

Donnerstag, 19.05.2016

Hörsaal C, Chemie Zentralbau, 17:15 Uhr

**Sprecher:** **Sebastian Reineke**  
*Technische Universität Dresden*

**Thema:** **Triplet centered excitonic mechanisms: thermally activated delayed fluorescence and biluminescence**

**Abstract:** This presentation discusses our latest progress on the understanding TADF emitters is presented. In this concept, the triplets are only used as intermediate states before they can reach the emissive singlet state via up-conversion. Additionally, our efforts on luminescence concepts making use of triplet states in organic molecules will be presented. The phosphorescence can be unlocked with their rigidification in polymer host materials at room temperature, so that the molecules turn into biluminophores. Only the interstate mixing between  $S_1$  and  $T_1$  determines the relative intensities. This mixing can be altered with advanced excitation schemes towards a higher phosphorescence ratio.

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