

Abstract Submitted  
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**Size Selection of Metal Nanoparticles on Few Layer Graphene<sup>1</sup>**

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University of Pennsylvania — We find layer number dependence in the size of metal nanoparticles grown on 1 to 10 layer graphene. Graphene is an attractive substrate for investigating and using nanoparticles due to its loose interaction with them. To preserve this condition it is ideal to grow particles in place rather than deposit them from solution. We find that annealing of evaporated metal nanoparticles on graphene and few layer graphene surfaces tightens their size distribution. The number of graphene layers changes the selected size. These results are in quantitative agreement with a model incorporating surface, bulk, and coulomb free energies.

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