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UNIVERSITÄT SIEGEN

JCF-Siegen Lecture
&
Award Ceremony of the Young-Chemist Alumni Award by the Alumni Chemie Siegen e.V.

Johannes R. Klein
Physical Chemistry II

Ultrafast charge carrier dynamics of perovskite solar cells

Organic-inorganic hybrid perovskites are promising materials for solar energy conversion. We employed ultrafast broadband absorption spectroscopy to understand the relaxation dynamics of photoexcited charge carriers in the most widely used $(CH_3NH_3I)_x(PbI2)_{1-x}$ system. It offers a wide tunability of the optical and electronic properties. We report the formation of low-dimensional perovskite structures for large mole fractions x with still remarkably low electron-hole recombination rate constants.

Siyu Jiang
Physical Chemistry I

Control of Protein Adsorption and Cell Attach-/Detachment on Thermo-responsive Poly((diethylene glycol) methyl ether methacrylate) Brushes

Thermoresponsive polymers have been recently introduced as attractive materials for biomedical research and applications. Here, we report on a thorough investigation of thermoresponsive poly((diethylene glycol) methyl ether methacrylate) brushes, which can trigger the detachment of cells. In addition to a detailed mechanistic study by surface plasmon resonance techniques, the capture and release of pancreatic cancer and induced pluripotent stem cells on micropatterned brushes will be discussed.

Willis Muganda
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Chair JCF

Markus Suta
-
Vice Chair JCF

Gabriel E. Gómez
-
Treasurer JCF