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Band Structure of K(2x2) on graphene JESSICA MCCHESNEY, AARON BOSTWICK, TAISUKE OHTA, Lawrence Berkeley National Laboratory , THOMAS SEYLLER, K.V. EMTSEV, Universitt Erlangen-Nrnber, KARSTEN HORN, Fritz Haber Institute, ELI ROTENBERG, Lawrence Berkeley National Laboratory — The electronic structure of K(2x2) on graphene, the same stochiometry as bulk KC_8, was studied using angle-resolved photoemission spectroscopy (ARPES). In addition to bands derived from the graphene π states an intercalant induced "interlayer band" is observed centered at Γ. Of these two bands, the dominant mass renormalization occurs in the π-derived bands, as determined by characterization of the "kinks" in the dispersion measured by ARPES. This suggests that the superconductivity in bulk KC_8 has a more important role than the interlayer band.

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