

Poster Presentation

MS83.P38

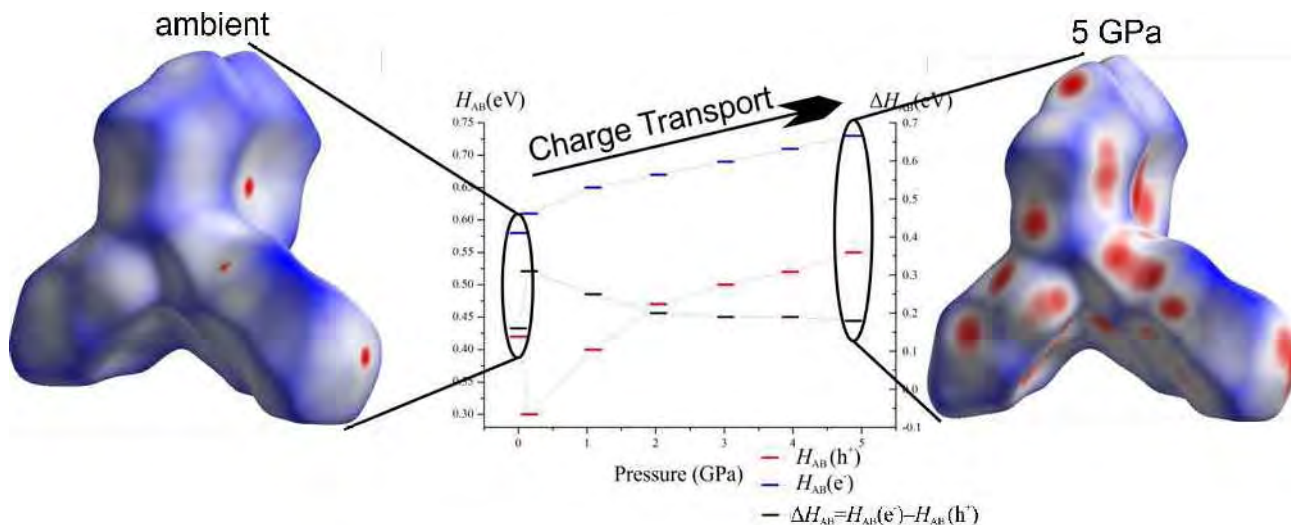
Structure-properties relationship in Borinic Systems at high and normal pressure

G. Wesela-Bauman^{1,2}, S. Parsons³, S. Luliński², J. Serwatowski², K. Woźniak¹

¹University of Warsaw, Department of Chemistry, Warsaw, Poland, ²Warsaw University of Technology, Faculty of Chemistry, Warsaw, Poland, ³The University of Edinburgh, School of Chemistry and Centre for Science at Extreme Conditions, Edinburgh, Scotland

Recently we were focused on the synthetic, physicochemical and theoretical evaluation of the properties of borinic 8-oxyquinolates.[1,2] Such systems are of interest of many groups in the world, as borinic derivatives are promising materials for the preparation of luminescent layers in organic light emitting diodes (OLEDs).[3] Our aim is to trace the impact of structure on properties of the system. Hence we have conducted polymorph screening for highly strain aromatic heteroleptic borinic system. As a result, we are presenting, the very first examples of polymorphism in the group of aromatic borinic 8-oxyquinolate complexes [(2-fluoro-3-pyridyl) (2,2'-biphenyl)borinic 8-oxyquinolate]). We wanted to extend our investigations on high-pressure crystallography. These investigations were prompted by results obtained by other groups which analysed crystal structures of AlQ3, GaQ3 and InQ3 under low and high pressure. Such studies helped to trace a connection between the motifs present in the crystal phases and optical properties of these complexes as a consequence of orbital interactions. On this basis we were interested in investigation of the influence of high pressure on the packing of synthesized and characterized (2-fluoro-3-pyridyl) (4-iodophenyl)borinic 8-oxyquinolate.

[1] G. Wesela-Bauman, P. Ciećwierz, K. Durka, et al, *Inorg. Chem.* 2013, 52, 10846–10859, [2] G. Wesela-Bauman, L. Jastrzębski, P. Kurach, et al, *J. Organomet. Chem.* 2012, 711, 1–9., [3] Y.-L. Rao, S. Wang, *Inorg. Chem.* 2011, 50, 12263–12274.



Keywords: Polymorphism, high-pressure X-Ray studies, Optoelectronics