

メタノール配位と水素結合による軸配位dabcoとCo(II)ネットワーク集合体の化学クロミズム

(東北大多元研) 芥川智行 (北大電子研) 野呂真一郎、中村貴義

(山口大) 志賀美咲、川口省吾、藤林将、綱島亮 (広島大) 西原禎文、井上克也

Dalton. Trans., 47(2018), 7656–7662.

Published online: 18 May, 2018

DOI: 10.1039/c8dt01220b

Chemo-chromism in an orthogonal dabco-based Co(II) network assembled by methanol-coordination and hydrogen bond formation

Misaki Shiga, Shogo Kawaguchi, Masaru Fujibayashi, Sadafumi Nishihara, Katsuya Inoue, Tomoyuki Akutagawa, Shin-ichiro Noro, Takayoshi Nakamura and Ryo Tsunashima

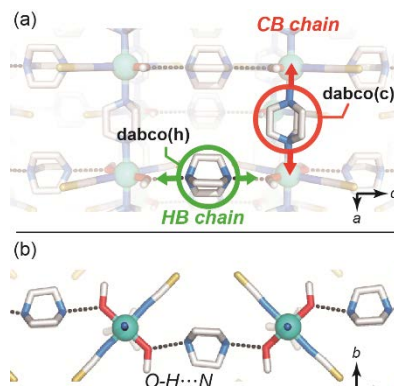


Figure 1. Crystal structure of 1-pink in (a) ac and (b) bc plane

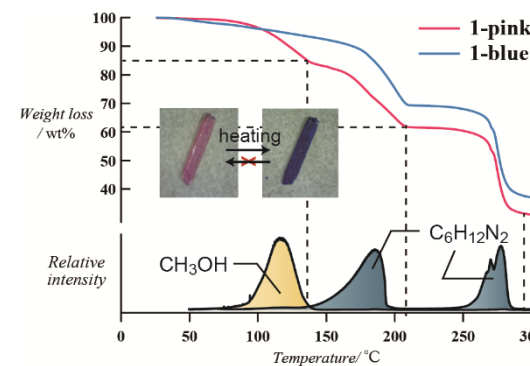


Figure 2. TG plot and MS-intensity plot measured. Inset shows a picture of the chromic behavior of a single crystal of 1-pink before and after incubation at ~90 C.

Back Cover Article.



Downloaded from the RSC Journals on 18 May 2018

Chemical reaction in an orthogonal dabco-based Co(II) network assembled by methanol-coordination and hydrogen bond formation

Single crystals of [Co(II)(dabco)(NCS)2(MeOH)2]·dabco showed chemo-chromic behavior in the solid state, changing from pink to blue upon heating or grinding. Due to the quantitative desorption of methanol in pink [Co(II)(dabco)(NCS)2]·dabco.



As featured in: Dalton Transactions

View Article Online

DOI: 10.1039/C8DT01220B

View Article Online

DOI: 10.1039/C8DT01220B

View Article Online

DOI: 10.1039/C8DT01220B



rsc.li/dalton

Newly prepared single crystals of $[\text{Co}(\text{II})(\text{dabco})(\text{NCS})_2(\text{MeOH})_2] \cdot \text{dabco}$ showed chromatropic behaviour in the solid state, changing from pink to blue upon heating or grinding. Chromism was demonstrated to stem from the quantitative desorption of methanol. The desolvated species showed chemo-chromic behaviour due to the selective size- and polarity-dependent adsorption of solvent molecules.

$[\text{Co}(\text{II})(\text{dabco})(\text{NCS})_2(\text{MeOH})_2] \cdot \text{dabco}$ 単結晶は、加熱や粉碎でピンクから青への固体状態におけるクロミズムを示す。このクロミズムは、メタノールの定量的な脱離に起因する。溶媒脱離した結晶は、溶媒分子の選択的なサイズおよび極性に依存した化学クロミック挙動を示した。