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Photoemission on highly-ordered arrays of structured epitaxial graphene JEREMY HICKS, J. PALMER, H. TINKEY, K. SHEPPERD, Georgia Institute of Technology, A. TEJEDA, A. TALEB-IBRAHIMI, P. LE FÈVRE, Synchrotron SOLEIL, C. BERGER, Georgia Institute of Technology & CNRS-Institut Nèel, W.A. DE HEER, E.H. CONRAD, Georgia Institute of Technology — We use the recently-demonstrated method of growing pre-patterned epitaxial graphene directly from structured silicon carbide (SiC) to produce dense, highly-ordered arrays of graphene nanoribbons suitable for macroscopic characterization methods. Specifically, we use angle-resolved photoemission spectroscopy (ARPES) to observe the ensemble-averaged band structure of nanoribbons with nominal widths of 10nm and 30nm. A Dirac-like cone is visible down to 10nm and, although the graphene is a single layer, it is undoped, in contrast to single layer graphene nanoribbons on either the Si- or C-terminated faces of SiC.

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