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Two Mixed-ligand Transition Metal Coordination Polymers: Treatment Activity on Fracture Treatment and Clinic Nursing

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SUMMARY. In the current research, with the mixed-ligand generation approach, two transition metal CPs, namely, $[Ni_2(\mu_2\text{-Hcpoia})_2(\mu_2\text{–}4,4´\text{-bpy})(H_2O)_2]_n \cdot 2nH_2O$ **2** and $[Cu(\mu_2\text{-Hcpoia})(phen)(H_2O)]_n$ (1) have been formed in success with the reaction between 4-(4-carboxyphenoxy)isophthalic acid (H_3cpoia), a carboxylic acid ligand and corresponding metal salts in the existence of various N-donor ligands 4,4´-bipyridine (4,4´-bpy) or phenanthroline (phen). These compounds were completely characterized through single-crystal X-ray diffraction, EA and IR spectroscopy. Besides, the CPs' protective effect against the clinic nursing and fracture treatment was examined and the specific mechanism was analyzed.

RESUMEN. En la investigación actual, con el enfoque de generación de ligandos mixtos, dos CP de metales de transición, a saber, $[Ni_2(\mu_2\text{-Hcpoia})_2(\mu_2\text{–}4,4´\text{-bpy})(H_2O)_2]_n \bullet 2nH_2O$ **2** y $[Cu\ (\mu_2\text{-Hcpoia})(fen)(H_2O)]_n$ (**1**) se han formado con éxito con la reacción entre el ácido 4-(4-carboxifenoxi)isoftálico (H_3cpoia), un ligando de ácido carboxílico y las sales metálicas correspondientes en la existencia de varios ligandos donantes de N 4,4´-bipiridina (4,4´-bpy) o fenantrolina (phen). Estos compuestos se caracterizaron completamente mediante difracción de rayos X monocristalinos, espectroscopía EA e IR. Además, se examinó el efecto protector de los CP contra la enfermería clínica y el tratamiento de fracturas y se analizó el mecanismo específico.

KEY WORDS: coordination polymer, fracture, X-ray.

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