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Scanning Photocurrent & Spectroscopic Mapping via Automa-

tion ANNA PAULSEN, Lafayette Coll — At the nanoscale, quantum mechanical effects take hold and alter material's optical and electronic properties in sometimes unexpected ways. Advances in nanotechnology (e.g. transistors or memory) greatly depend on understanding how to control these phenomena changes and ultimately be able to reproduce them. We analyze these characteristics using a range of techniques that leverage the optical properties of different types of light in order to capture high resolution images, optical spectra, and various other measurements of unknown samples. In order to achieve this, precision of sample movement is critical for reproducible measurements, precision focusing, and mapping of sample properties.

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