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Scanning Tunneling Microscopy and Spectroscopy on Cu(111) DAVID GOHLKE, Ohio State University — Scanning tunneling microscopy allows us to examine the surface of a material on an atomic scale. Our setup allows us to take detailed atomic-resolution images of the sample, perform tunneling spectroscopy of electronic and magnetic structure, and manipulate single adatoms to build nanostructures with atomic precision. From these nanostructures, we can study cluster physics, seeing how electronic spectroscopy evolves as atoms are added. Our group is also involved in research in Tip-Enhanced Raman Spectroscopy and Spin-Polarized STM, and optical scanning tunneling microscopy. This presentation will examine current work being done by the group as well as preliminary studies of Au on a Cu(111) surface.

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