27 HSKIKI

VELI LOŠINJ
2021

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WITH INTERNATIONAL PARTICIPATION • 5th SYMPOSIUM "VLADIMIR PRELOG"

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BOOK OF ABSTRACTS

27th Croatian Meeting of Chemists and Chemical Engineers

with international participation

5th Symposium Vladimir Prelog

5 – 8 October 2021

Veli Lošinj, Vitality Hotel Punta, Croatia

BOOK OF ABSTRACTS

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ULTRASOUND-ASSISTED GREEN SYNTHESIS AND CHARACTERIZATION OF Ni/HISTIDINE MOF

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Metal organic frameworks (MOFs) are porous 3D networks which are assembled from organic ligands as linkers between metal cations. They are considered as promising materials for a variety of applications because of their fine tunable and uniform pore size.[1] Here we report ultrasound-assisted synthesis of Nickel(II)/histidine MOF and its structural, morphological and compositional characterization. Ultrasound-assisted synthesis is simple, environmental-friendly and most of all cost-effective method in which nickel acetate is decomposed with ultrasonic cavitation in basic water solution of histidine.[2] Synthesized compound is further structurally characterized by powdr X-ray diffraction (PXRD), morphologically investigated by scanning electron microscopy (SEM), while chemical composition has been determined by X-ray photoelectron spectroscopy (XPS).

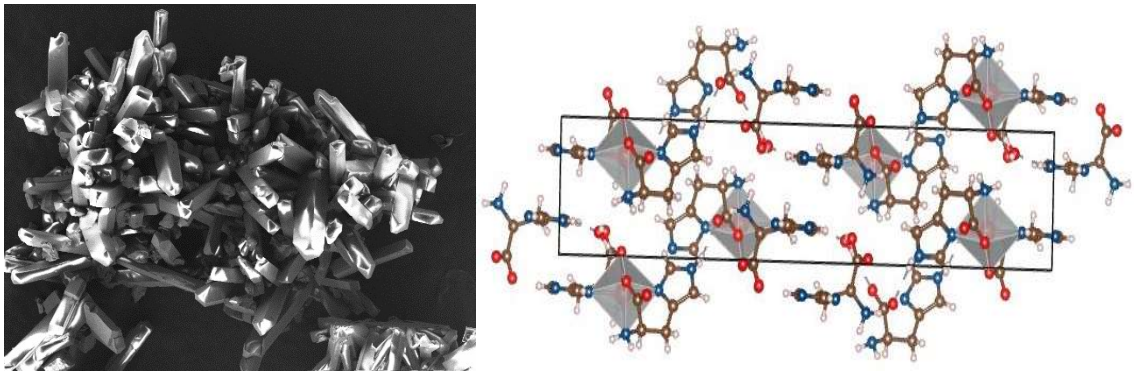

Figure 1. SEM image (left) and crystal structure visualization (right) of synthetized Ni/histidine MOF.

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