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Title:	Molecular di- and tetra-nuclear zinc(II) phosphates with sterically hindered aryl phosphate mono esters ligands
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Abstract:	Neutral dinuclear Zn(II) phosphates $[Zn_2(L)_2(phen)_2(H_2O)_2]$, (L = L2; (1)), anionic dinuclear Zn(II)-phosphates $[Et_3NH]^+[Zn_2(L1)_4(pyz)_2]^-$ (2) and tetranuclear double-4-ring (D4R) Zn(II) phosphates $[Zn_4(L)_4(DMF)_4]$ (5–7), (L = L1; (3), L3; (4), L4; (5)), $[Zn_4(L1)_4(pyz)_2(DMF)_2]$ (6) and $[Zn_4(L4)_4(phen)_2(DMF)_2]$ (7) were synthesized by using the bulky aryl phosphate ligands (L = 2,6-(diphenylmethyl)-4-alkyl-phenyl substituted phosphates, $ArOP(O)(OH)_2$ (Ar = 2,6-CHPh2-4-R-C6H2; R = Me (L1), Et (L2), i-Pr (L3), and t-Bu (L4)). The preparation of the complexes 1–7 was accomplished at room temperature by the use of additional co-ligands such as phenanthroline or pyrazole. Use of the linear co-ligand, 4,4′-bipyridine, affords the one-dimensional coordination polymer $[Zn_4(L3)_4(bpy)(DMF)_2]_n$, 8 which is built by the fusion of tetranuclear Zn(II) motifs. All the compounds were characterized by single crystal X-ray diffraction techniques.
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