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AFM and SThM Characterization of Graphene CHRISTOPHER FOY, ANTON SIDOROV, XUNCHI CHEN, MING RUAN, CLAIRE BERGER, WALTER DE HEER, ZHIGANG JIANG, Georgia Inst of Tech — We report on detailed characterization of epitaxial grown graphene on SiC and chemical vapor deposition grown graphene on Cu foil using atomic force microscopy (AFM) and scanning thermal microscopy (SThM). We focus on the electronic and thermal properties of graphene grain boundaries, and thus providing valuable feedback to materials growth. Specifically, we perform thermal conductivity contrast mapping and surface potential mapping of graphene, and compare with that obtained on the Au electrodes and the substrate.

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