A New Interpenetrated Metal-Carboxylate Zn(II) Complex: for Inhibiting Growth of Human Cervical Cancer Cells

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SUMMARY. A new interpenetrated metal-carboxylate framework, namely \([\text{Zn}_2(\text{bpydb})_2\text{H}_2\text{O})(\text{DMA})_3]_n\) (1, \(\text{H}_2\text{bpydb} = 4,4’-(4,4’-\text{bipyridine-2,6-diyl})\text{dibenzoic acid}, \text{DMA} = \text{N,N-Dimethylacetamide}\)) was synthesized by solvothermal reaction. Single-crystal X-ray diffraction indicated that 1 is composed of two different frameworks with 2D 6^3 bilayers and a rare 4-connected 3D crb net giving an interesting 2D + 3D framework. In addition, the antitumor effects of the title compound 1 and its corresponding organic ligand \(\text{H}_2\text{bpydb}\) were studied on three human cervical cancer cells (HeLa, CaSki and SiHa). The results showed that compared with organic ligand \(\text{H}_2\text{bpydb}\), compound 1 displayed efficient antitumor activity.

KEY WORDS: antitumor, metal-carboxylate, X-ray.

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