

Publication

2-Dimensional networks assembled using 4'-functionalized 4,2':6',4''-terpyridines and Co(NCS)₂**JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 3198447**Author(s)** Klein, Y. M.; Prescimone, A.; Constable, E. C.; Housecroft, C. E.**Author(s) at UniBasel** [Housecroft, Catherine](#) ; [Constable, Edwin Charles](#) ; [Klein, Maximilian](#) ; [Prescimone, Alessandro](#) ;**Year** 2016**Title** 2-Dimensional networks assembled using 4'-functionalized 4,2':6',4''-terpyridines and Co(NCS)₂**Journal** Polyhedron**Volume** 103, Part A**Pages / Article-Number** 58-65**Keywords** Cobalt; 4,2'':6'',4''-Terpyridine; Coordination polymer; Coordination network; Substituent effects

A series of 2-dimensional (4,4) nets formed in reactions of Co(NCS)₂ with divergent 4''-functionalized-4,2'':6'',4''-terpyridine ligands is reported, and the effects of the 4''-substituent R (ligand 1, R = tBu; 5, R = MeO; 6, R = EtO; 7, R = nPrO) on the packing of the nets are described. The 2D-coordination networks in [Co(NCS)₂(6)₂·4CHCl₃]_n and [Co(NCS)₂(7)₂·4CHCl₃]_n are essentially isostructural. On going to [Co₂(NCS)₄(5)₄·2CHCl₃·1.5MeOH]_n, modification of both the geometry of the rhombuses that comprise the network, and the packing occurs. All three structures feature head-to-tail π -stacking of 4''-(4-alkoxyphenyl) units, but with variation in their relative orientations. In contrast, [Co(NCS)₂(1)₂·0.5H₂O]_n comprises double layers of (4,4) nets with hydrophobic coatings of tert-butyl groups, leading to alternating wide and close spacings between adjacent nets.

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