

Abstract Submitted  
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**Factors Contributing to Size Selection of Metal Nanoparticles on Graphene**<sup>1</sup> LUKE SOMERS, EUGENE MELE, ZHENG TANG LUO, A.T. CHARLIE JOHNSON, University of Pennsylvania — We examine layer number dependence in the size of metal nanoparticles grown on single and multilayer graphene. Graphene offers a smooth inert substrate for nanoparticles, in particular for particles grown in situ. Upon annealing, the particles forming on thin layers are smaller. A theory based on balance between self-repulsive dipole interaction and surface tension is presented. We test this theory by examining size distributions for various metals.

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Luke Somers  
University of Pennsylvania

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