MAGNETIC MOLECULES IN 2D MATERIALS

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In the last 30 years coordination chemistry has been a source of new magnetic molecules and multifunctional and switching materials with novel properties or combination of properties. At present, these molecules and materials are being exploited in other emerging fields including molecular spintronics and quantum computing [1]. A current trend in this area is to combine these molecular systems with 2D materials with the aim of exploring the novel properties and applications that may emerge from such combination. Here I will illustrate this concept with some relevant examples: 1) 2D magnets based on MOFs [2]; 2) hybrid heterostructures and devices based on spin crossover complexes interfaced with graphene and other 2D materials [3].

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[1] E. Coronado, *Nature Rev. Mater.* **2020** *5*, 87-104.

[2] J. Lopez-Cabrelles *et al. Nature Chem.* **2018**, *10*, 1001-1007

[3] C. Boix-Constant *et al*, *Adv. Mater.* **2022**, *34*, 2110027.