On the track of magnetic polynuclear complexes

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Our quest for polynuclear clusters exhibiting single-molecule magnet behaviors led us to explore the ability of different ligands to afford high spin systems with enhanced anisotropy [1-4]. Calixarene type ligands [2, 3] allowed us to synthesis systems with different nuclearities. Among which a mixed-valence polyoxovanadate(III,IV) clusters exhibiting ferromagnetic V(III)-V(IV) interactions [3].

With β-diketone ligands known to give cubane like structures, we synthesized mixed-valence and heterometallic clusters ranging from tetranuclear to nonanuclear [1, 3, 5].

In this communication the synthesis, structure and magnetism of some of these compounds will be presented and discussed.

References :


