



**UNIVERSITÀ
DEGLI STUDI
DI TRIESTE**

Dipartimento di Scienze Chimiche e Farmaceutiche

AVVISO DI SEMINARIO

**Prof. Marcos D. García
Centro de Investigaciones Científicas
Avanzadas (CICA-UDC)**

**Stimuli-responsive bipyridinium
salts: expanding the playground of
aqueous supramolecular chemistry**

Venerdì 14 Luglio 2023 ore 14.30

Aula A1 - III piano – C11

Online on teams at link

<http://bitly.ws/KD9J>

Tutti gli interessati sono invitati a partecipare.

Il Direttore

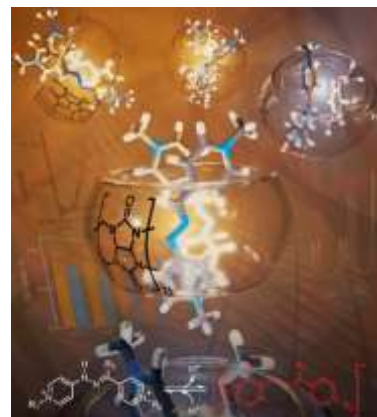
Prof. Paolo Tecilla



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Host-guest chemistry has been traditionally focused on the development of new abiotic macrocyclic receptors with fine-tuned affinities and selectivities, resulting in the long run into new valuable insights into molecular recognition and the discovery of intrinsically new chemical function. In turn, the use of molecular switches as control units within host-guest assemblies opened the door for the regulation of the dynamic interactional behaviour of those systems, which is currently being translated into applications such as improved controlled drug release, the development of molecular machinery or the design of adaptive stimuli-responsive materials. In this context, the seminar will discuss recent advances developed in the SUPREN research group,¹ in particular those involving the development of bipyridinium-based host^{2,3} and guest⁴ entities able to translate their molecular behaviour as acid-base switches to the supramolecular level in aqueous media.



- (1) Neira, I.; Blanco-Gómez, A.; Quintela, J. M.; García, M. D.; Peinador, C. *Acc. Chem. Res.* 2020, 53, 2336.
- (2) Blanco-Gómez, A.; Fernández-Blanco, A.; Blanco, V.; Rodríguez, J.; Peinador, C.; García, M. D. *J. Am. Chem. Soc.* 2019, 141, 3959.
- (3) Blanco-Gómez, A.; Neira, I.; Barriada, J. L.; Melle-Franco, M.; Peinador, C.; García, M. D. *Chem. Sci.* 2019, 10, 10680.
- (4) Barravecchia, L.; Blanco-Gómez, A.; Neira, I.; Skackauskaite, R.; Vila, A.; Rey-Rico, A.; Peinador, C.; García, M. D. *J. Am. Chem. Soc.* 2022, 144, 19127.



Marcos D. García was born in Boiro (A Coruña) in 1975. He studied Chemistry at the Universidade de Santiago de Compostela, where he completed his PhD in medicinal chemistry in 2005, under the supervision of Prof. F. Fernández and Prof. O. Caamaño, and working on the development of new carbocyclic nucleoside analogues as antiviral agents. After post-doctoral studies at the University of Leicester (UK), in the group of Prof. Paul R. Jenkins and focused on the development of kinase inhibitors, in 2007 he moved back to Spain, joining the Universidade da Coruña as Isidro Parga Pondal Fellow. In 2011 he obtained a tenured position as profesor contratado doctor, and in 2018 was promoted to profesor titular. He has been visiting professor at the University of Leicester and Politecnico di Milano. Marcos' scientific career has been developed within the broad field of heterocyclic chemistry, where he has published to date more than 60 original research papers, in addition to several reviews and book chapters. Current research is being carried out as P.I. of the SUPREN research group, at the Centro de Investigaciones Científicas Avanzadas (CICA-UDC) in a Coruña, and is focused on the field of Supramolecular Chemistry, with a particular emphasis on the development of new stimuli-responsive host-guest systems in aqueous media.