Structure and Fluorescent Properties of a Chiral Cd(II) Complex: $Cd(bpy)(H_2O)(PhCH{=}CHCO_2)_2$

Xian-Wen Wang[a], Jing-Zhong Chen[a], and Jian-Hong Liu[b]

[a] Faculty of Material Science and Chemical Engineering, China University of Geoscience, Hubei, Wuhan 430074, China
[b] College of Chemistry and Chemical Engineering, Shenzhen University, Guangdong, Shenzhen 518060, China

Reprint requests to Dr. Xian-Wen Wang. Fax: +86-27-/87801763.
E-mail: wxw10108092@yahoo.com.cn

Z. Naturforsch. **2007**, *62b,* 1139 – 1142; received April 6, 2007

Reaction of $Cd(CO_3)_2$, cinnamic acid and 2,2′-bipyridine (bpy) in CH_3OH/H_2O afforded a new chiral Cd(II) complex, $Cd(bpy)(H_2O)(PhCH{=}CHCO_2)_2$ (**1**). Single crystal X-ray analysis shows that complex **1** crystallizes in the monoclinic space group $P2_1$ with the cell dimensions: a = 10.081(2), b = 9.2657(19), c = 13.748(3) Å, β = 103.02(3)°, V = 1251.2(4) Å^3, Z = 2. The seven-coordinated Cd atoms are in a severely distorted capped trigonal prism geometry. The complex molecules are assembled *via* strong O–H···O hydrogen bonds into chains along the [010] direction. Complex **1** exhibits weak fluorescence in the solid state at r. t.

Key words: Crystal Structure, Cadmium, Chirality, Fluorescent Properties