

## ***Electronic Supplementary Information***

### **Perchlorate supported Cu(II) based 1D polymeric chain containing 1,10-phenanthroline: Synthesis, characterization and adsorption of organic dyes and heavy metal ions**

Sawaira Atta<sup>a</sup>, Amna Siddique<sup>a</sup>, Muhammad Naveed Qasim<sup>a</sup>, Murad A. AlDamen<sup>b</sup>, Tahir Ali Sheikh<sup>a</sup>, Normamatov Adkhamjon Sadullayevich<sup>c</sup>, Aziz B. Ibragimov<sup>c</sup>, Muhammad Nadeem Akhtar\*<sup>a</sup>

<sup>a</sup>*Institute of Chemistry, The Islamia University of Bahawalpur, Bahawalpur 63100, Pakistan*

<sup>b</sup>*Department of Chemistry, School of Science, the University of Jordan, Amman 11942, Jordan*

<sup>c</sup>*Institute of General and Inorganic Chemistry of Uzbekistan Academy of Sciences, M. Ulugbek Str, 77a, Tashkent 100170, Uzbekistan*

Corresponding author:

nadeemchem@yahoo.com, [m.nadeemakhtar@iub.edu.pk](mailto:m.nadeemakhtar@iub.edu.pk) (M.N. Akhtar)  
[orcid.org/0000-0002-0645-0796](http://orcid.org/0000-0002-0645-0796)

## **Contents**

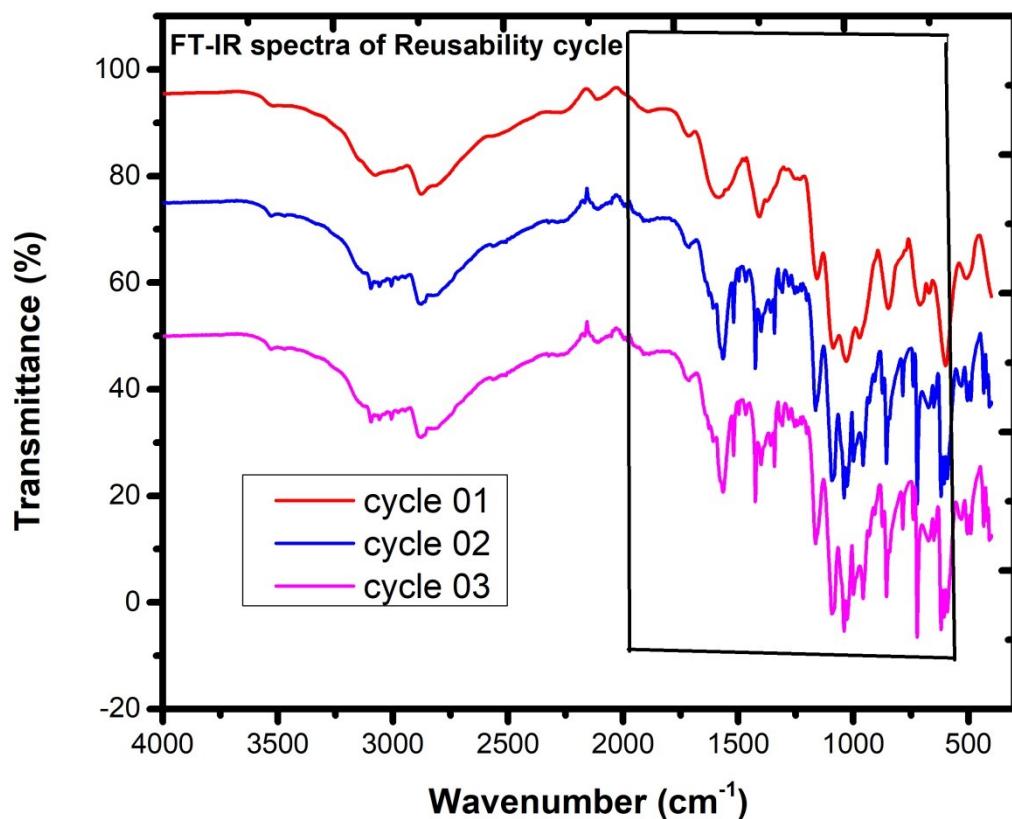
**Table S1.** Selected bond lengths and bond angles for **1**.

**Fig. S1.** Comparative FT-IR Plot for Reusability of **1**.

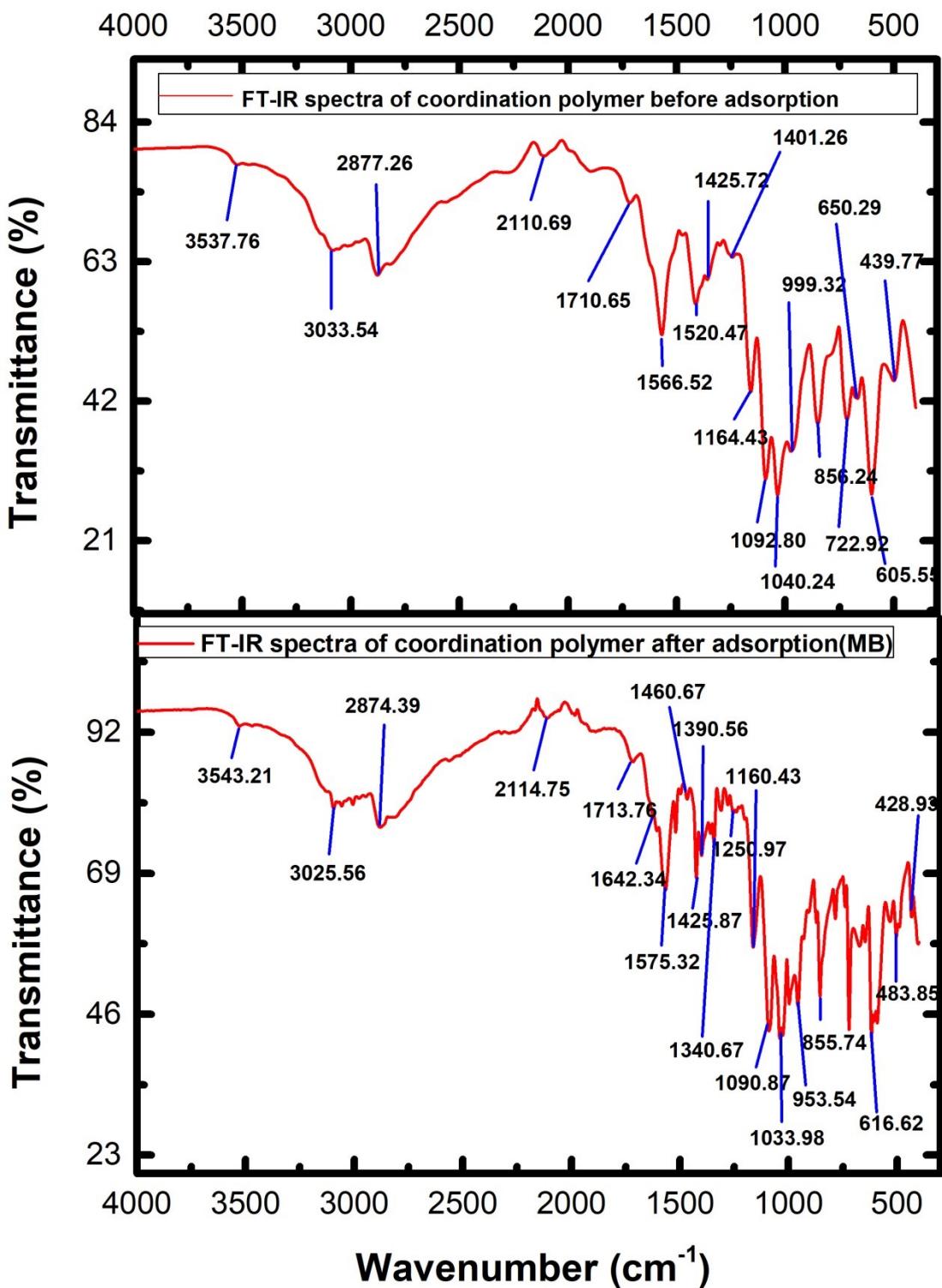
**Fig. S2:** FT-IR spectra of **1** before and after adsorption of MB.

**Table S1.** Selected bond lengths and bond angles for **I**.

	Length ( $\text{\AA}$ )
$Cu_I\text{-}O_I$	1.970(3)
$Cu_I\text{-}N_I$	2.009(4)
$Cl_I\text{-}O_3$	1.454(4)
$Cl_I\text{-}O_2$	1.498(3)
$O_I\text{-}H_{IA}$	0.855
$N_I\text{-}C_I$	1.350(6)
	Angle (°)
$O_I\text{-}Cu_I\text{-}O'_I$	94.2(2)
$O_I\text{-}Cu_I\text{-}N'_I$	91.8(2)
$O_I\text{-}Cu_I\text{-}N_I$	173.9(2)
$N_I\text{-}Cu_I\text{-}N'_I$	82.3(2)
$O_3\text{-}Cu_I\text{-}O'_3$	178.2(2)



**Fig. S1.** Comparative FT-IR Plot for Reusability of **I**.



**Fig. S2:** FT-IR spectra of **I** before and after adsorption of MB.