Vasu, K. S.; Pramanik, D.; Kundu, S.; Sridevi, S.; Jayaraman, N.; Jain, M.; Maiti, P. K.; Sood, A. K., 2018, "Opening of large band gap in metallic carbon nanotubes by mannose functionalized dendrimers: Experiments and theory", *J. Mater. Chem*. C, 6, 6483 - 6488.

Collaborative work with Prof. A. K. Sood and Prof. P. K. Maiti, Physics Department, IISc.

This work shows that metallic SWNTs wrapped with PETIM dendrimer without mannose functionality (DM) do not show metal to semiconductor transition. It appears that manno-dendrimer molecule is necessary to induce bond length asymmetry and hence opening up of the band gap. Experimental and theoretical effort for explicit understanding of the supramolecular control of band gap opening in SWNTs are demonstrated.