

**“HIGHLY CONDUCTIVE SUPRAMOLECULAR ASSEMBLIES OF A  
COVALENTLY-LINKED PHTHALOCYANINE-C<sub>60</sub> FULLERENE  
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In this communication we report on a novel covalently-linked phthalocyanine-C<sub>60</sub> fullerene conjugate (Pc-C<sub>60</sub>) **1** 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-C<sub>60</sub> 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-C<sub>60</sub> conjugate within the film.

[1] [www.nanotec.es](http://www.nanotec.es)

[2] Tomoyuki Akutagawa, Keiko Kakiuchi, Tatsuo Hasegawa, Sin-ichiro Noro, Takayoshi Nakamura, Hiroyuki Hasegawa, Sinro Mashiko, and Jan Becher *Angew. Chem. Int. Ed.* 2005, 44, 7283 –7287