**Effect of γ-ray MWCNTs on electrical conductivity of a PET/graphite composite**

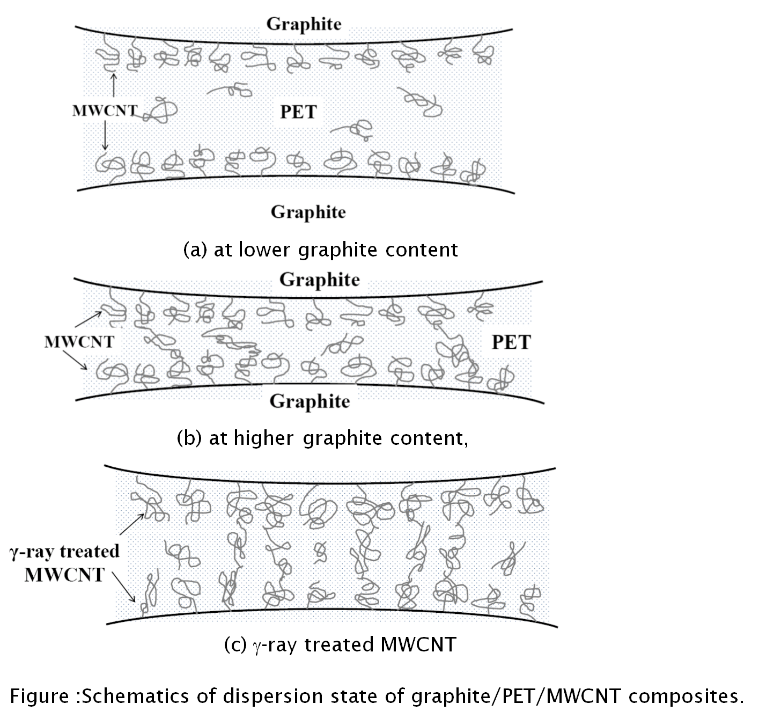
Taehyun Yoo and Younggon Son:

Advanced Materials Science and Engineering, College of Engineering, Kongju National University, Cheonan, Chungnam 31080, Republic of Korea

### Abstract

The effects of a compounding method and γ-ray treated multiwall carbon nanotubes (MWCNTs) on the electrical conductivity of graphite/PET composites were investigated. We found that dispersion of MWCNTs in the PET phase plays a critical role in determining the electrical conductivity of graphite/PET/MWCNT composites. Dispersion and electrical conductivity were enhanced by a two-step method in which PET and MWCNTs are compounded in advance and the MWCNT/PET mixture is then compounded again with graphite. It was also observed that γ-ray treated MWCNTs provide enhanced conductivity in the graphite/PET/MWCNT composite. The synergetic effect of the two-step mixing method and γ-ray treatment made it possible to increase the conductivity of graphite/PET composites to a great extent with a very small amount of γ-ray irradiated MWCNTs.

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Biography

Younggon Son has expertise in polymer processing and rheology. His special interests is development of small devices which compounds two different polymers with small quantity and measures the rheological properties with only several tens milligrams.

Email: [sonyg@kongju.ac.kr](mailto:sonyg@kongju.ac.kr)