

# **Spiro-donor-acceptor compounds and conjugated nano hoops as optoelectronic materials**

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In this talk I will present our research on spiro compounds with donor-acceptor structure as well as on chiral conjugated nano hoops as emitters with chiroptical properties. The spiro compounds are based on heterospirenes with either internal donor-acceptor structure or with donor character, connected to acceptor moieties, and have low predicted singlet-triplet energy gaps. I will discuss their structural design and synthesis as well as optoelectronic properties. The conjugated nano hoops are chiral due to the incorporation of diketone units with discrete stereocenters or bent dibenzopentalene units. I will present synthetic strategies to such strained, chiral hoops as well as their chiroptical and electronic properties.