

**Program**  
of the 1st Berichtskolloquium of the SPP 1236  
**Structures and characteristics of crystals  
at extremely high pressures and temperatures**  
*Place: Bonifatiuskloster, Hünfeld*

**Monday, 1st October**

- 12:00      **Lunch**
- 13:30      *Prof. B. Winkler* Organizational
- 13:50      *Dr. A. Friedrich* The CO<sub>2</sub> laser-heating facility
- 14:15      **Session: Minerals**
- 14:15      *A. Watenphul* Ammonium in high pressure minerals
- 14:40      *R. Minch* Synthesis, structure and properties of carbonates at earth-mantle conditions
- 15:05      **Coffee break**
- 15:30      *F. Deon* Water incorporation in olivine and wadsleyite
- 15:55      *K. Schollenbruch* Systematics of the post-spinel transition in Fe-bearing compositions
- 16:20      **Organization of the clusters I**
- 16:30      **Poster session I**
- 17:30      **Cluster meeting I (DAC, Multi Anvil, Theory)**
- 18:30      **Dinner**
- 19:30      **Organizational (Dates)**
- 20:00      **Klosterstube**

# Tuesday, 2nd October

8:00 **Breakfast**

8:45 **Session: Minerals (continued)**

8:45 *M. Wehber, Dr. C. Lathe* In-situ p-V-T measurements of magnetite

9:10 *Dr. C. McCammon* New results from in situ high P,T studies of lower mantle minerals

9:35 *B. Hewener, Prof. V. Schünemann* Characterization of geominerals with Mössbauer spectroscopy and Nuclear Inelastic Scattering

10:00 **Group photo**

10:30 **Invited lecture:** *Prof. R. Angel* Phase transitions in perovskites: new insights from single-crystal diffraction

11:10 **Session: Other Compounds**

11:10 *Dr. P. Balog, S. Pfeiffer, Prof. M. Jansen* Sulphides and selenides of Group 15 elements at high pressures and high temperatures

11:35 *Prof. B. Mihailova* Pressure-induced structural transformations in Pb-based relaxor ferroelectrics

12:00 **Lunch**

13:30 **Session: Oxonitrides**

13:30 *Dr. M. Schwarz* Status quo of the high-pressure investigations in the  $Si - Al - O - N$  system

14:05 *Dr. I. Kinski* High-pressure/high-temperature syntheses of novel oxonitrides in the system  $GaN - Ga_2O_3$

14:40 **Coffee break**

15:05 *C. Braun, R. Römer* A new high pressure phase of  $Ca_2Si_5N_8$  and theoretical studies on the nitridosilicates  $M_2Si_5N_8$  ( $M = Ca, Sr, Ba$ ).

15:40 **Invited lecture:** *Dr. R. Pentcheva, K. Otte* Stability, electronic and magnetic properties of iron (oxyhydr-)oxides under high pressure: insights from first principles

- 16:20      **Organization of the clusters II (minerals, nitrides, etc.)**
- 16:30      **Poster session II**
- 17:30      **Cluster meeting II (Nitrides, Minerals etc.)**
- 18:30      **Dinner**
- 19:30      **Organizational**
- 20:00      **Klosterstube**

## Wednesday, 3rd October

- 8:00      **Breakfast**
- 9:00      **Session: Carbides and Nitrides**
- 9:00      *PD. Dr. U. Schwarz, Prof. R. Niewa, D. Rau* High-pressure crystal structure and properties of  $Cu_3N$
- 9:35      *Dr. J. von Appen, M. Wessel* High-pressure crystal structure and properties of  $Cu_3N$  - theory
- 10:00      *Dr. J. Gracia, Dr. A. Togo* High pressure phase transformations in  $Si - C - N$ . The phase boundary between beta- and gamma silicon nitride
- 10:35      **Break**
- 11:00      *Dr. N. Dubrovinskaia, PD.Dr. L. Dubrovinsky, Dr. R. Wirth, Dr. N. Mijajima, Prof. H. F. Braun* Where is boron in superconducting diamonds?
- 11:25      *Dr. E. A. Juarez Arellano* Study of Rhenium, Scandium and Titanium Carbides at different (P,T) conditions
- 11:50      **Closing remarks**
- 12:00      **Lunch**
- 13:00      **Departure**