

The fungicide effect of HKUST-1 to *Aspergillus niger*, *Fusarium solani* and *Penicillium chrysogenum*

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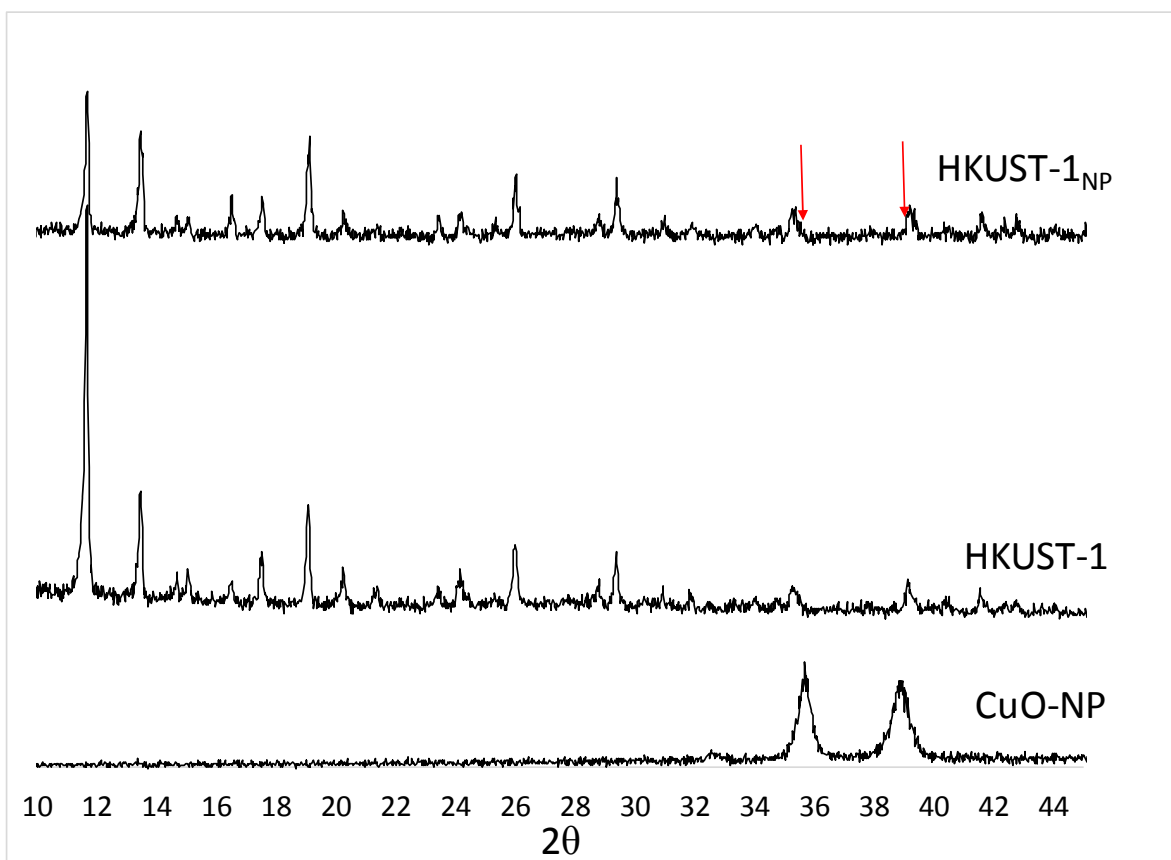


Figure S1. X-ray diffraction patterns of CuO-NP, HKUST-1 and HKUST-1_{NP}.

The amount of CuO-NP in the HKUST-1 network is very low, indeed the copper oxide diffraction peaks in the HKUST-1_{NP} sample have very low relative intensities.

To determine the presence of these peaks on the HKUST-1 framework the HKUST-1_{NP} diffractogram was subtracted of the HKUST-1 diffractogram. The patterns were normalized to peak (400) to 13.50 (2θ), thus obtaining the difference between the two diffractograms, negative peaks attributed to the growth or appearance of new diffraction peaks in the HKUST-1_{NP} sample. The peaks marked with an arrow indicate the positions of the peaks assigned to CuO-NP. The negative peaks correspond to the decrease of the relative

intensities of the main peaks of HKUST-1. Such decrease of certain intensities has been observed previously in the hydration changes of the network [1, 2].

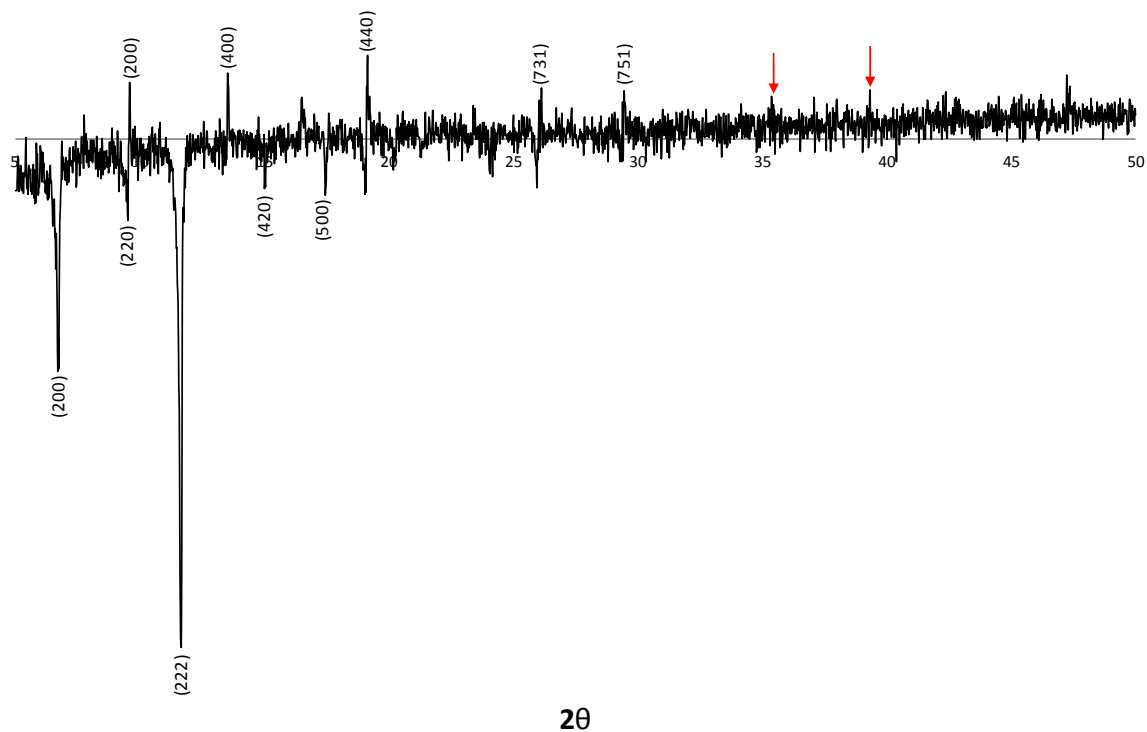


Figure S2. Subtracted X-ray diffraction of the HKUST-1_{NP} obtained by Relative Intensity_{HKUST-1NP}-I_{HKUST-1NP}.

References

- [1] M. Schlesinger, S. Schulze, M. Hietschold, M. Mehring, *Microporous and Mesoporous Materials*, vol. 132, 2010, pp. 121-127.
- [2] S. Loera-Serna, M.A. Oliver-Tolentino, M. de Lourdes López-Núñez, A. Santana-Cruz, A. Guzmán-Vargas, R. Cabrera-Sierra, H.I. Beltrán, J. Flores, *Journal of Alloys and Compounds*, vol. 540, 2012, pp. 113-120.