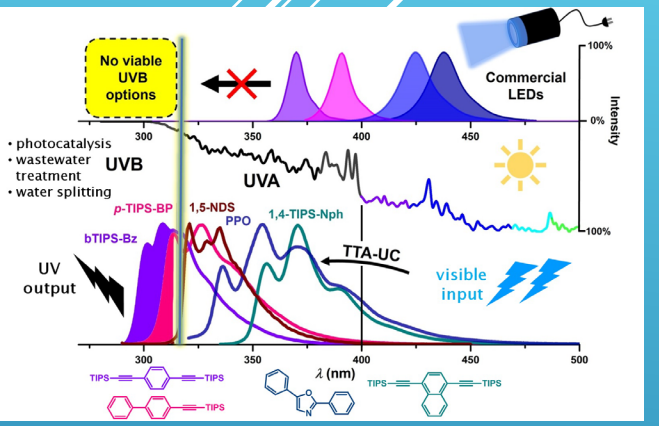
Appl. Chem. Department seminar, The 77th CMS International Seminar

The 10th Excited-state Functional Chemistry Seminar, The 33rd Q-Colloquium

Prof. Christoph Kerzig (Lab HP)

Johannes Gutenberg University Mainz, Germany



“One UV photon or two visible photons, that is the question”

Date: July 31st (Mon) 2023, 16:00~ (JST)
Place: West 4-314, Ito Campus, and YouTube

Abstract: Numerous challenging photoreactions require UV light and cannot be driven by one visible photon for thermodynamic reasons. With the aim in mind to replace inefficient UV light sources, we are working on different strategies to pool the energy of two visible photons for achieving similar photochemical reactivities as obtained upon direct (one-photon) UV excitation. Several two-photon mechanisms and photocatalytic applications will be discussed with a focus on recent results related to two key mechanisms: (i) consecutive two-photon absorption with intermediate triplet states and (ii) upconversion via sensitized triplet-triplet annihilation. All projects are characterized by a synergistic interplay of molecular design, time-resolved optical spectroscopy and lab-scale irradiation experiments.

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Admission: free