

Einladung zum GDCh-Kolloquium

Am Donnerstag, dem 14. Juni 2018, 17:00 Uhr, spricht

Herr Prof. Dr. J. Paul Attfield

The University of Edinburgh, UK

zum Thema:

New Orders in Simple Solids

Control of the electronic and magnetic properties of materials often involves the formation of additional orders within simple structure types such as perovskite, spinel, rocksalt, etc. These orders may be of atoms, vacancies, charges, and orbital or spin states. High pressure conditions are sometimes used both to create such orders. This talk will illustrate the progression from long range motifs to molecule-like objects driven by the d-states within ordered superstructures of transition metal compounds. Long range superstructures will be illustrated by the discovery of cation-ordered Mn-perovskites and large-period vacancy ordered planes in SrCrO_{3-x} materials - these are synthesised through 'hard-soft' chemistry starting from the high pressure perovskite SrCrO_3 . More unconventional, polymer-like, correlated orders of O and N atoms have been discovered in oxynitride perovskites such as SrTaO_2N . These have an unusual sub-extensive scaling of entropy with particle size. The low temperature phase of magnetite, Fe_3O_4 , has been an enduring mystery since it was first reported by Verwey in 1939. Our determination of the superstructure shows that it is charge and orbitally ordered to a good approximation, but with an additional orbital molecule order of 3-site 'trimeron' units.

Ort: Fakultät für Chemie und Mineralogie, Johannisallee 29, kl. HS 015, 04103 Leipzig

Alle Interessenten sind zu diesem Vortrag herzlich eingeladen.

Prof. Dr. O. Oeckler
GDCh-Ortsverband

Prof. Dr. N. Sträter
Dekan

Die Professoren des Institutes
für Anorganische Chemie

Nähere Informationen bei Prof. Dr. Holger Kohlmann, Tel.: 36201, holger.kohlmann@uni-leipzig.de

Um **16.15 Uhr** findet die traditionelle **Vorbesprechung/Kaffeerunde** im Institut für Anorganische Chemie, R. 153 statt, zu der herzlich eingeladen wird.