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•Development of nano- metallic decorated single wall carbon nanotubes sensors for non-polar gas detection

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Abstract

Single walled carbon nanotubes based gas sensors have been investigated towards the detection of polar and non-polar gases. It has been stated that pristine carbon nanotubes are not suitable for the detection of non-polar gases but the inclusion of functional groups, polymers or metallic nanoparticles might help in their detection. The long-term goal of this project is the detection of non-polar gases such as chlorine, hydrogen and methane using well-dispersed platinum, palladium and palladium-ruthenium nanoparticles on single walled carbon nanotubes, as sensing material.

Last Publications: Rosario-Castro, B. I.; Contes, E. J.; Lebron-Colon, M.; Meador, M. A.; Sanchez-Pomales, G.; Cabrera, C. R., Combined electron microscopy and spectroscopy characterization of as-received, acid purified, and oxidized HiPCO single-wall carbon nanotubes. *Materials Characterization* **2009,** 60, (12), 1442-1453.

Rosario-Castro, B. I.; Contes, E. J.; Lebron-Colon, M.; Meador, M. ; Scibioh, M.A., Single wall carbon nanotube attachment at platinum electrodes. *Applied Surface Science* **2010,** (257) 340-353.

Last presentation: 218th ECS meeting, Las Vegas, NV - Oct 2010