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An Automated System for GISAXS and GIWAXS Measurements JESSICA JIMENEZ, Jema Technology LLC, ERIC SCHAIBLE, Lawrence Berkeley National Laboratory, MATTHEW CHURCH, Jema Technology LLC, CHRISTINA YEE, ALASTAIR MACDOWELL, DILWORTH PARKINSON, EDWARD DOMN-ING, BRIAN SMITH, STEVEN ALVAREZ, ALEXANDER HEXEMER, Lawrence Berkeley National Laboratory — Grazing incidence small-angle scattering (GISAXS) and grazing incidence wide-angle scattering (GIWAXS) are important techniques for characterizing thin films, and their use is rapidly expanding. The current bottleneck in conducting GISAXS measurements is the time it takes to load and align samples. In order to meet increasing demand, we are implementing a fully automated system to conduct GISAXS and GIWAXS measurements. A robot arm will load samples from a holding tray onto the measurement stage. Intelligent software will align each sample in turn, and measure each according to user-defined specifications. Users will be able to mail in trays of samples, and will be able to monitor and control their experiments remotely.

> Matthew Church Jema Technology LLC

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