
CHEMISTRY OF GRAPHENE OXIDE AND ITS HYBRID NANOMATERIALS

BYEONG-SU KIM

*Interdisciplinary School of Green Energy,
Ulsan National Institute of Science and Technology (UNIST),
Ulsan 689-798, Korea
e-mail: bskim19@unist.ac.kr*

Carbon nanomaterials including fullerenes, carbon nanotubes, and graphenes represent the most important class of materials today; their unique physical and chemical attributes advance their roles across most advanced scientific and technology platforms. In this presentation, I will describe our efforts in developing innovative nanomaterials for energy and biomedical applications based on the carbon nanomaterials. Due to its facile synthetic nature as well as rich surface functional groups, the graphene oxide nanosheets can offer various opportunities in material science and engineering. In particular, our group is focusing on the synthesis and applications of graphene oxide and its hybrid nanostructures with other materials such as nanotubes, nanoparticles, polymers, and biomolecules based on the layer-by-layer assembly. This talk will offer some chances of how we synthesize these hybrid nanomaterials and how these new materials will find their potentials in supercapacitors, field-effect transistors, electrocatalysts, and organic catalysts.^[1-4]

References

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- [4] Byeong-Su Kim et al. *ACS Nano* 2012, 6 (3), 2432.