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Light at Interfaces: Linker Design for organic/inorganic hybrids



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Abstract: Molecular-level control of hybrid molecule/semiconductor interfaces is one of the prerequisites to enable innovative technologies for the conversion of solar energy to produce electricity and energy-rich chemicals.These interfaces are of fundamental interest, but also address important technological challenges in application fields ranging from solar energy conversion to electrochromic materials and nanosensors. Our research aims at controlling and understanding, through synthetic design of chromophore-bridge-anchor compounds, the properties of this complex interface. In particular, our group is interested in developing the bridge-anchor moiety (the linker) to control distance, surface orientation and other important parameters. The talk will focus on this area, particularly the use of “functionally active” linkers, discussing our recent work on compounds with one or two linker units and how small structural changes can have significant influence on interfacial charge transfer. The talk will also address other aspects of linker design we have studied over the years.

Friday, November 13 | 3:30pm-4:45pm | Science Hall 126 & Zoom

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