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## Two cobalt-dicarboxylate metal-organic frameworks with photo-catalytic property

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Because of the high costs and secondary pollutants generating from traditional biological and physical treatment methods, scientists have focused on the exploitations of new catalysts recently. Here, two cobalt-dicarboxylate photo-catalysts  $[\text{Co}(4\text{-pysmia})(\text{H}_2\text{O})_2]_n$  (1) and  $[\text{Co}_3(\mu\text{-OH})(\text{H}_2\text{O})(\text{pysmiaH})(\text{pysmia})_2]_n$  (2) have been hydrothermally synthesized from the reactions of 5-((pyridin-4-ylthio)methyl)isophthalic acid ( $\text{H}_2\text{pysmia}$ ) with  $\text{CoSO}_4$ . 1 represents a 2D network with a Schläfli symbol of  $6^3$ . 2 is an unprecedented (3,3,7)-connected network with the Schläfli symbol of  $(4^3)(4\cdot 8^2)(4^5 6^{11} 8^5)$ . Both 1 and 2 manifest photocatalytic activities for degradation of methylene blue (MB) under UV light irradiation and show good stabilities toward UV-light photocatalysis. Remarkably, the degradation rate of 2 towards MB can reach 91.4%.

### Biography

Rong-Xin Yuan has completed his PhD in 2002 at Nanjing University. From 2002 to 2004, he worked at University of Bielefeld and University of Nottingham as postdoctoral fellow. Now he is the director of Jiangsu Provincial Key Laboratory of Advanced Functional Materials. He has published more than 60 papers in reputed journals and has been serving as an editorial board member of the Journal of Soochow University (Natural Science Edition).

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