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Electronic transport through single-molecule magnets by scanning tunneling spectroscopy SIMRANJEET SINGH, Department of Physics, University of Central Florida, Orlando, Fl, JYOTI KATOCH, Department of Physics and NanoScience Technology Center, University of Central Florida, Orlando, Fl, TAKETO TAGUCHI, GEORGE CHRISTOU, Department of Chemistry, University of Florida, Gainesville, Fl, MASA ISHIGAMI, Department of Physics and NanoScience Technology Center, University of Central Florida, Orlando, Fl, ENRIQUE DEL BARCO, Department of Physics, University of Central Florida, Orlando, Fl — Atomic structure of molecules and electrodes are expected to sensitively influence the properties of molecular spintronics devices. We have studied the transport properties of individual Mn_4 single-molecule magnets bound to a surface using atomic force and scanning tunneling microscopy at cryogenic temperatures Unlike previous scanning probe microscopy experiments, we are able to continuously tune the density of states of individual molecules using novel device geometries insitu We will discuss transport properties of single-molecule magnets as a function of their atomic structure, coupling to electrodes and the Fermi levels.

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