

Synthesis, Crystal Structure and Properties of a New Trinuclear Manganese(II) Complex $\text{Mn}_3(2,2'\text{-bipy})_2(\text{C}_7\text{H}_5\text{O}_3)_6$

Ying-Qun Yang^a, Man-Bo Zhang^b, Man-Sheng Chen^a, and Zhi-Min Chen^a

^a Department of Chemistry and Materials Science, Hengyang Normal University, Hengyang City, Hunan 421008, P. R. China

^b College of Chemistry and Chemical Engineering, Hunan Normal University, Changsha City, Hunan 410081, P. R. China

Reprint requests to Associate Professor Ying-Qun Yang. Fax: +867348484911.

E-mail: yingqunyq@163.com or Dr. Man-Bo Zhang. E-mail: manbozhang@163.com

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A new trinuclear complex $\text{Mn}_3(2,2'\text{-bipy})_2(\text{C}_7\text{H}_5\text{O}_3)_6$ (**1**) with α -furacrylic acid (HL) and 2,2'-bipyridine as ligands has been synthesized. In **1**, six L^- anions link three Mn(II) cations to form a trinuclear structure. Each Mn cation is coordinated by six atoms to give a distorted octahedral coordination geometry. The luminescence and electrochemical properties of **1** were investigated. Complex **1** exhibits one intense fluorescence emission band at around 498 nm. It is paramagnetic showing weak antiferromagnetic coupling at low temperature. The electron transfer is irreversible in the electrode reaction of **1**, one electron being involved in the reduction corresponding to Mn(III)/Mn(II).

Key words: Manganese(II) Complex, Crystal Structure, Luminescence and Electrochemical Properties