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J.R. Galán-Mascarós holds a Degree in Chemistry from the University of Valencia and the Imperial College (London) and a PhD from the University of Valencia under the supervision of Prof. E. Coronado (1999). Between 1999 and 2002 he was post-doctoral researcher at Texas A&M University (College Station) working with Prof. Kim R. Dunbar. In 2002 he joined ICMOL (U. de Valencia) as Ramón y Cajal Fellow. In 2009 he took a position at ICIQ, where he currently leads a research group focused on future applications of coordination chemistry for Renewable Energies and Materials Sciences. In september 2010 he became ICREA Research Professor. Galán-Mascarós has received several awards, including the Olivier Kahn International Award (2008) and an ERC Starting Grant (2012-2016). He is the coordinator of the collaborative project H2020-FETPROACT A-LEAF (2017-2020): a major European public investment for the realization of a viable artificial photosynthesis platform.

Research interests

Our research team in Coordination Chemistry is devoted to the development of molecule-based materials with the desired chemical and physical properties for novel applications in the fields of Materials Sciences and Renewable energies. In Renewable Energies, we are working in the development of stable, efficient and low-cost new catalysts for the production of solar fuels, with particular interest in water oxidation catalysis. In Materials Sciences, we are designing multifunctional smart materials able to exhibit novel phenomena from unusual combination of physical properties (redox, magnetic, electrical and/or optical, etc...).

Selected publications

– Hegner FS, Cardenas-Morcoso D, Gimenez S, Lopez N & **Galán-Mascarós JR** 2017, 'Level Alignment as Descriptor for Semiconductor/Catalyst Systems in Water Splitting: The Case of Hematite/Cobalt Hexacyanoferrate Photoanodes', *ChemSusChem*, vol. 10, pp. 4552-4560.

– Hegner FS, Herraiz-Cardona I, Cardenas-Morcoso D, Lopez, N, **Galán-Mascarós JR** & Gimenez S 2017, 'Cobalt Hexacyanoferrate on BiVO₄ Photoanodes for Robust Water Splitting', *ACS Appl. Mater. Interfaces*, vol. 9, pp. 37671-37681.

– Natali M, Bazzan I, Goberna-Ferron S, Al-Oweini R, Ibrahim M, Bassil BS, Dau H, Scandola F, **Galán-Mascarós JR**, Kortz U, Sartorel A, Zaharieva I & Bonchio M 2017, 'Photo-assisted water oxidation by high-nuclearity cobalt-oxo cores: tracing the catalyst fate during oxygen evolution turnover', *Green Chem.*, vol. 19, pp. 2416-2426.

– Soriano-López J, Musaev DG, Hill CL, **Galán-Mascarós JR**, Carbó JJ & Poble JM 2017, 'Tetracobalt-polyoxometalate catalysts for water oxidation: key mechanistic details', *J. Catal.*, vol. 350, pp. 56-63.

– Cirera B et al. 2017, 'Preservation of electronic properties of double-decker complexes on metallic supports', *Phys. Chem. Chem. Phys.*, vol. 19, pp. 8282-8287.

– Blasco-Ahicart M, Soriano-López J & **Galán-Mascarós JR** 2017, 'Conducting organic polymer electrodes with embedded polyoxometalate catalysts for water splitting', *ChemElectroChem*, vol. 4, pp. 3296-3301.

– Aguilera-Sigalat J, Sáenz de Pipaón C, Hernandez-Alonso D, Escudero-Adan EC, **Galán-Mascarós JR** & **Ballester P** 2017, 'A Metal Organic Framework Based on a Tetra-Arylextended Calix[4]pyrrole Ligand: Structure Control through the Covalent Connectivity of the Linker', *Cryst. Growth Des.*, vol. 17, pp. 1328-1338.

– Tang P et al. 2017 'Enhanced photoelectrochemical water splitting of hematite multilayer nanowire photoanodes by tuning the surface state via bottom-up interfacial engineering', *Energy Environ. Sci.*, vol. 10, pp. 2124-2136.