

Liquid phase production of high quality graphene with large crystal sizes: Properties and applications.

Yenny Hernandez

Mikel Hurtado, Sergio Rey, Daniel Olaya.

*Universidad de los Andes, Carrera 1 #18A - 10,
Bogota, Colombia*

Yr.hernandez@uniandes.edu.co

Liquid phase production of graphene has provided a viable route for composite preparation with applications already being brought to the market. Graphene exfoliated in organic solvents is currently extensively being studied for the the preparation of conductive inks for ink-jet printing. Low crystal sizes of the dispersed graphene limits its conductivity which makes it not competitive for transparent electrodes applications. In this talk I will discuss the outstanding properties and large scalability of electrochemically exfoliated graphene and its potential application in thermoelectric materials, perovskite solar cells and transparent electrodes.

References

- [1] Hernandez, Y, et al Nature Nanotechnology 3(9):563-8, 2008.
- [2] Parvez, K, et al ACS Nano 7(4):3598–3606, 2013.