



Contribution ID: 27

Type: **Talk**

## Lattice modification and morphological control of halide substituted yqt-type zeolitic imidazolate frameworks $Zn_3mim_5X$ , with $X = Br, Cl, F$ or $OH$

*Wednesday, 16 March 2022 15:10 (20 minutes)*

Zeolitic Imidazolate Frameworks (ZIFs) are a large subgroup of metal-organic frameworks, which has been studied for decades. The synthesis in aqueous solution using methylimidazolate (Hmim) and different zinc salts leads to the formation of  $Zn_3mim_5XH_2O \cdot nH_2O$  with  $x = Br, Cl$  and  $\alpha$ - $Zn_3mim_5X$  with  $x = F, OH$  phases showing an yqt network. The incorporation different halide and hydroxide anions into the network effects the de- and rehydration behavior, the spectral properties and thermal expansion.

**Primary author:** BETTE, Sebastian (Max Planck Institute for Solid State Research)

**Co-authors:** Dr GLANTE, Stephan; Dr WISSER, Dorothea; Prof. MARTIN, Hartmann; Mr JOOS, Markus; Prof. DINNEBIER, Robert E.

**Presenter:** BETTE, Sebastian (Max Planck Institute for Solid State Research)

**Session Classification:** Solid State and Materials Chemistry II

**Track Classification:** Main conference: Structural Chemistry & New crystal structures