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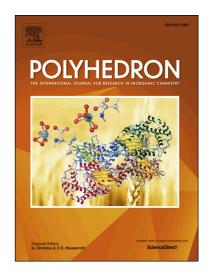
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## **ACCEPTED MANUSCRIPT**

# Synthesis and properties of cobalt(II) coordination polymers linked by 4'-(4-pyridyl)-2,2':6',2''-terpyridine

Olga Drath<sup>a</sup>, Robert W. Gable<sup>a</sup>, Boujemaa Moubaraki<sup>b</sup>, Keith S. Murray<sup>b</sup>, Colette Boskovic<sup>a,\*</sup>

<sup>a</sup> School of Chemistry, University of Melbourne, Parkville, VIC, 3010, Australia <sup>b</sup> School of Chemistry, Monash University, Clayton, 3800, VIC, Australia

Dedicated to Professor Spyros Perlepes on the occasion of his 65<sup>th</sup> birthday.

#### **ABSTRACT**

The cationic one-dimensional coordination polymers  $[\{Co(pyterpy)_2\}\{M(hfac)_2\}]^{2+}$  (M = Co(II) or Zn(II); pyterpy = 4'-(4-pyridyI)-2,2':6',2"-terpyridine; hfac = hexafluoroacetyloacetonate) feature alternating  $\{Co(pyterpy)_2\}$  and  $\{M(hfac)_2\}$  units linked through heteroditopic pyterpy ligands. Cocrystallization with  $[M(hfac)_3]^-$  (M = Co(II) or Zn(II)) counteranions has afforded the compounds:  $[\{Co(pyterpy)_2\}\{Co(hfac)_2\}][Co(hfac)_3]_2$  (1) and  $[\{Co(pyterpy)_2\}\{Co_{0.7}Zn_{0.3}(hfac)_2\}][Zn(hfac)_3]_2$  (2). Variable temperature crystallographic and magnetic studies indicate low spin cobalt(II) ions in the  $\{Co(pyterpy)_2\}$  components of the coordination polymers up to room temperature; magnetic studies suggest the onset of a thermally-induced spin crossover at these centers above room temperature.

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