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Laser-based spin- and angle-resolved photoemission spectroscopy for rapid, high-resolution measurements KENNETH GOTLIEB, University of California Berkeley, AARON BOSTWICK, ZAHID HUSSAIN, Lawrence Berkeley National Laboratory, ALESSANDRA LANZARA, University of California Berkeley and Lawrence Berkeley National Laboratory, CHRISTOPHER JOZWIAK, Lawrence Berkeley National Laboratory — A unique spin-and angle-resolved photoemission spectrometer (spin-ARPES) is coupled with a 6 eV laser to achieve unprecedented measurements of near-EF physics in topological insulators and Rashba systems. The pairing of the spin-ARPES system with the laser allows for energy and angular resolutions never before seen in a spin-ARPES experiment. Most importantly, the high efficiency of the system and high photon flux of the laser make measurements very rapid, permitting exploration of a large experimental phase space.

Kenneth Gotlieb
University of California Berkeley

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