



Einladung zum Vortrag von

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***Recent Developments in Photoredox Catalysis and
Dual Catalysis***

Over the last decade, we have been involved in the implementation of organometallic catalysis to the development of more sustainable synthetic radical chemistry. Whether relying on the use of new organometallic iron or copper complexes, or photocatalytic systems, we have been able to devise efficient homolytic processes with relevant applications in organic synthesis. More recently, we have introduced hypervalent bis-catecholato silicon compounds as versatile sources of alkyl radicals upon visible light photocatalysis. Using Ir(III) as catalytic photooxidant, or an organic dye, a series of alkyl radicals, including highly reactive primary ones can be generated and engaged in various intermolecular homolytic reactions. Based on cyclic voltammetry, Stern-Volmer studies and DFT calculations, a mechanism involving a single electron transfer from the silicate to the excited photocatalyst has been proposed. Finally, we have shown this oxidative photocatalyzed process can be efficiently merged with nickel-catalyzed C_{sp^2} - C_{sp^3} cross-coupling reactions. Based on our developments in gold catalysis, our recent efforts in photoredox/gold dual catalysis will also be presented.

Mittwoch, 10. Oktober 2018, 16:15 Uhr
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