

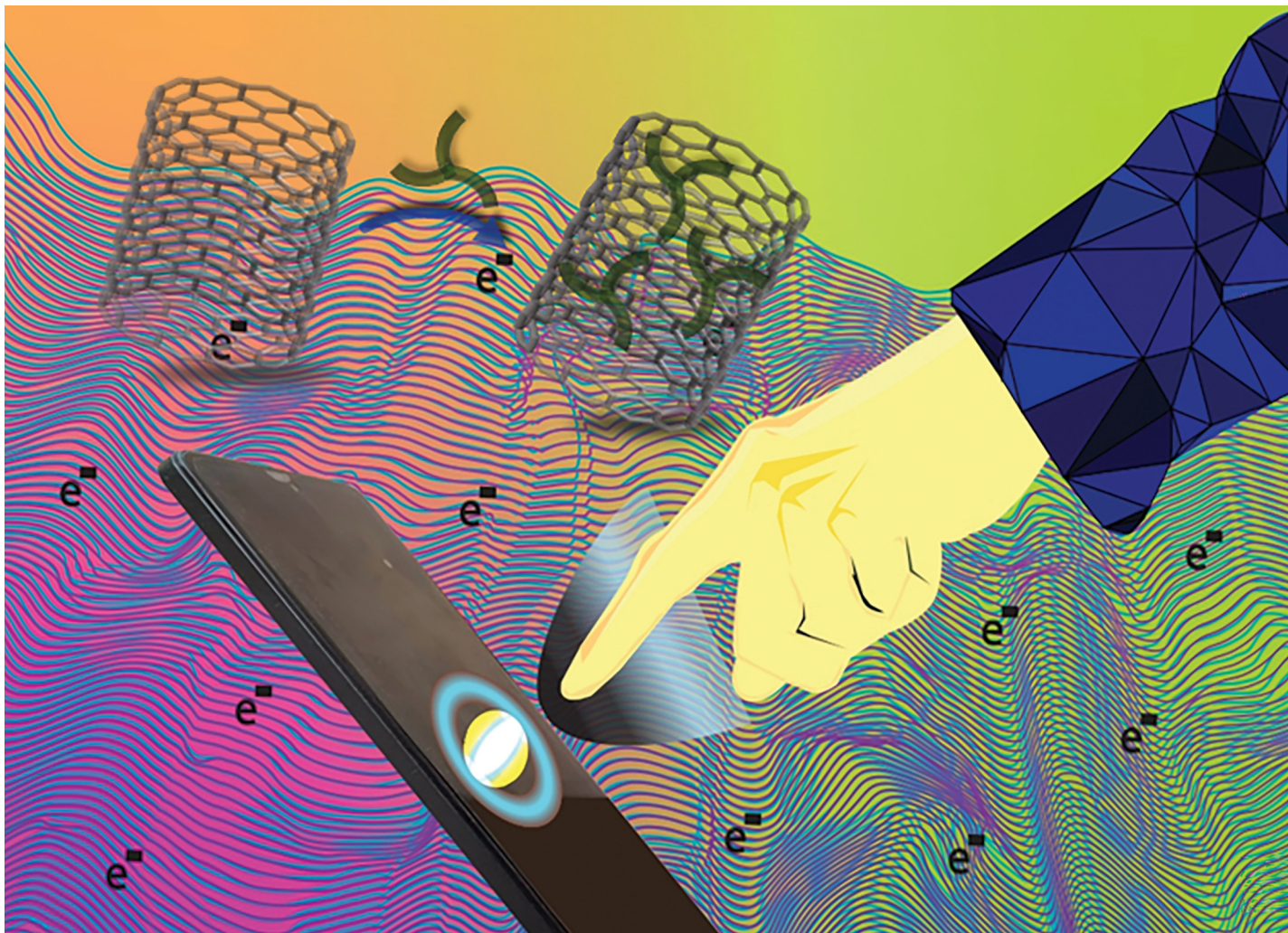
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**Showcasing research from Dr Jit's laboratory, Advanced Materials Laboratory, CSIR-Central Leather Research Institute, Chennai, India.**

Aqueous dispersion of SWCNT using vegetable oil-based 3-Arm star oligomer: mechanistic investigation and its functional application

Hydrophobic castor oil was modified into an amphiphilic oligomer, enabling effective dispersion of single-walled carbon nanotubes (SWCNTs). The modified oligomer and SWCNT dispersion were characterized experimentally using UV-Vis spectroscopy, FTIR spectroscopy, and electron microscopy, complemented by density functional theory (DFT) studies. The dispersed SWCNTs were coated onto filter paper to fabricate a conductive film. This film efficiently operated a mobile touchscreen and shows strong potential for applications in gloves for cold-temperature environments.

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**As featured in:**



See Avik Ghosh, Jit Sarkar *et al.*, *New J. Chem.*, 2026, **50**, 3019.