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Nanoscale engineering of quantum systems at surfaces

Monday, December 2, 2024 11:00 AM (30 minutes)

The increasing interest in quantum technologies calls for purpose-designed nanoscale structures at surfaces. In my talk I will focus on tailored-made molecular structures that are made for two very different purposes: firstly, self-assembled molecular layers engineered for orbital cinematography, i.e., spatial and temporal imaging of electron dynamics in molecules at their intrinsic time scales, and secondly, single-molecule devices created at the tip apices of scanning probe microscopes that can be used as quantum sensors to investigate the properties of surfaces and two-dimensional quantum materials with unprecedented sensitivity and resolution.

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