

## Electronic Supplementary information

### Sun Light Assisted Degradation of Pollutant dye in water by $\text{WO}_3@g\text{-C}_3\text{N}_4$

#### Nanocomposite Catalyst

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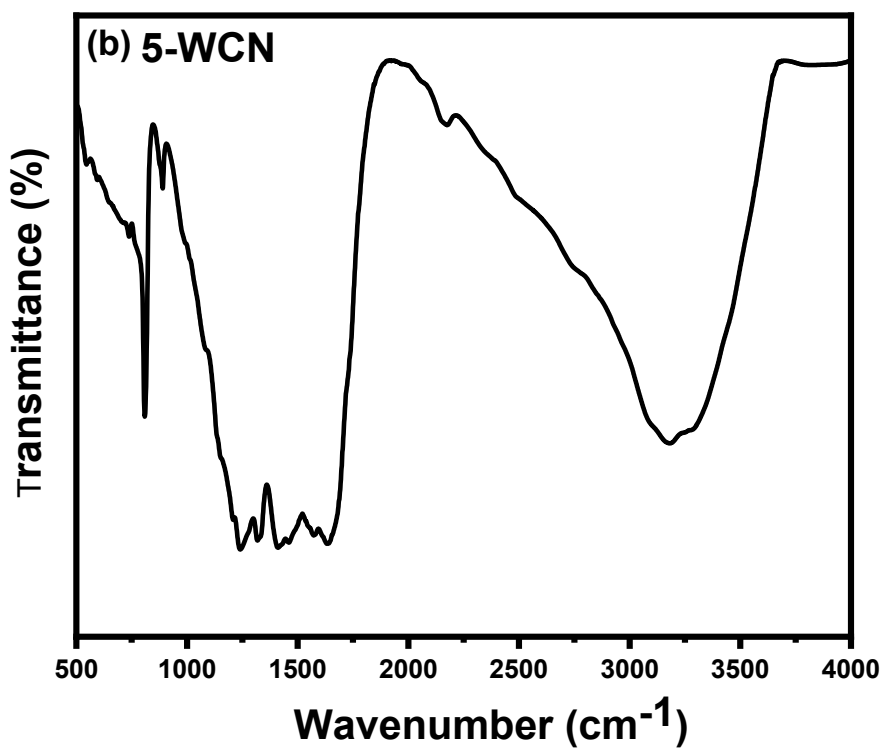
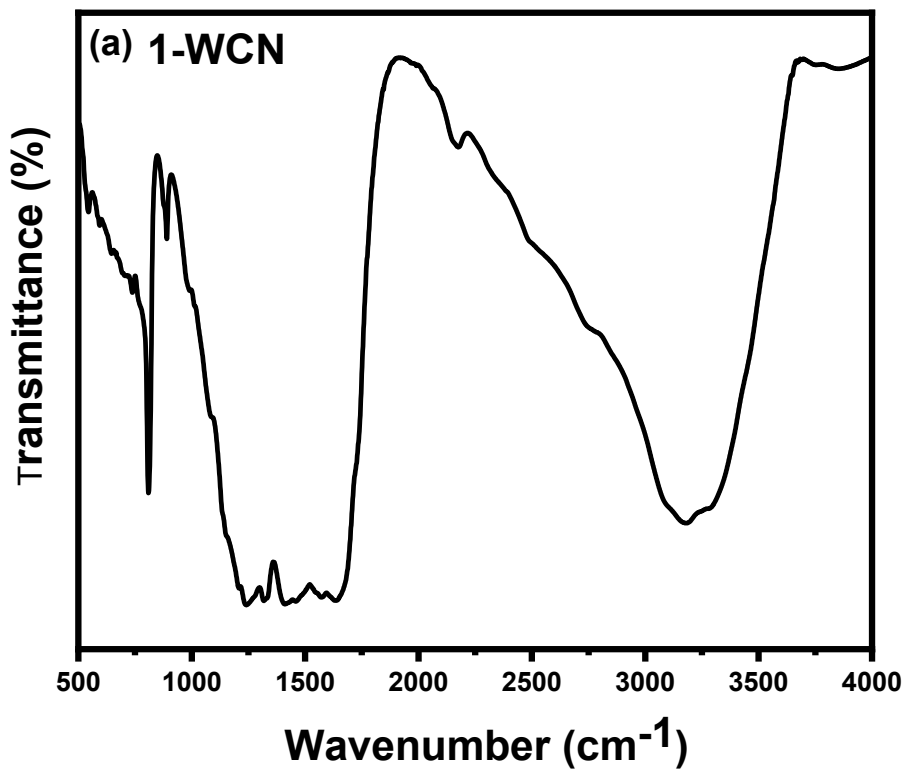
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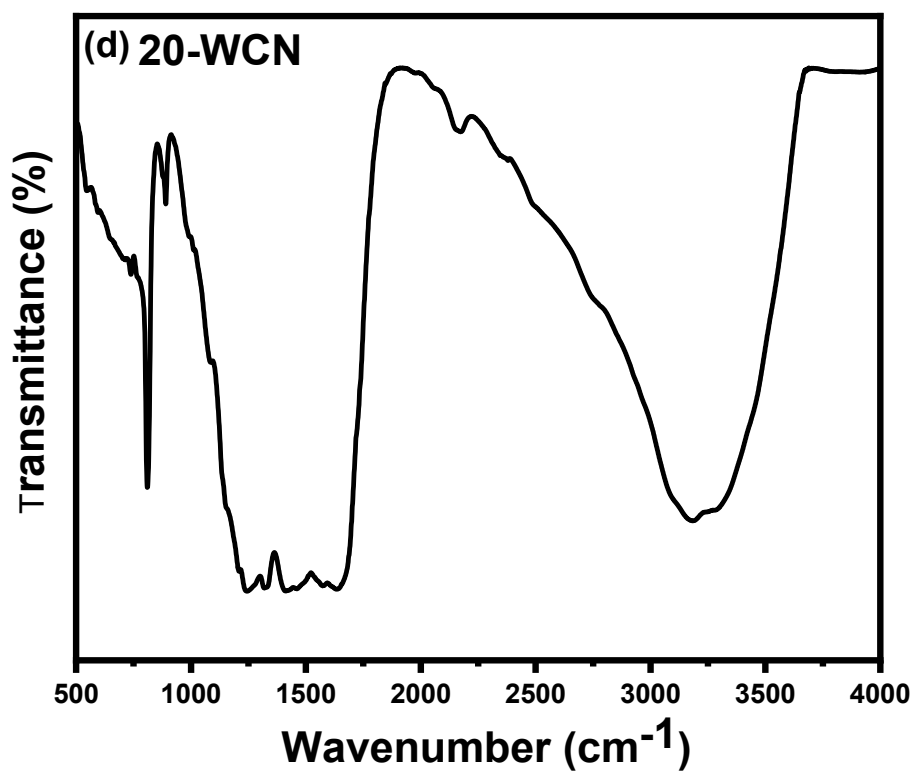
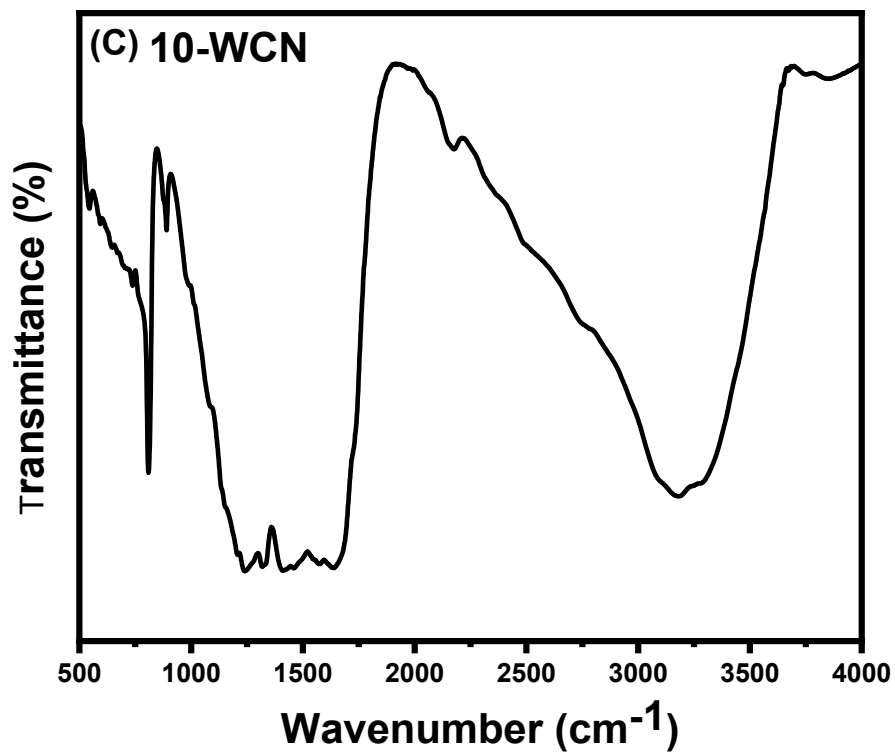
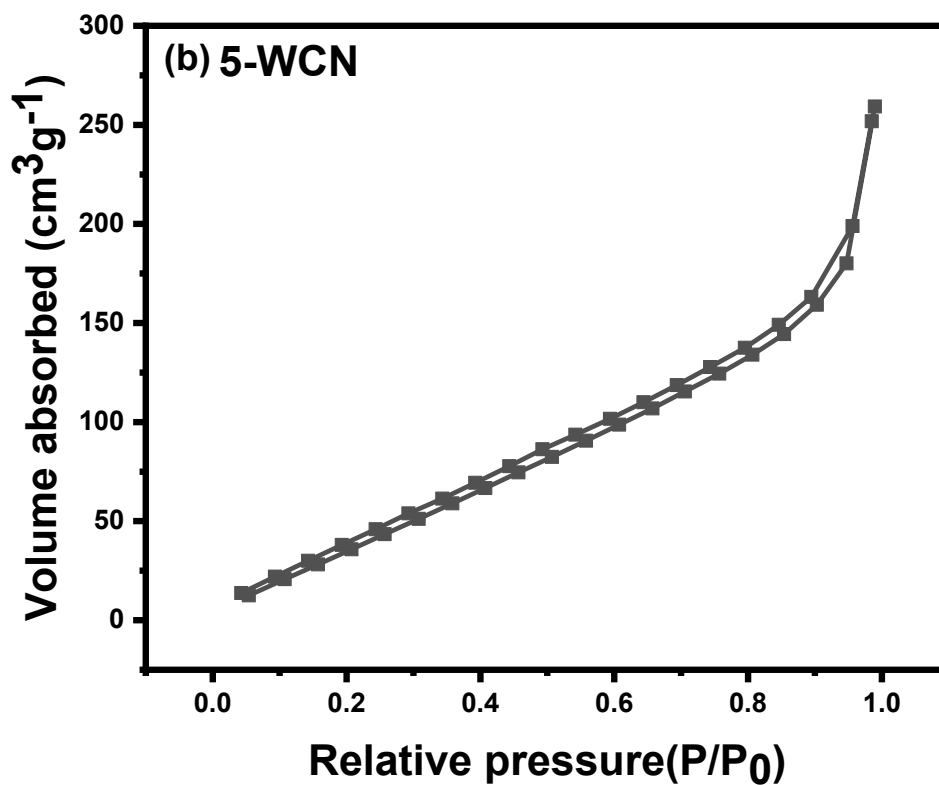
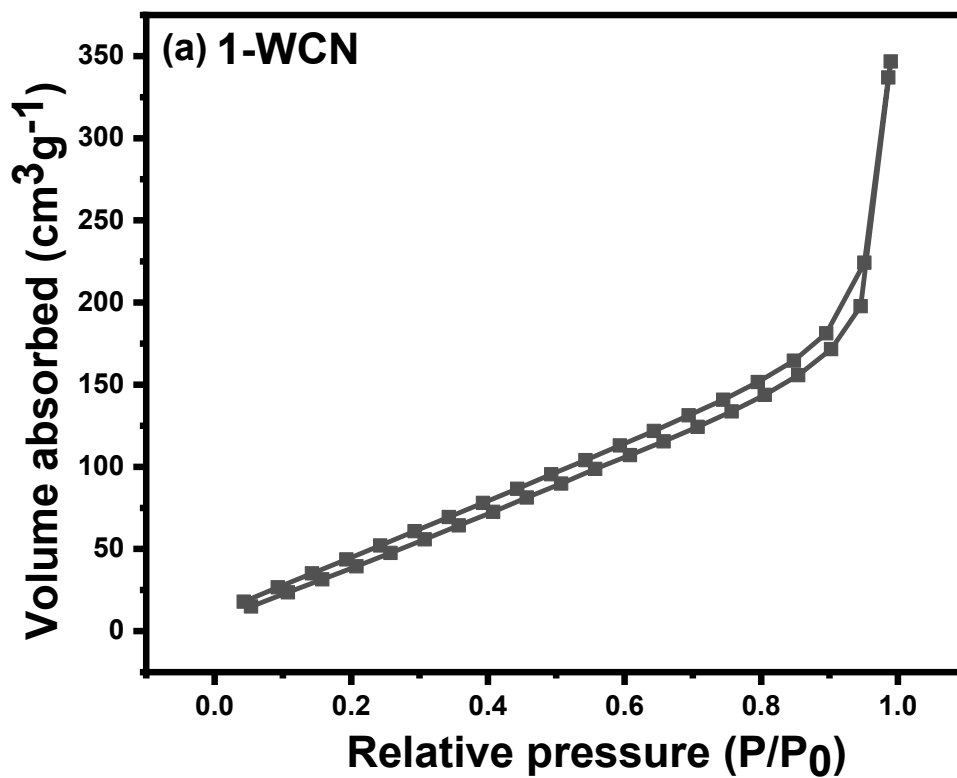
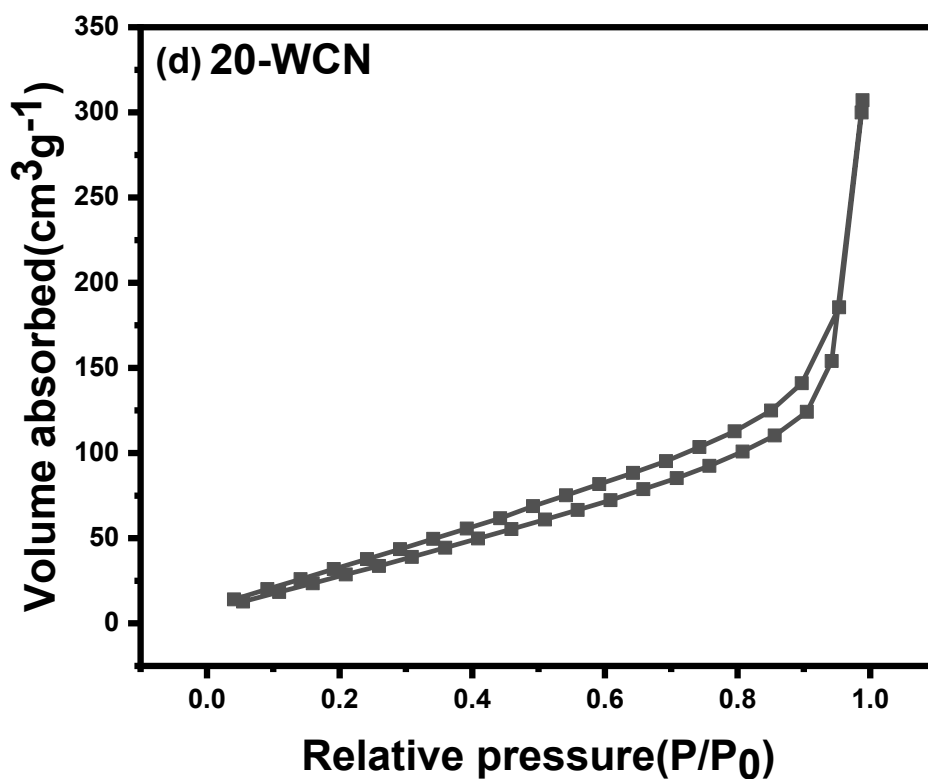
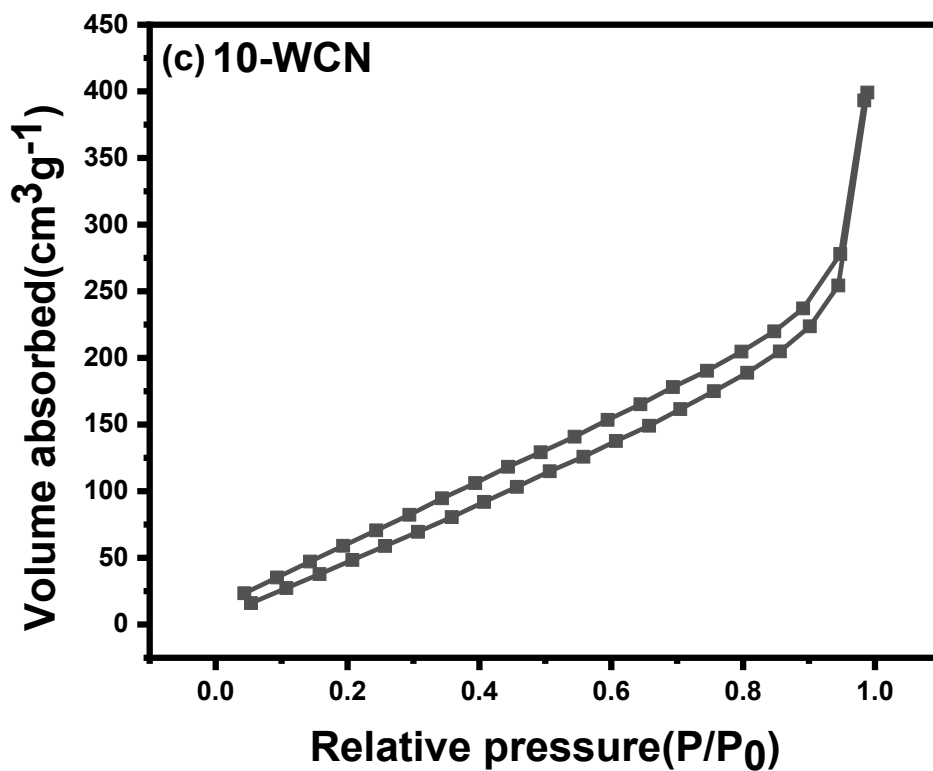
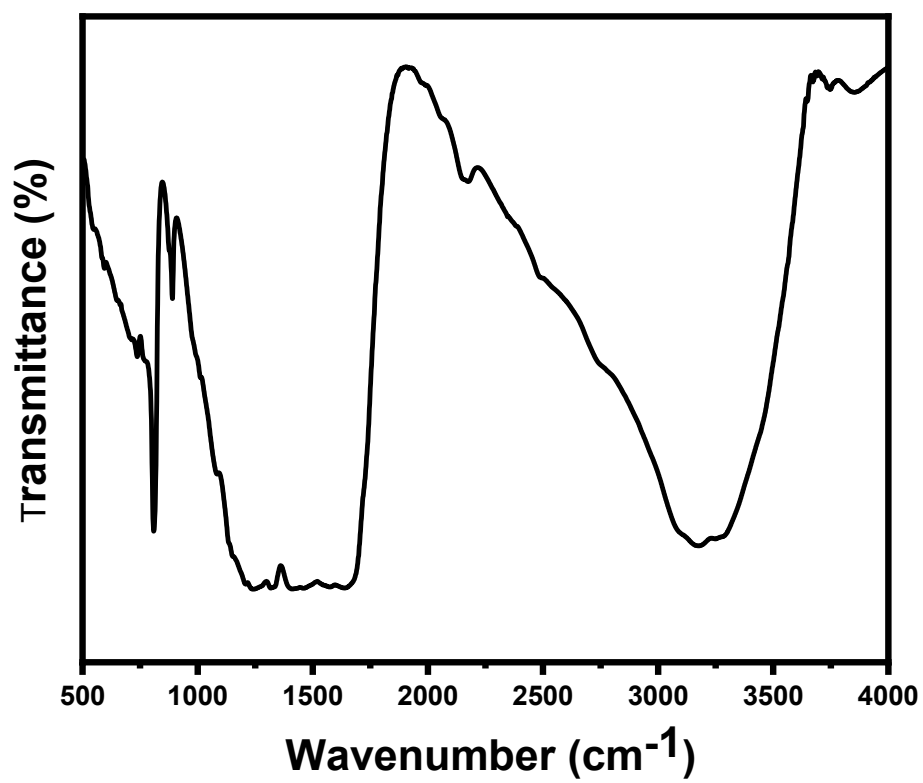


Figure S1. FT-IR spectra of (a) 1-WCN (b) 5-WCN (c) 10-WCN (d) 20-WCN nanocomposites.

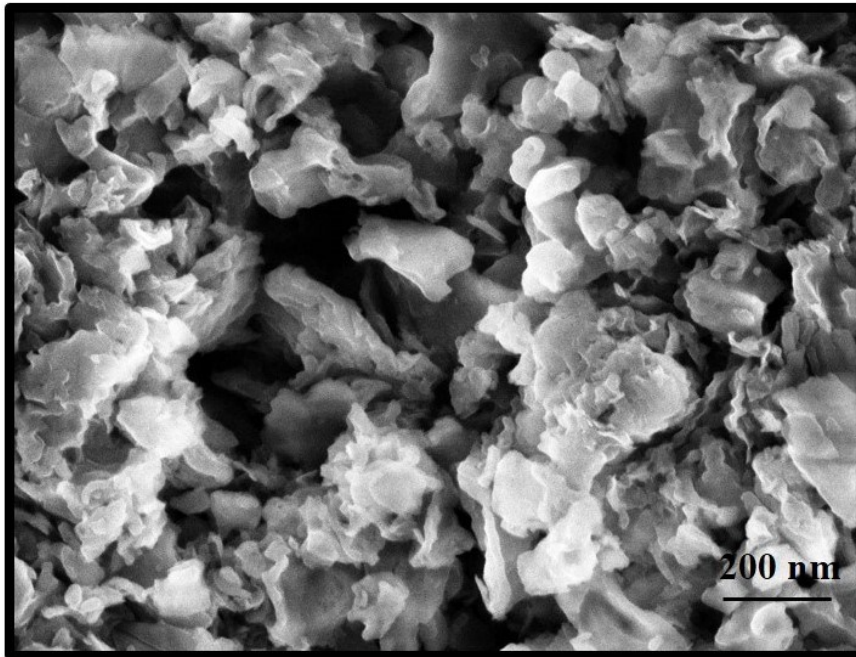




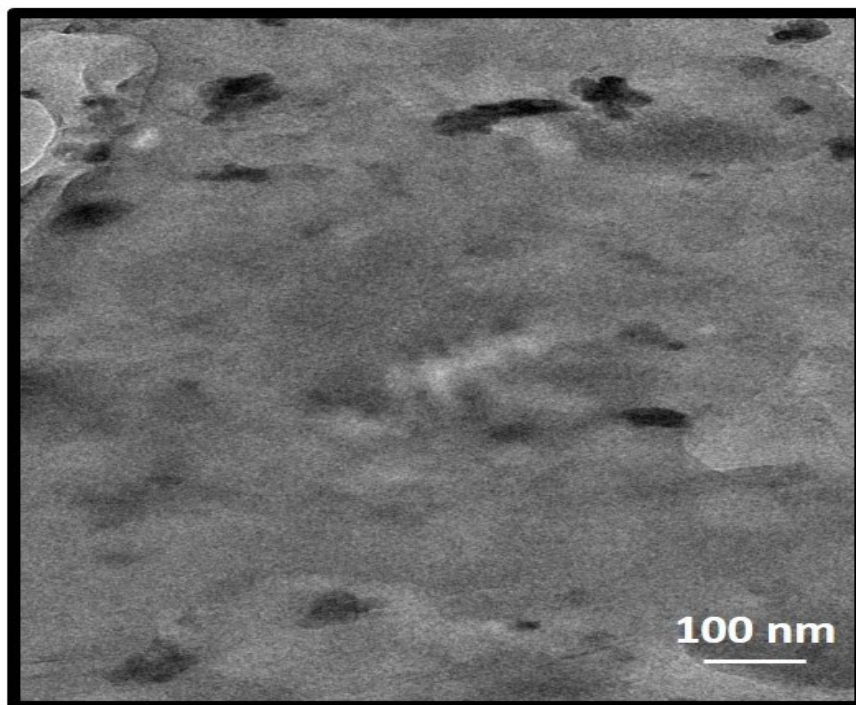
**Figure S2.** Nitrogen adsorption-desorption isotherm plots of (a) 1-WCN (b) 5-WCN (c) 10-WCN (d) 20-WCN nanocomposites.



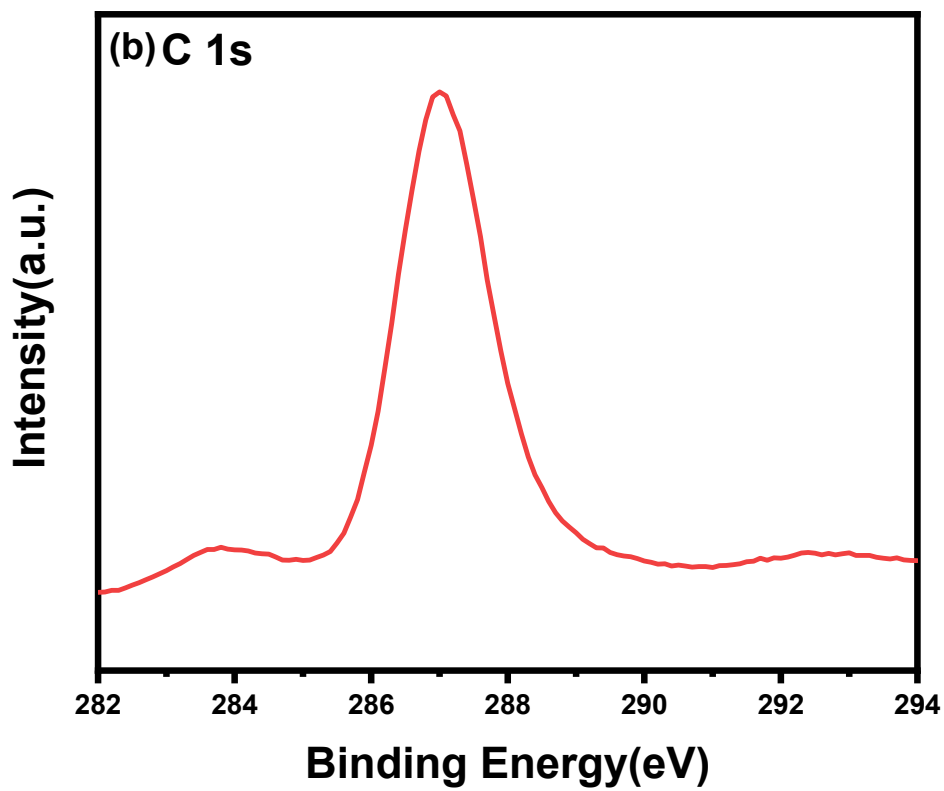
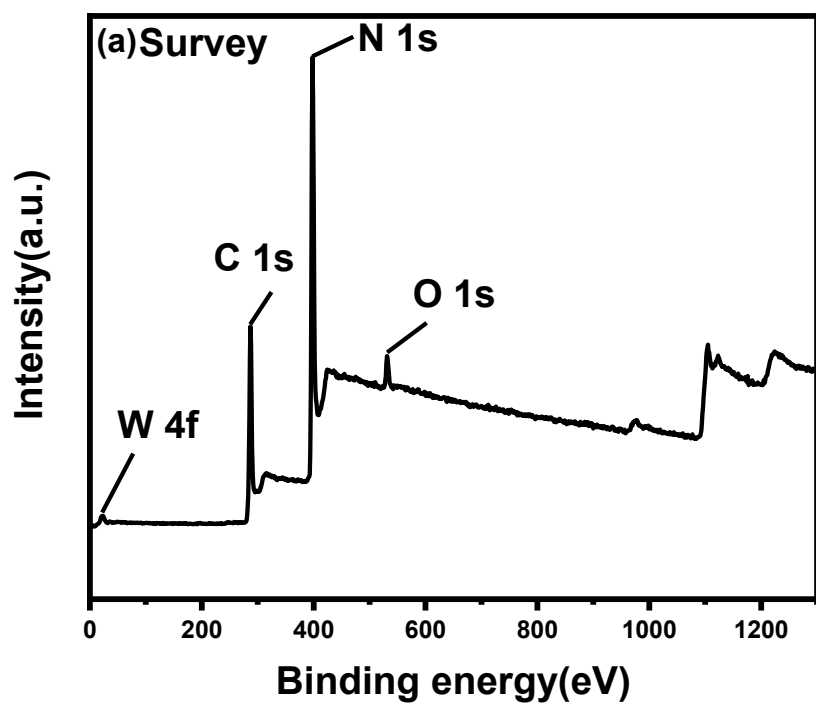
**Figure S3.** FT-IR spectra of recovered 2-WCN nanocomposites.



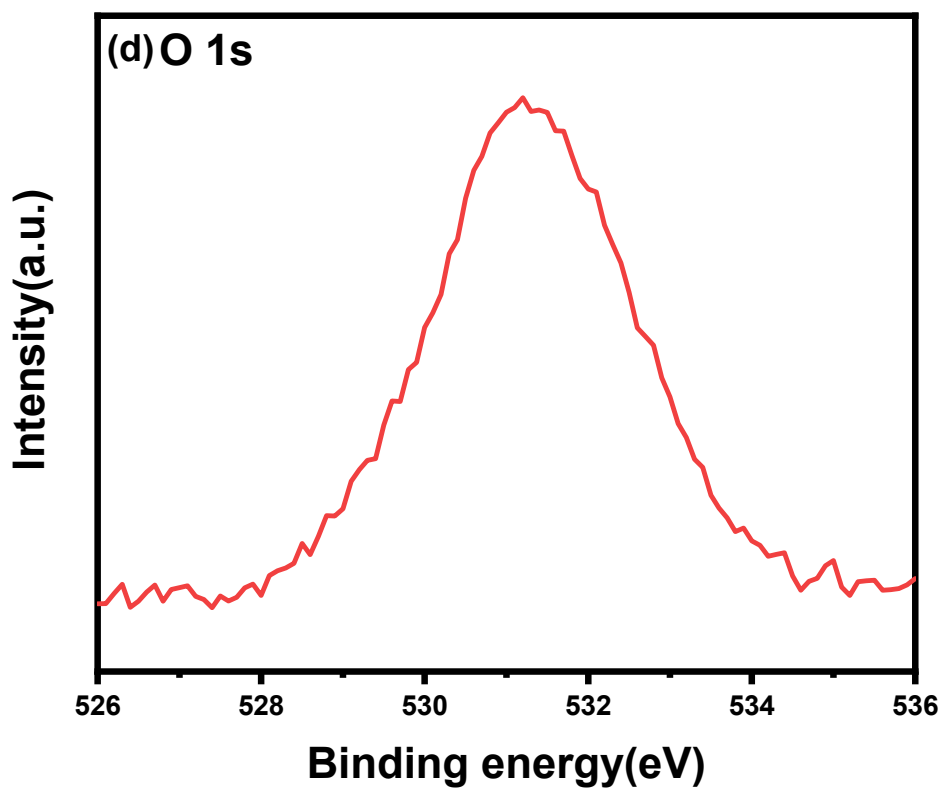
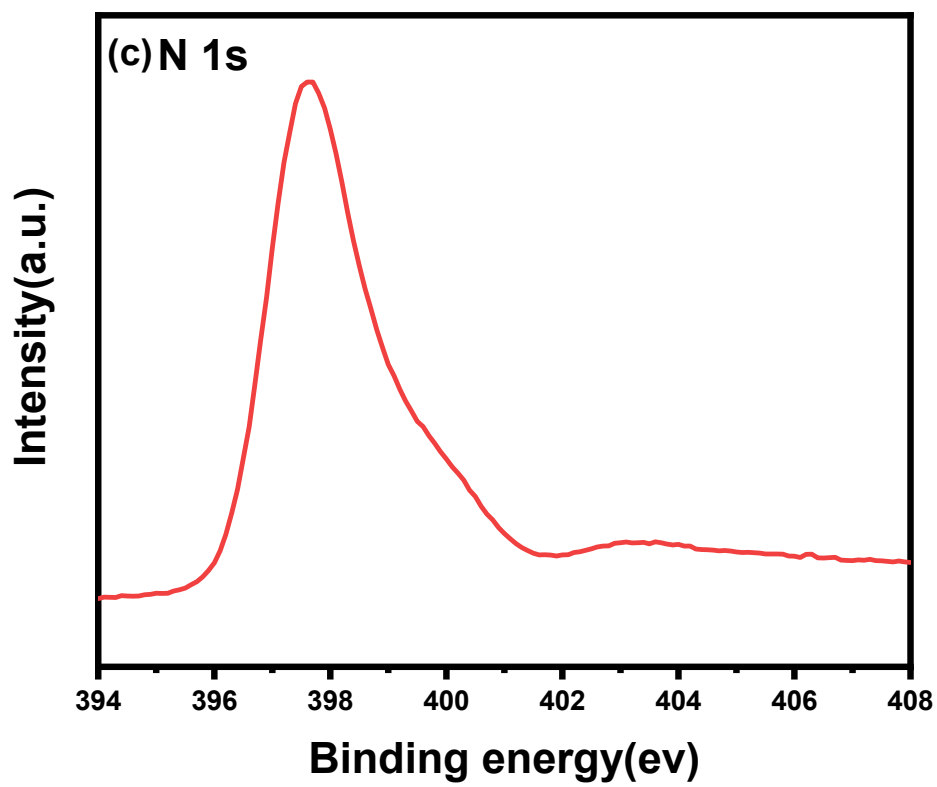
**Figure S4.** FE-SEM image of recovered 2-WCN nanocomposites.

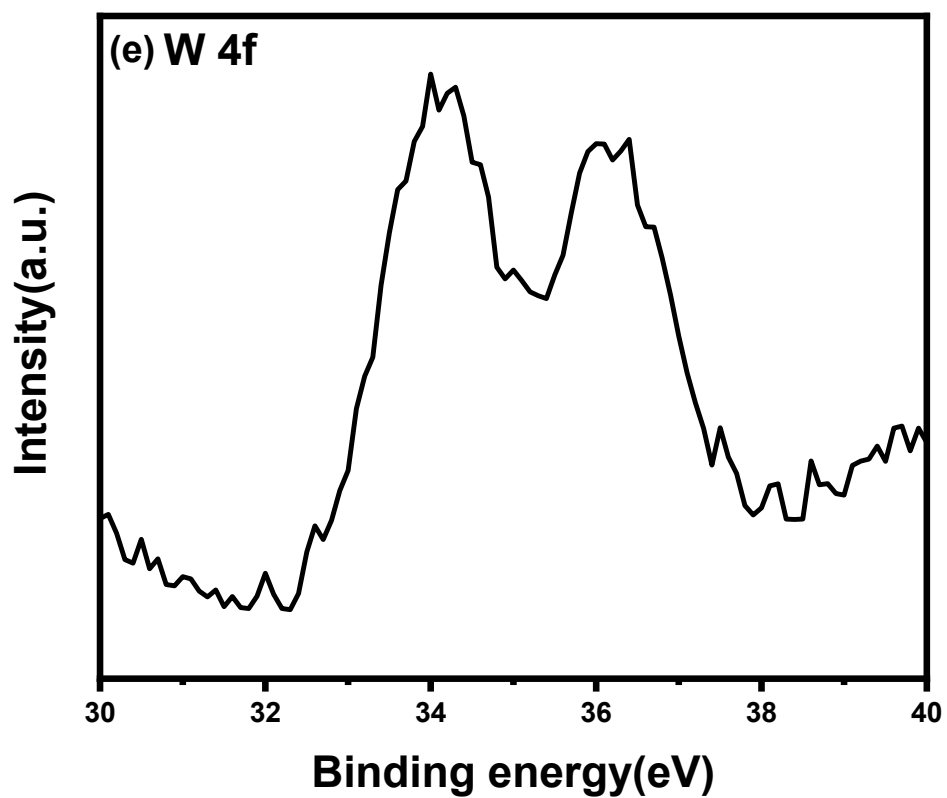


**Figure S5.** TEM image of recovered 2-WCN nanocomposites.









**Figure S6.** (a) XPS survey, (b) C 1s XPS spectra, (c) N 1s XPS spectra, (d) O 1s XPS spectra, (e) W 4f XPS spectra of recovered 2-WCN nanocomposites.

**Table S1: BET surface areas of as-prepared samples**

| <b>Samples</b>                  | <b>BET Surface area (m<sup>2</sup> g<sup>-1</sup>)</b> |
|---------------------------------|--|
| g-C <sub>3</sub> N <sub>4</sub> | 98.4   |
| WO <sub>3</sub>                 | 279.5  |
| 1-WCN                           | 233.4  |
| 2-WCN                           | 230.5  |
| 5-WCN                           | 223.8  |
| 10-WCN                          | 186.8  |
| 20-WCN                          | 147.9  |