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## **A new scanning photoemission microscope for ELETTRA: SuperMAXIMUM**

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High brightness, third generation synchrotrons allow diffraction-limited performance and large flux for scanning photoemission microscopes. A new microscope, Super-MAXIMUM, is being developed at the University of Wisconsin Center for X-ray Lithography in collaboration with the Sincrotrone Trieste. The beamline, being built in Trieste, uses a Variable Angle Spherical Grating Monochromator (VASGM). A combination of rotation of a plane mirror and rotation of the spherical grating keeps the slit positions and beam directions fixed. The microscope objectives

are normal-incidence, multilayer-coated, Schwarzschild objectives. The project, which is nearing completion, utilizes novel designs for optics alignment, sample rastering mechanics, and software control. We will discuss the project status, new designs, and techniques.