

## Two Novel Mg (II) and Ho (III) Complexes Based on the Same Ligand Inhibit Growth of Human Lung Cancer Cells

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**SUMMARY.** Two new three-dimensional (3D) metal-organic frameworks, namely  $\{[\text{Mg}_3(\text{DTDN})_3(\text{H}_2\text{O})_6](\text{DMF})_2\}_n$  (**1**, H2DTDN = 6,6'-dithiodinicotinic acid) and  $\{[\text{Ho}_2(\text{DTDN})_3(\text{H}_2\text{O})_5] \cdot 7\text{H}_2\text{O}\}_n$  (**2**) have been successfully prepared under solvothermal or hydrothermal conditions. The analysis results show that complex **1** is a 2-fold interpenetrated framework structure with a **hxx** topological network and complex **2** features a 3-D network with an uncommon twofold interpenetrating four-connected  $\text{CdSO}_4$  structure. In addition, *in vitro* anti-cancer activities of compounds **1** and **2** on four human lung cancer cell lines (H1299, MSTO-211H, PC9 and A549) was further determined.

**RESUMEN.** Dos nuevos marcos tridimensionales (3D) metálicos orgánicos, a saber  $\{[\text{Mg}_3(\text{DTDN})_3(\text{H}_2\text{O})_6](\text{DMF})_2\}_n$  (**1**, H2DTDN = 6,6'-ácido ditiiodinicotínico) y  $\{[\text{Ho}_2(\text{DTDN})_3(\text{H}_2\text{O})_5] \cdot 7\text{H}_2\text{O}\}_n$  (**2**) se han preparado con éxito en condiciones solvotermales o hidrotérmicas. Los resultados del análisis muestran que el complejo **1** es una estructura de entramado interpenetrada 2 veces con una red topológica **hxx** y el complejo **2** presenta una red 3-D con una estructura de  $\text{CdSO}_4$  de cuatro conexiones interpenetrada doble poco frecuente. Además, se determinaron adicionalmente las actividades anticancerígenas *in vitro* de los compuestos **1** y **2** en cuatro líneas celulares de cáncer de pulmón humano (H1299, MSTO-211H, PC9 y A549).

**KEY WORDS:** anticancer activity, four-connected, metal-organic.

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