Infinite 1-D and 3-D Nets with Two Different Zinc and Terbium Coordination Polymers.

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The hydrothermal reaction of $Zn(NO_3)_2 6H_2O$ with benzene-1,3-dicarboxylic acid (or isophthalic acid, 1,3-BDCH₂) and pyridine led to the formation of a 1-dimensional coordination polymer with the empirical formula of $[Zn_4(1,3-BDC)_3(Py)_2(O^2)]$ (1). On the other hand, the hydrothermal reaction of $Tb(NO_3)_3 5H_2O$ with benzene-1,3-dicarboxylic acid (or isophthalic acid, 1,3-BDCH₂) and pyridine gave a 3-D compound $[Tb_3(1,3-BDC)_2(H_2O)_3]$ (2). The structures of both compounds have been determined by X-ray diffraction. 1 crystallizes in the monoclinic space group $P2_1/n$, a = 10.344(3) Å, b = 18.030(3) Å, c = 18.033(3) Å, $e = 90.46(2)^\circ$, e = 3363.1(13) Å³, e = 40. 2 crystallizes in the monoclinic space group e = 22.253(5) Å, e = 18.672(4) Å, e = 11.5812 Å, $e = 101.40(2)^\circ$, e = 4717.3(21) Å³, e = 80.

