Supporting Information for *Acta Phys. -Chim. Sin.* 2016, *32* (7): 1810－1818
doi: 10.3866/PKU.WHXB201604145

过氧钒配合物抑制朊蛋白淀粉样肽的纤维形成

张宝红 [1,2] 胡国胜 [1,*] 朱登森 [2] 王文姬 [2] 巩格辉 [2]
杜为红 [2,*]

([1] 中北大学材料科学与工程学院，太原 030051；[2] 中国人民大学化学系，北京 100872)

Inhibition of Prion Amyloid Peptide Fibril Formation by Peroxovanadium Complexes

ZHANG Bao-Hong[1,2] HU Guo-Sheng[1,*] ZHU Deng-Sen[2] WANG Wen-Ji[2]
GONG Ge-Hui[2] DU Wei-Hong[2,*]

([1]*College of Materials Science and Engineering, North University of China, Taiyuan 030051, P. R. China*;
[2]*Department of Chemistry, Renmin University of China, Beijing 100872, P. R. China*)

[*]Corresponding authors. HU Guo-Sheng, Email: chinahugsh@hotmail.com; Tel: +86-351-3925158.
DU Wei-Hong, Email: whdu@ruc.edu.cn; Tel: +86-10-62512660.

表 S1 通过核磁测定 M109F 氧化的平衡时间

Table S1 Equilibration time of M109F oxidation was determined by NMR

Vanadium complexes	**M109F equilibration time/ min**
$(NH_4)[VO(O_2)_2(bipy)]\cdot 4H_2O$, **1**	62
$(NH_4)[VO(O_2)_2(phen)]\cdot 2H_2O$, **2**	125

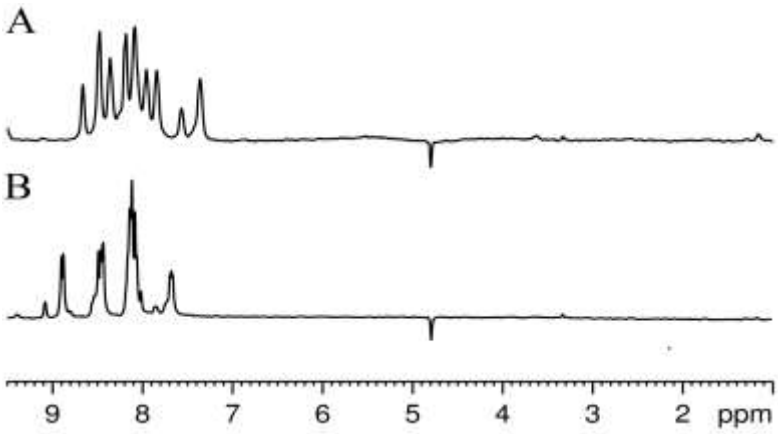

图 S1 过氧钒配合物 1（A）和 2（B）的核磁共振氢谱（pH 5.7, 298 K）

Fig.S1 ^{1}H-NMR spectra of peroxovanadium complexes 1 (A) and 2 (B) at pH 5.7, 298 K

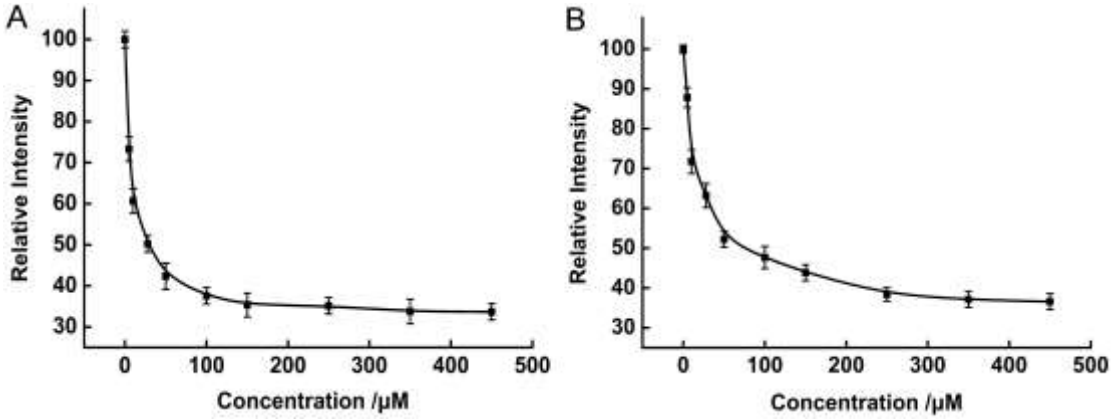

图 S2 M109F 在配合物 1 (A) 和 2 (B) 存在下的浓度依赖曲线

Fig.S2 The dose-dependent manner for M109F in the presence of complex 1 (A) and 2 (B)

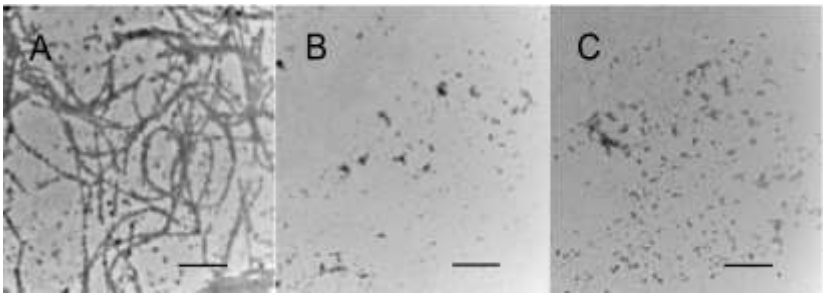

图 S3（A）单独 M109F 的 TEM 形貌图;（B, C）配合物 1 和 2 存在下 M109F 的 TEM 形貌图（配合物与 M109F 摩尔比 5:1）；标尺为 500 nm

Fig.S3 (A) TEM image of M109F alone; (B, C) TEM images of M109F in the presence of complexes 1(B) and 2 (C) at a molar ratio of five; The scale bar is 500 nm

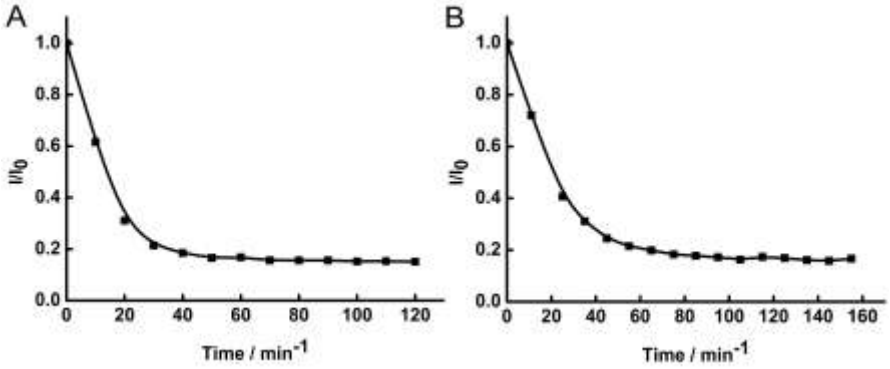

图 S4 通过核磁共振实验监测 M109F 在配合物 1（A）和 2（B）存在下甲硫氨酸（2.08 处）的氧化图谱

Fig.S4 Detection of methionine oxidation at peak 2.08 for M109F in the presence of complex 1 (A) and 2 (B) by NMR experiments

The concentration of peptide is 500 μmol L^{-1}; The molar ratio is 2 for each sample.

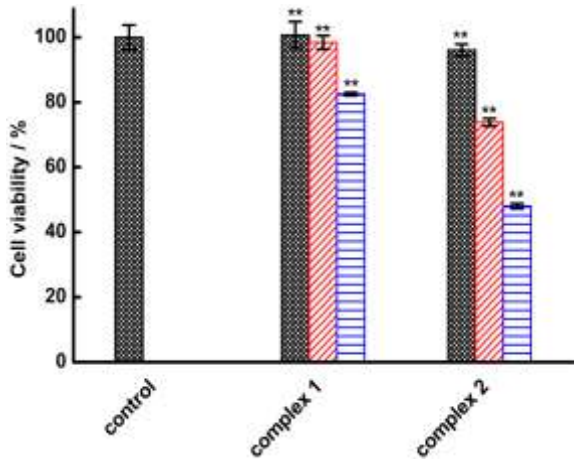

图 S5 MTT 法测定细胞存活率

Fig.S5 The cell viability monitored using the MTT assay

SH-SY5Y cells were treated with different concentrations of vanadium complexes at 1μmol L^{-1} (dense), 10 μmol L^{-1} (medium) and 50 μmol L^{-1} (sparse) to detect the cytotoxicity of vanadium complex independently. The data are shown as means±SD, n=3. ** $p<0.01$ and *$p<0.05$ compared to the control.