In this communication we report on a novel covalently–linked phthalocyanine–C60 fullerene conjugate (Pc–C60) which is able to self–organise on graphite and graphite–like surfaces forming films and fibres which possess outstanding nanoscale electrical conductivity. These molecules are also able to self-organise into carbon nanotubes and thus give rise to a large scale of nanotechnological applications. All these systems were characterized by means of Atomic Force Microscopy (AFM) [1]. Supramolecular films of a covalently–linked Pc–C60 conjugate have been prepared by simple solution–processing steps on HOPG and graphite oxide substrates. These films have been electrically characterised by using C–AFM technique showing remarkable “across–plane” and “in–plane” electrical conductivity values, higher than for the majority of supramolecular systems [2] which reflect an extremely high degree of molecular order of the Pc–C60 conjugate within the film.

[1] www.nanotec.es