

# Nano-carbon application activities in Korea

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The unique electrical, optical, and mechanical properties of carbon nanotubes and graphene have triggered diverse application efforts both in academia and industries. Some of these activities were successful, but others faded away. This talk briefly introduces carbon nanotube and graphene application activities in Korea. Firstly, major nano-carbon producers and suppliers will be introduced. Secondly, currently-available commercial products and near-future applications will be discussed. These include anti-static composites/films, electrically or thermally conductive composites/pastes, EMI shielding films, transparent conductive films, and energy storage materials. Finally, recent research activities targeting future markets will be discussed. Many of them are focused on flexible/stretchable electronics. The research activities in my group will also be briefly introduced. We employed 1-dimensional carbon nanotubes and/or functionalized silver nanoparticles to enhance conductivity or fluorescence for applications in flexible composites/pastes [1-3], stretchable films [4], flexible EMI shielding films [5], and stretchable fibers [6].

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- [2] R.Ma et al. *Adv. Mater.* **24**, 3344 (2012)
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