

Abstract Submitted
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High Resolution Studies of the Electronic Properties of Graphite and Graphene SHUYUN ZHOU, Department of Physics, University of California, Berkeley, CA 94720; Materials Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA , GEY-HONG GWEON, DANIEL GARCIA, ELIZABETH ROLLINGS, Department of Physics, University of California, Berkeley, CA 94720, CATALIN SPATARU, STEVEN LOUIE, DUNG-HAI LEE, ALESSANDRA LANZARA, Department of Physics, University of California, Berkeley, CA 94720; Materials Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA — We report a high-resolution angle-resolved photoemission spectroscopy (ARPES) study on the electronic properties of bulk graphite and atomically-thin graphene layers. Data as a function of both in-plane and out-of-plane momenta, binding energy and photon energy will be presented. We have observed for the first time using ARPES some very interesting electronic properties near the Fermi energy E_F , which shows that interlayer coupling is an important ingredient in understanding the electronic properties of graphite. In addition, the unique electronic properties in atomically-thin graphene layers will be discussed and compared with those from the bulk graphite sample.

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