UH Institute for NanoEnergy
Media Release:

US PTO Patent Grant: Thiation of Carbon Nanotubes and Composite Formation

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The Director of the Institute for NanoEnergy (INE), Dr Seamus Curran, today received notice that a patent application (No. 7,713,508. **Thiation of Carbon Nanotubes and Composite Formation)**, originally filed in 2004, has recently been awarded by the US Patent and Trademark Office (US PTO).

In 2003, while at New Mexico State University, Professor Curran developed and directed, with a team of scientists, a novel way of producing polymer/nanotube composites. This invention consists of a method for creating nanotube structures comprising nanotubes covalently bonded via chemically reactive groups on the outer walls of the nanotubes and methods for forming the covalently bonded nanotube structures. The present invention also comprises materials consisting of the functionalized nanotubes covalently bonded to organic based monomers and/or polymers, and methods for their formation.

These polymer/nanotube composites have two key properties: they are transparent to light and electrically conductive.

The team at the Institute for NanoEnergy (INE) is already working in a number of unique technological directions which will draw on these interesting capabilities. Potential commercial applications involve the replacement of existing transparent conductors (such as ITO) and EMF shielding in applications such as air force pilot visors and/or cockpit screens.

The Institute for NanoEnergy was established at the University of Houston in 2009 in order to develop breakthrough technologies in energy storage and generation (solar and wind) by developing organic based nano-photonic, nano-phononic and nanomechanical composites that are manufactured by means of sophisticated material control mechanisms.

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