



Chiral Recognition in Molecular Nanowires from Square-Planar Platinum(II) Complexes

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Square-planar Pt(II) complexes have a strong tendency to aggregate and to form stacks with short metal-metal contacts between individual complexes. This can lead to extended one-dimensional structures exhibiting high electric conductance, vapo-chromism, and photoluminescence. Until recently, most compounds of this type were made from achiral building blocks, but recent research suggests that nanowires from chiral Pt(II) complexes give access to helical superstructures with unusual properties. In this proposed project, we plan to combine the expertise of the Sparr group in the area of axially chiral organic molecules with the knowledge of the Wenger group in coordination chemistry and spectroscopy to explore a conceptually new class of nanowires featuring Pt(II) based chiral superstructures. Their sensing properties for volatile organic compounds (VOC) and chiral recognition of atmospheric terpenes relevant to global warming will be of key interest.