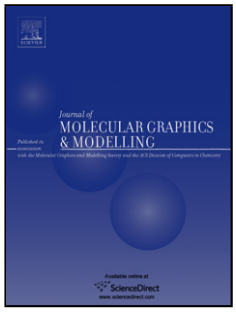

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Electrical Characterization of C_{28} Fullerene Junctions formed with Group 1B metal electrodes

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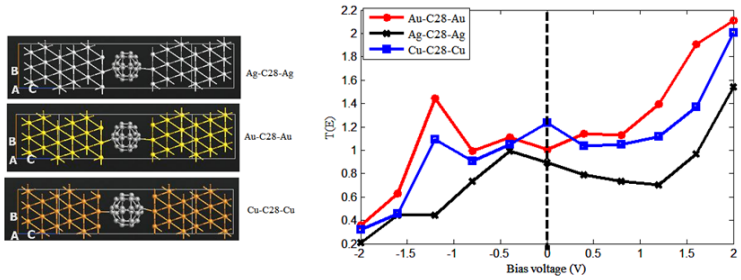
Graphical abstract



HIGHLIGHTS

- All C_{28} fullerene junctions assay ballistic transport with conductance higher than that assayed by C_{60} junctions.
- High conductance is related to large availability of quantum states in DOS and transmission spectra, high magnitudes of transmission coefficient at fermi energy and small HLG, and vice versa.
- Fullerene junctions formed from copper and gold electrodes are concluded to be super conductive at zero bias and finite bias respectively. Third testbed formed from silver leads is deduced to be least conductive among Group 1B metals.