

Invitation to the guest lecture of

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“Hydrothermal Synthesis of Advanced Organic Materials”

Advanced organic materials are defined as (i) showing superior performance in at least one characteristic relevant to a desired application, and (ii) being mainly built up of C,H,N,O,S and further heteroatoms. Examples are aromatic high-performance polymers or organic high-performance dyes of interest to organic electronics applications. These materials are classically generated by harsh, toxic and environmentally harmful techniques. We could recently show, that several advanced organic materials can be synthesized in high-temperature water (HTW), via so-called hydrothermal synthesis, at high conversion and efficiency. Hydrothermal synthesis is a geomimetic approach, *i.e.* it takes inspiration from natural mineral formation processes. Since geomimetic approaches often yield highly crystalline products, materials properties that profit from crystallinity, are enhanced. Moreover, hydrothermal synthesis is inherently benign compared to most conventional protocols, as it requires solely water as reaction medium. With this presentation, I will show that advanced materials ranging from high-performance polymers to organic dyes and inorganic-organic hybrid materials can be generated hydrothermally. Special interest will be placed on discussing why such transformations are possible at all, and where the academic and industrial potential of hydrothermal organic synthesis lies.

- **Thursday, 18th May 2017**
- **14:30 s.t.**
- **HS H “Ulrich Santner”**

Institut for Chemistry and Technology of Materials
Assoc. Prof. Dr. Christian Slugovc