

Chemical Modification of Epitaxial Graphene

Elena Bekyarova, Mikhail E Itkis, Palanisamy Ramesh, Robert C Haddon
University of California-Riverside

Claire Berger, Michael Sprinkle, Walt A de Heer
Georgia Institute of Technology

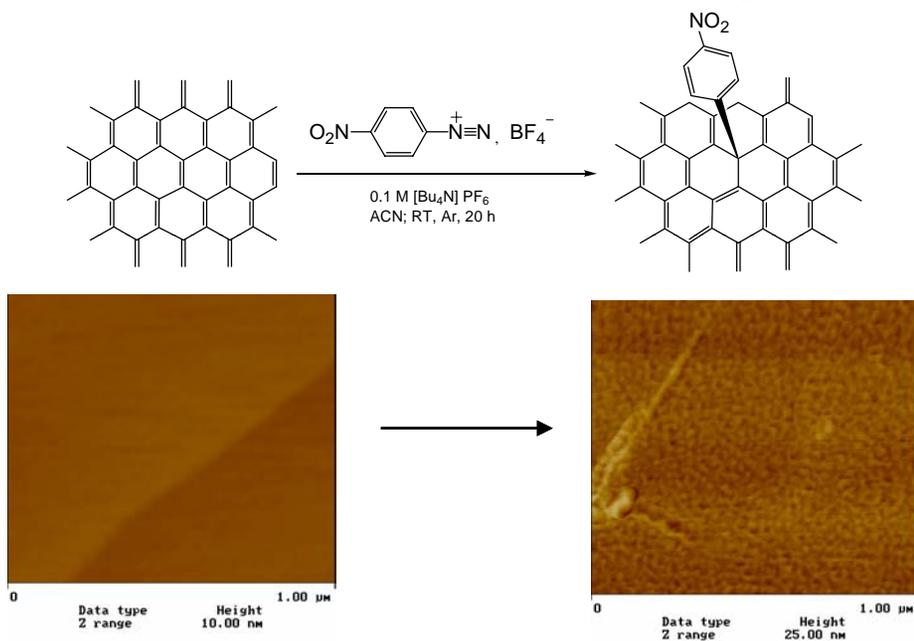


Fig. 1 Spontaneous grafting of aryl groups to epitaxial graphene

Advantages:

- Extremely mild conditions
- Minimum perturbation to electronic structure of EG (conversion of C sp^2 to sp^3)
- Simple, Fast, Versatile

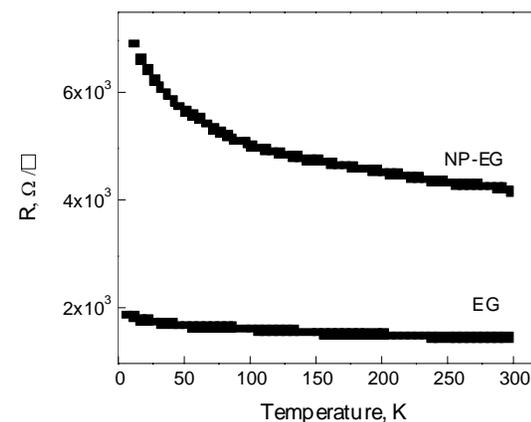


Fig. 2 Temperature dependence of sheet resistance of pristine (EG) and nitrophenyl functionalized graphene (NP-EG).



Sponsored by NSF-MRSEC through contract DMR-0820382

Bekyarova, E.; Itkis, M. E.; Ramesh, P.; Berger, C.; Sprinkle, M.; de Heer, W. A.; Haddon, R. C.,
Chemical Modification of Epitaxial Graphene: Spontaneous Grafting of Aryl Groups.
J. Am. Chem. Soc. **2009**, *131*, 1336-1337.

