

Abstract Submitted
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Progress toward few-molecule photochemistry with a low temperature STM.¹ DAVID DAUGHTON, DONGHUN LEE, JAY GUPTA, The Ohio State University — Photochemistry at interfaces provides insight into molecular binding and charge transfer with future implications for organic photo-active devices. We have developed a novel instrument combining a low-temperature scanning tunneling microscope (STM) with a maneuverable, high numeric aperture lens in proximity to the tunnel junction for the study of photoactive systems with single molecule sensitivity. We will present the results of our initial efforts on the electronic and photo-induced polymerization of C60 islands, tunneling and photo-induced isomerization of thioindigo, and the effects of well-defined optical nanostructures on photochemical processes. <http://www.physics.ohio-state.edu/~jgupta>

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