



Consegna del **Ciamician-Gonzalez Lectureship Award** assegnato dalla Società Chimica Italiana con la Real Sociedad Española de Química al

## Prof. Nazario Martín León

(Departamento de Química Orgánica, Universidad Complutense de Madrid)

Martedì 14 gennaio 2020

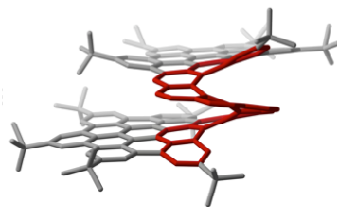
Aula Morin, Edificio H2, Università di Trieste

Ore 15.00

Seguirà la lectio magistralis del Prof. Martín:

### Bottom-up Synthesis of Chiral Molecular Nanographenes

Chirality is an important and fascinating concept which has not been properly addressed in nanocarbons science.<sup>1-2</sup> We have reported *the first inherently chiral bilayer nanographene* with a helicene linker, both as the racemate and the *M* isomer.<sup>3</sup> By extending precedent [6]helicene starting material, we obtained an unprecedented chiral nanographene comprised of two hexa-*peri*-hexabenzocoronene layers fused to a [10]helicene. Furthermore, we have also described a bottom-up synthesis of structurally well-defined curved nanographenes from corannulene. Different conditions in the final step (Scholl oxidation) allow the selective formation of a six and/or seven-membered ring between corannulene and DBPP, affording inherent helicenes in the resulting molecular nanographene.<sup>4</sup> In this presentation, the most relevant results and recent findings on 3D nanographenes and *on-surface* carbon polymers will be discussed.<sup>5,6</sup>



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2. E. E. Maroto, M. Izquierdo, S. Reboredo, J. Marco-Martínez, S. Filippone, N. Martín *Acc. Chem. Res.* **2014**, *47*, 2660–2670.
3. P. J. Evans, J. Ouyang, L. Favereau, J. Crassous, I. Fernández, J. Perles Hernández, N. Martín, *Angew. Chem. Int. Ed.* **2018**, *57*, 6774–6779.
4. J. M. Fernández-García, P. J. Evans, S. Medina Rivero, I. Fernández, D. García-Fresnadillo, J. Perles, J. Casado, N. Martín, *J. Am. Chem. Soc.* **2018**, *140*, 17188–17196.
5. J. M. Fernández-García, P. J. Evans, S. Filippone, M. A. Herranz, N. Martín, “Chiral Molecular Carbon Nanostructures”, *Acc. Chem. Res.* **2019**, *52*, 1565-1574.
6. J. Urieta-Mora, M. Krug, W. Alex, J. Perles, I. Fernandez, A. Molina-Ontoria, D. M. Guldi, N. Martín, *J. Am. Chem. Soc.*, **2019**, DOI: 10.1021/jacs.9b10203.