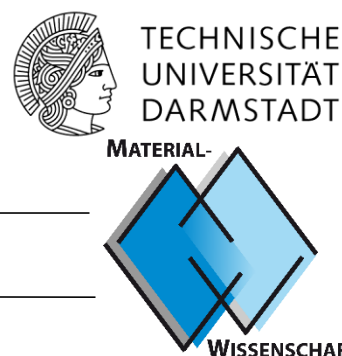# Materialwissenschaftliches Kolloquium

Montag, 27. April 2020, 15.20 Uhr s.t., online only

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Chemist vs. Nature: the challenge who is the best

The rapid advancements in technology are inevitably connected with the development of new materials, ranging from polymeric materials over semiconductors to alloys. On the other hand, nature has already developed long ago highly-efficient mechanisms on the nanoscale for various applications. In this talk, I will discuss how the chemist can learn from nature in order to synthesize functional materials for energy conversion[1] and storage[2].

Besides the discussion of the required material size, the focus will be on the dimensionality (1D and 2D) for the target application. The scope of the talk will also include the importance of recycling to achieve a sustainable life-cycle on the example of biomaterials, derived from lignin, as environment-neutral sorbents for recovery of cobalt.

1   Slabon et al. *Nanoscale* **2020**, *12*, 3121; Slabon et al., *Dalton Trans.*, **2020**, *49*, 3450; Slabon et al., *J. Phys. Chem. C* **2020**, 124, 152; Slabon et al., *Inorg. Chem.* **2019**, *58*, 9655; Slabon et al., *ACS Appl. Mater. Interfaces* **2019**, *11*, 19077; Slabon et al., *ACS Appl. Nano Mater.* **2018**, *1*, 869.
2   Yaprak, Slabon, Afyon et al., J. Solid State Electr. **2020** accepted; Slabon, Nesper et al., *Angew. Chem. Int. Ed. Engl.* **2012**, *124*, 11762.
3   Budnyak, Slabon, Sipponen *ChemSusChem* **2020** accepted.

The meeting can be joined via ZOOM using the following link
https://zoom.us/j/443443486?pwd=TXpCUDU1dWlnM3RrYzFBRG1lUzRlUT09
and the following credentials
Meeting ID: 443 443 486
Password: 751894

For Ph.D. students who want to have this meeting counted, please write your name into the chat AFTER the meeting and discussion is over.

If you need more details on how to use zoom, please check: https://www.hrz.tu-darmstadt.de/konferenz/videokonferenz/zoom/index.de.jsp

L. Alff / O. Gutfleisch / W. Jaegermann