



A single-molecule electronic transport survey of nanowires based on curcuminoids

Núria Aliaga-Alcalde,^{a,b} Daniel Riba-López,^b Teresa Cardona-Lamarca,^b Daniel Herrera-Miranda,^b Rossella Zaffino,^b Raúl Díaz-Torres,^b Laura Rodríguez-Cid,^b Concepción Domingo,^b Edison Castro,^c Luis Echegoyen,^c Diana Dulic,^d Herre J. S. van der Zant,^e Mònica Soler,^f Eliseo Ruiz,^g Arántzazu González-Campo^b

^aICREA (Institució Catalana de Recerca i Estudis Avançats), Passeig Lluís Companys, 23 08018 Barcelona, Spain. nuria.aliaga@icrea.cat

^bICMAB-CSIC (Institut de Ciència dels Materials de Barcelona), Campus de la Universitat Autònoma de Barcelona, 08193 Bellaterra, Spain. naliaga@icmab.es

^cThe University of Texas at El Paso, El Paso, Texas 79902, USA

^dDepartamento de Física, Facultad de Ciencias Físicas y Matemáticas, Universidad de Chile, Santiago de Chile, Chile

^eKavli Institute of Nanoscience, Delft University of Technology, Lorentzweg 1, 2628 CJ Delft, The Netherlands

^fDepartamento de Ciencia de los Materiales, Facultad de Ciencias Físicas y Matemáticas, Universidad de Chile, Santiago, Chile

^gUniversitat de Barcelona, Facultat de Química, Diagonal 645, 08028 Barcelona, Spain

Abstract:

During the last years, my group FunNanoSurf has designed a number of curcuminoids (CCMoids) and studied them in fields related to Nanoscience and Nanotechnology aside from biomedicine.^[1]

Here, I would like to emphasize our work with CCMoids in the field of Molecular Electronics, regarding single-molecule transport studies by the use of (i) break junction (BJ)^[2] and (ii) mechanically controllable break junction (MCBJ)^[3] techniques.

The combination of these well-developed approaches and the thorough design of the molecular units, including anchoring groups and their coordination to metal/metalloid centres, has promoted a detailed knowledge of the conductance properties of CCMoids at the single molecule level, expandable to additional families conjugated molecules.^[1-3]

In addition, I will introduce our latest results in the creation of CCMoid-based extended systems (1D-3D) for electronic purposes.

References:

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