

Supplementary Materials

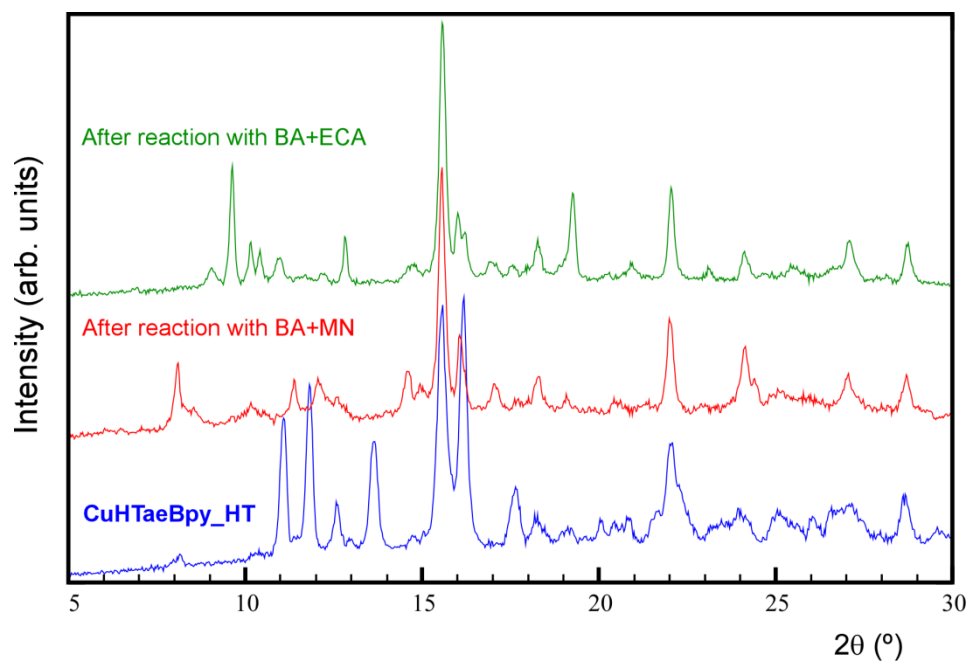
## Catalytic performance of a new 1D Cu(II) coordination polymer {Cu(NO<sub>3</sub>)(H<sub>2</sub>O)}(HTae)(4,4'-Bpy) for Knoevenagel condensation

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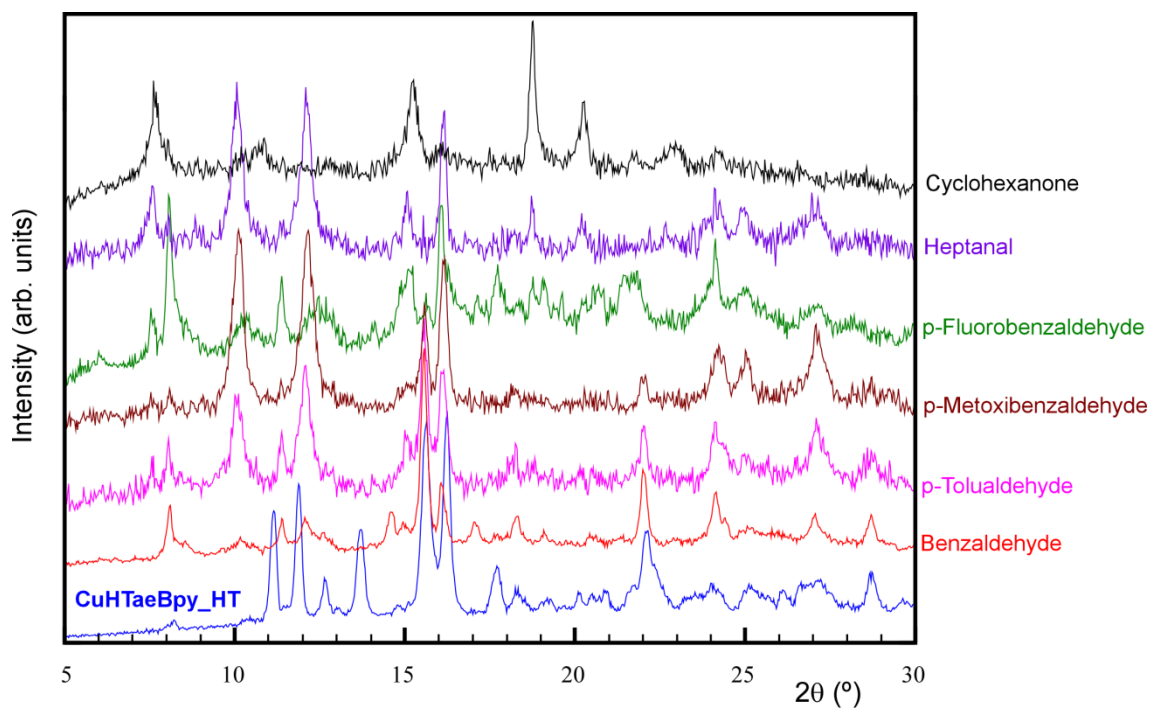
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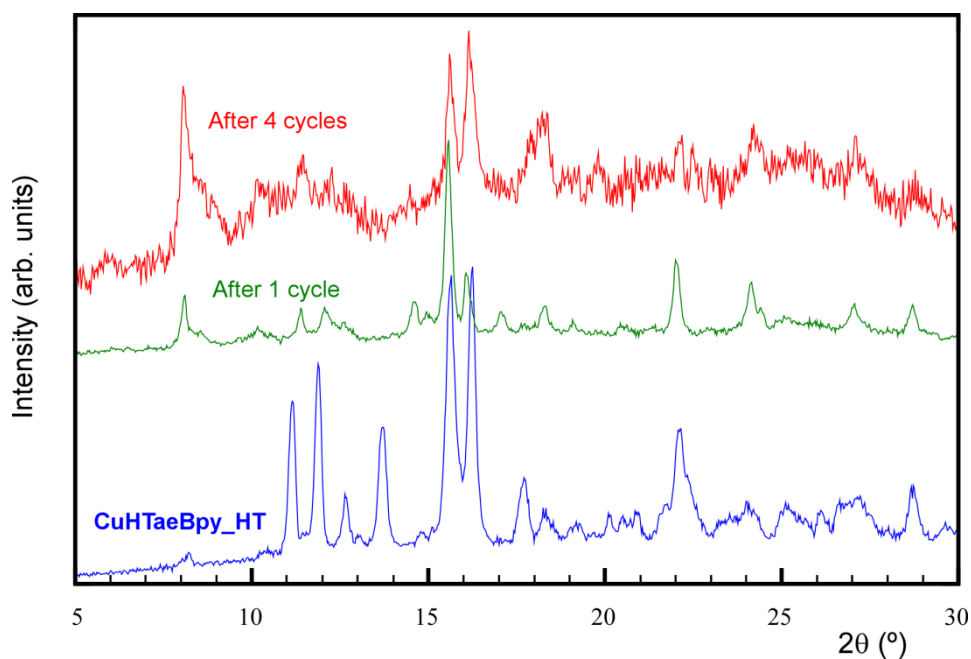
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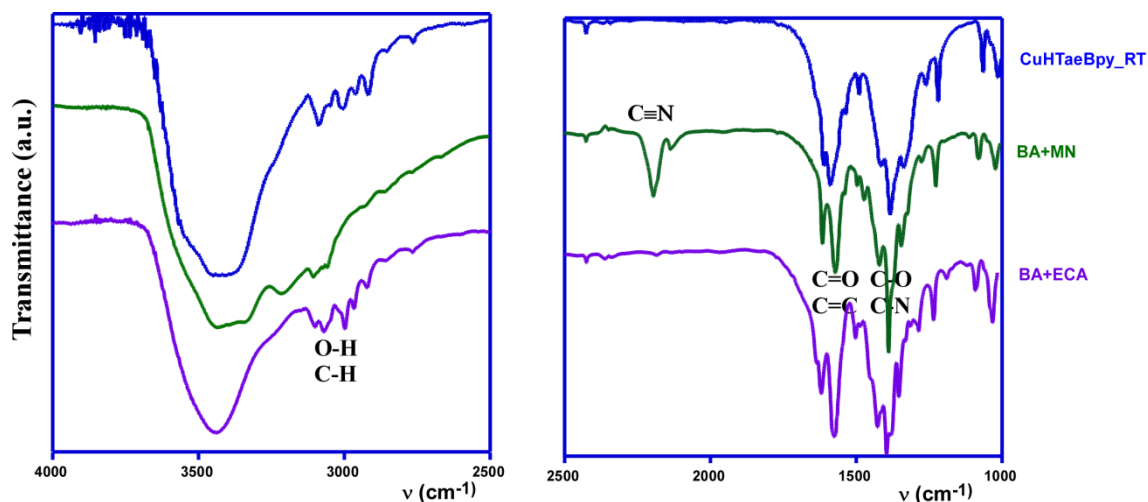
**Figure S1.** X-ray diffractograms of the activated CuHTaeBpy\_HT catalyst before the reaction, after reacting with benzaldehyde (BA) and malononitrile (MN), and after reacting with benzaldehyde(BA) and ethyl cyanoacetate (ECA).



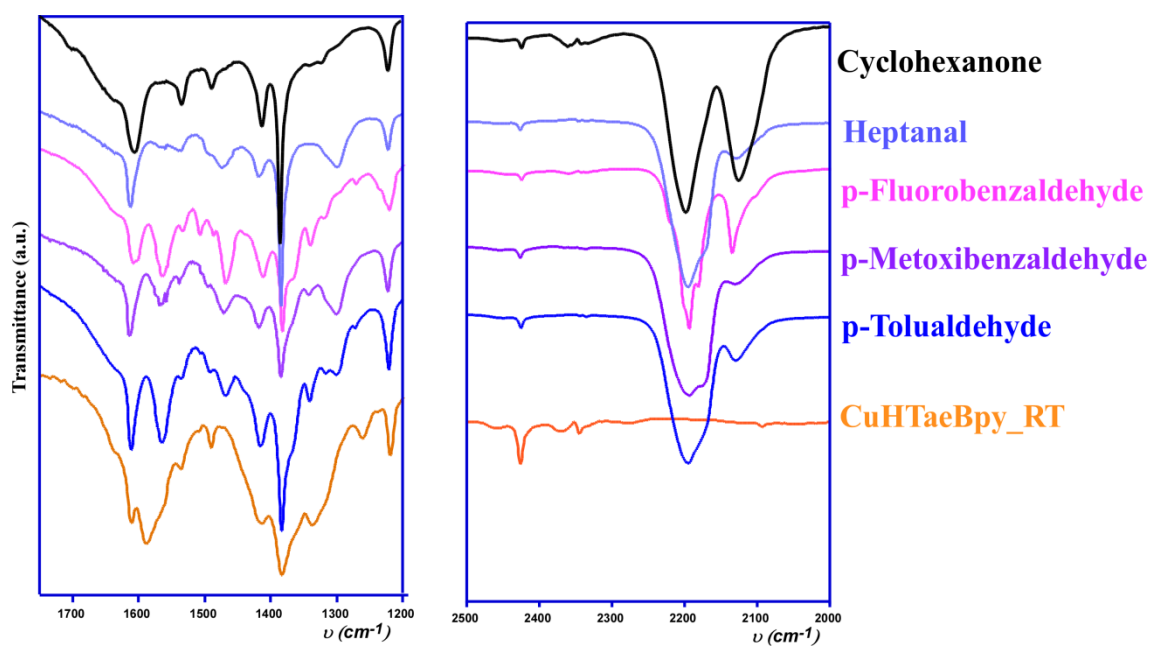
**Figure S2.** X-ray diffraction patterns of the activated catalyst, **CuHTaeBpy\_HT**, and after reacting with various substrates and MN.



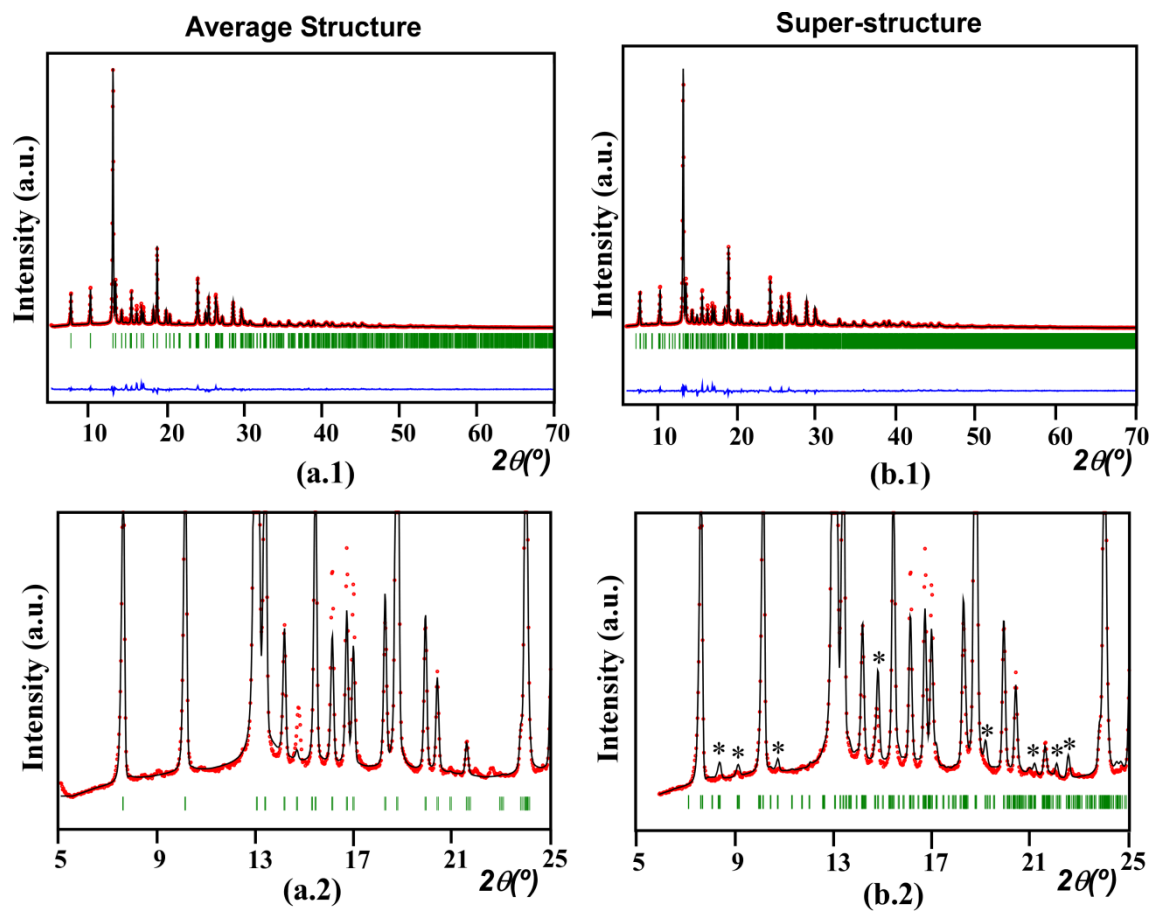
**Figure S3.** X-ray diffraction patterns of the activated catalyst, **CuHTaeBpy\_HT**, and after 1 cycle of reaction and after 4 cycles of reaction of BA and MN.



**Figure S4.** IR spectra of the CuHTaeBpy\_RT preactivated catalyst, the catalyst after reacting with benzaldehyde (BA) and malononitrile (MN), and after reacting with benzaldehyde (BA) and ethyl cyanoacetate (ECA).



**Figure S5.** IR spectra of the CuHTaeBpy\_RT preactivated catalyst, the catalyst after reacting with various substrates and malononitrile.



**Figure S6.** Top: Rietveld refinements of the  $\{\text{Cu}(\text{NO}_3)(\text{H}_2\text{O})\}(\text{HTae})(4,4'\text{-Bpy})$  with the average structural model (left) and commensurate structural model (right). Bottom: Details of the refinement of the satellite peaks due to the super-structure.