



Cyanomethylene-bis(phosphonate) as ditopical ligand: stepwise formation of a 2-D heterometallic Fe(III)-Ag(I) coordination network

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Résumé en anglais	<p>A new heteroditopic ligand, cyanomethylene-bis(5,5-dimethyl-2-oxo-1,3,2 lambda(5)-dioxaphosphorinane) 1 (bphosCN), has been reacted with Fe(ClO₄)(3) to afford the mononuclear complex Fe(bphosCN)(3) 2 which crystallized in the cubic system, space group Pa (3) over bar. The iron center, chelated by the oxygen atoms of the ligand, shows an almost perfect octahedral geometry, with the CN groups disposed at 120 degrees each other. Further reaction with AgClO₄ provided the heterometallic coordination polymer (infinity)(2) {(Fe (bphosCN)(3))(3)Ag-3(H₂O)(2)]center dot (ClO₄)(3)} 3 as the unique crystalline polymorph, in the monoclinic space group P21/a. The targeted 2D honeycomb type structure has been achieved through an interplay between coordinative CN-Ag bonds and CN center dot center dot center dot H₂O bonds. The magnetic measurements demonstrate the existence of isolated paramagnetic Fe(III) centers in both complexes.</p>
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Liens

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