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Electronic structure of single fullerene molecules in C60 nanocrystals grown on thin NaBr film GAREGUIN MIKAELIAN, XIUWEN TU, WILSON HO, University of California Irvine — Since the discovery of C60 much attention has been devoted to utilizing its interesting electronic properties for the advancement of the controllable single molecule technologies. Here we report scanning tunneling microscopy and spectroscopy of C60 nanocrystals grown on thin sodium-bromide films supported on the NiAl(110) surface. STM allows us to study the electronic properties of the C60 crystal with submolecular resolution. Differential conduction spectroscopy reveals a variety of features corresponding to the vibronic excitation and charging of individual C60 molecules in these nanocrystals.

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