 15:40	5	Electron density distribution in borylene complexes	
15:40 – 16:10		Coffee Break	
Chair: Scherer, Augsburg			
	Poster	Kaupp, Würzburg	
16:10 – 16:30	6	Analysis of charge distributions in polar metal-ligand bonds	
16:30 – 16:50	Poster	Kohout, Dresden / Wagner, Dresden	
	7	Metal-metal and metal-ligand interactions from a viewpoint of direct space functionals	
16:50 – 17:10	Poster	Mitzel, Bielefeld	
	8	Electron density topology and nature of bonding in small ring compounds with dative bonds	

17:10 – 17:30	Poster 9	Krossing, Freiburg Experimental charge densities of weakly bound complexes: Dispersive interactions and influence of relativity on calculated charge densities
17:30 – 17:50	Poster 10, 11, 12	Englert, Aachen / Lehmann, Mühlheim Experimental electron density studies of secondary interactions in solids
17:50 – 19:30		Dinner
19:30 – 21:00		Poster Session

### Thursday, February 05<sup>th</sup>, 2009

08:00 - 09:00		Breakfast
Chair: Luger, Berlin		
09:00 - 09:20	Poster 13	Koritsanszky, Murfreesboro Methodological Developments in X-ray Charge Density Determination
09:20 – 09:40	Poster 14	Dittrich, Göttingen Using molecular dynamics for understanding and modelling disordered crystal structures
09:40 – 10:00	Poster 15	Engels, Würzburg Using quantum chemical computations to study the electron density and its influence on the reactivity
10:00 - 10:20		Coffee Break
10:20 – 10:40	Poster 16	van Smaalen, Bayreuth The maximum entropy method for accurate charge-density studies, and its application to proteins and other molecules of biological interest
10:40 - 11:00	Poster 17	Schirmeister, Würzburg Correlation of electron density derived molecular properties with biological activity - a new tool in rational ligand design
11:00 – 12:30		Poster Session
12:30 - 14:00		Lunch
Chair: Stalke, Göttingen		
14:00 – 14:30	Poster 18, 19, 20	Eickerling, Augsburg / Himmel, Heidelberg / Scherer, Augsburg On the Nature and Origin of Ligand-induced Charge Concentrations: The Key for Controlling C-H Activation Processes in Electron-Rich Transition Metal Complexes
14:30 – 14:50	Poster 21	Fueß, Darmstadt Correlated momentum, charge and magnetization density in the kagome staircase system $Co_3V_2O_8$

14:50 – 15:10	Poster 22	Borrmann, Dresden / Pietsch, Siegen Charge density response to an external high electric field	
15:10 – 15:30	Poster 23	Fueß, Darmstadt / Weyrich, Konstanz The Electronic Structure of TiO <sub>2</sub> , VO <sub>2</sub> and Related Transition-Metal Oxides: A Joined Electron-Density Study of Materials in Position, Momentum and Phase Space	
15:30 - 16:00		Coffee Break	
Chair: Stalke, Göttingen			
16:00 - 16:20	Poster 24, 25	Pöttgen, Münster / Scherer, Augsburg (lecture by Hofmann) Chemical bonding in rare earth–transition metal–carbides, borides, boride carbides, silicides, and pnictide oxides	
16:20 - 16:40	Poster 26	Grin, Dresden Electron density and chemical bonding in intermetallic borides and structural analogues	
16:40 - 17:00	Poster 27	Rosner, Dresden Electron densities of intermetallic compounds inspected by spectroscopy	
17:00 – 17:30	Poster 28	Jansen, Stuttgart / Paulus, Berlin / Weyrich, Konstanz Deviations from Ideal Structures in Metallic Elements and Simple Intermetallics: Combined Experimental and Theoretical Studies of Electron distributions	
17:30 – 17:50	Poster 29	Fässler, Garching Accurate charge density determination in Zintl phases	
17:50 –		Dinner and Beer	

### Departure for applicants (optional)

### Friday, February 06<sup>th</sup> 2009

8:00 – 9:00	Breakfast
9:00	Referee Board Meeting

#### Departure

#### General remarks:

The allocated time slot to present each project is 20 minutes in general. Those projects combining various groups and methods got 10 minutes extension to present their common proposal. The slot accommodates a 15 (20) minutes presentation plus 5 (10) minutes of discussion.

It is the group's responsibility to identify the person to present the project, however, at the end all applicants should enter the stage to answer the referee's questions.

The sessions will be chaired to avoid delays according to the program.

The presentations ought to be given using overhead transparencies, slides, or PowerPoint presentations.