

Two novel Tb (II) and Ca (II) Coordination Polymers: Crystal Structure and Inhibition of Human Cervical Cancer Cells

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SUMMARY. In this study, two new metal-organic frameworks [Tb₂(NO₃)₃(TTTT)(NMP)₄](NMP)₂ (**1**, NMP = N-methyl pyrrolidone) and (H₂NMe₂)[Ca₄(BTB)₃](DMF)₂ (**2**, DMF = N,N-dimethylformamide) with diverse architectures have been successfully prepared via a one pot solvothermal synthesis by using the flexible tricarboxylic acid ligand 2,4,6-tris[(4-carboxyphenoxy)methyl]-1,3,5-trimethylbenzene (H₃TTTT) and the rigid tricarboxylic acid ligand 4,4',4''-benzene-1,3,5-triyl-tribenzoic acid (H₃BTB). Both of the two complexes are characterized by single-crystal X-ray diffraction and elemental analysis. In addition, *in vitro* anticancer activity of compounds **1** and **2** on three human cervical cancer line cells (HeLa, SiHa and C33A) was further determined.

RESUMEN. En este estudio se han preparado con éxito dos nuevos marcos organometálicos de [Tb₂(NO₃)₃(TTTT)(NMP)₄](NMP)₂ (**1**, NMP = N-metilpirrolidona) y (H₂NMe₂)[Ca₄(BTB)₃](DMF)₂ (**2**, DMF = N,N-dimetilformamida) con diversas arquitecturas a través de síntesis solvotérmica de una sola vasija mediante el uso del ligando de ácido tricarbóxico flexible 2,4,6-tris[(4-carboxifenoxi) metil]-1,3,5-trimetilbenceno (H₃TTTT) y el ligando de ácido tricarbóxico rígido 4,4',4''-ácido benceno-1,3,5-trialil-tribenzoico (H₃BTB). Ambos complejos se caracterizaron por difracción de rayos X de monocristal y análisis elemental. Además, se determinó adicionalmente la actividad anticancerígena *in vitro* de los compuestos **1** y **2** en tres líneas celulares humanas de cáncer de cuello uterino (HeLa, SiHa y C33A).

KEY WORDS: cervical cancer, metal-organic, X-ray diffraction.

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