

## TRR Guest Scientist Lecture / Seminar

Date/Time: 19.10.2016 / 4pm  
Location: Paderborn / A1

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## Organic-Inorganic Hybrid Perovskites for Photovoltaic Applications

### Abstract:

Organic-inorganic hybrid perovskites (OIHPs) have successfully emerged as promising light harvesters for high efficiency solid-state solar cells due to their excellent optical and electronic properties. These materials can be prepared by simple solution-based methods, for example, inkjet printing, dip coating and spin coating methods, which allow one to reduce the amount of energy required and are suitable for an industrial approach. In this talk, we provide an overview of OIHPs, which includes some preparation processes for improving and controlling charge separation and transport of the perovskite layers. Also, we highlight their electronic properties investigated by modulated surface photovoltage (SPV) spectroscopy.

### References

1. J. Burschka, et al., Nature 499 (2014) 316.
2. P. Prajongtat and Th. Dittrich, J. Phys. Chem. C 119 (2015) 9926.
3. P. Prajongtat, et al., J. Phys. Chem. C 120 (2016) 3876.
4. A. Naikew, et al., Appl. Phys. Lett. 106 (2015) 232104.
5. T. Dittrich, et al., J. Phys. Chem. C 103 (2016) 183906.

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