

Publication

A Tail Does Not Always Make a Difference: Assembly of cds Nets from Co(NCS)₂ and 1,4-bis(n-Alkyloxy)-2,5-bis(3,2'':6'',3''''-terpyridin-4''-yl)benzene Ligands**JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**

ID 4647329

Author(s) Capomolla, Simona S.; Manfroni, Giacomo; Prescimone, Alessandro; Constable, Edwin C.; Housecroft, Catherine E.**Author(s) at UniBasel** [Housecroft, Catherine](#) ;**Year** 2022**Title** A Tail Does Not Always Make a Difference: Assembly of cds Nets from Co(NCS)₂ and 1,4-bis(n-Alkyloxy)-2,5-bis(3,2'':6'',3''''-terpyridin-4''-yl)benzene Ligands**Journal** Molecules**Volume** 27**Number** 15**Pages / Article-Number** 4995

The consistent assembly of a (65.8) cds net is observed in reactions of cobalt(II) thiocyanate with 1,4-bis(n-alkyloxy)-2,5-bis(3,2'':6'',3''''-terpyridin-4''-yl)benzene ligands in which the n-alkyloxy substituents are n-propyl (ligand 3), n-butyl (4), n-pentyl (5), n-hexyl (6), n-heptyl (7), and n-octyl (8). Crystals were grown by layering a methanol solution of Co(NCS)₂ over a 1,2-dichlorobenzene solution of each ligand. The choice of crystallization solvents is critical in directing the assembly of the cds net. Single-crystal structures of [Co(NCS)₂(3)]n.3.5nC₆H₄Cl₂, [Co(NCS)₂(4)]n.5.5nC₆H₄Cl₂, [Co(NCS)₂(5)]n.4nC₆H₄Cl₂, [Co(NCS)₂(6)]n.3.8nC₆H₄Cl₂, [Co(NCS)₂(7)]n.3.1nC₆H₄Cl₂, and [Co(NCS)₂(8)]n.1.6nC₆H₄Cl₂.2nMeOH (C₆H₄Cl₂ = 1,2-dichlorobenzene) are presented and compared. The n-alkyloxy chains exhibit close to extended conformations and are accommodated in cavities in the lattice without perturbation of the coordination framework.

Publisher MDPI**ISSN/ISBN** 1420-3049**URL** <https://www.mdpi.com/1420-3049/27/15/4995>**edoc-URL** <https://edoc.unibas.ch/89445/>**Full Text on edoc** Available;**Digital Object Identifier DOI** 10.3390/molecules27154995