Title:	Design and Construction of a Chiral Cd(II)-MOF from Achiral Precursors: Synthesis, Crystal Structure and Catalytic Activity toward C–C and C–N Bond Forming Reactions
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Abstract:	Using achiral components, a V-shaped dicarboxylic acid (H2L) and a conformationally flexible bidentate linker (bpp), a thermally stable chiral metal organic framework {[Cd(bpp)(L)(H2O)]·DMF}n (1), where H2L = 4,4′-(dimethylsilanediyl)bis-benzoic acid, bpp = 1,3-bis(4-pyridyl)propane and DMF = N,N-dimethylformamide, has been solvothermally synthesized and crystallographically characterized. It consists of 1D helical chains linked at the cadmium centers resulting in an overall 2D framework. Its microporous nature was confirmed by gas-sorption measurements. Upon thermal activation of 1, where both guest DMF molecules present in the 1D open channels and the coordinated H2O molecules are removed, its active metal site shows Lewis acid character to be an excellent heterogeneous catalyst for the C–C (Knoevenagel condensation reaction) and C–N (Strecker) bond forming reactions.
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