Electronic Supplementary Material on the New Journal of Chemistry entitled:

Extraction of phenylurea herbicides in rice and enviornment water utilizing MIL-100(Fe)-functionalized magnetic adsorbent

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Reagents and samples.

Iron(III) chloride hexahydrate ($FeCl_3$•$6H_2O$)was obtained from (Sinopharm Group, China) ethylene glycol (EG) sodium acetate (NaAc)，anhydrous ethanol were all analytically pure and purchased from Tianjin, China. Thioglycolic acid (≥99%)，1,3,5-Benzenetricarboxylic acid (H_3BTC ≥98%) were obtained from Aladdin. Chromatographic-grade Acetonitrile (ACN)，methanol (MT) all of them purchased

from Merck (Darmstadt, Germany). The environment water sample mentioned in this study was taken from South Lake (Changchun, China) and rice sample purchased from in local supermarkets (Changchun, China).

Instrument

The crystal structure of the sample was analyzed using X-ray polycrystal diffraction(XRD). Scanning was performed at a scan speed of 5°/min using a Cu Co target (λ = 0.154184 nm) in the range of 2θ = 10° to 90°.HPLC Model (Series 1100) Agilent, USA,Data processing software is Instrument 1.Diode array detector (DAD) model G1315B. mobile phase Acetonitrile: methanol 50:50 (v:v) column temperature 27℃ flow rate 0.75 ml/min. Transmission electron microscopy (TEM) images were obtained with a JEM-2000EX transmission electron microscope operating at 300kV. Thermogravimetric Analysis was performed at 25-780 °C Model TGA2 (METTLER TOLEDO). The magnetic properties were evaluated by a LakeShore 7404 vibrating sample magnetometer (VSM) (LakeShore, USA) at 299 K. The Fourier transform infrared spectroscopy (FT-IR) was analyzed by an Spectrum Two spectrometer (Perkin Elmer, USA). The surface area, pore volume, and pore size distribution of the materials were calculated by Brunauer-Emmett-Teller (BET) analysis on a ASAP 2020,HD88 (Micromeritics, USA).

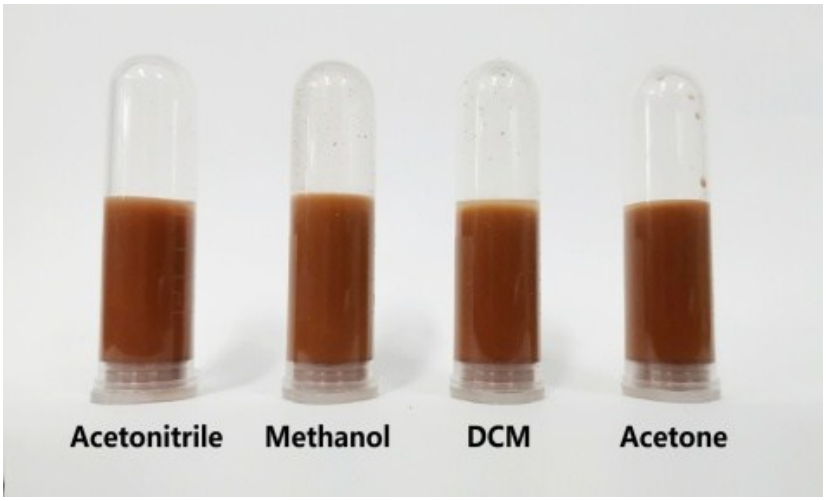


Figure S1 . Fe_3O_4@MIL-100 (Fe) dispersed in different solvents.

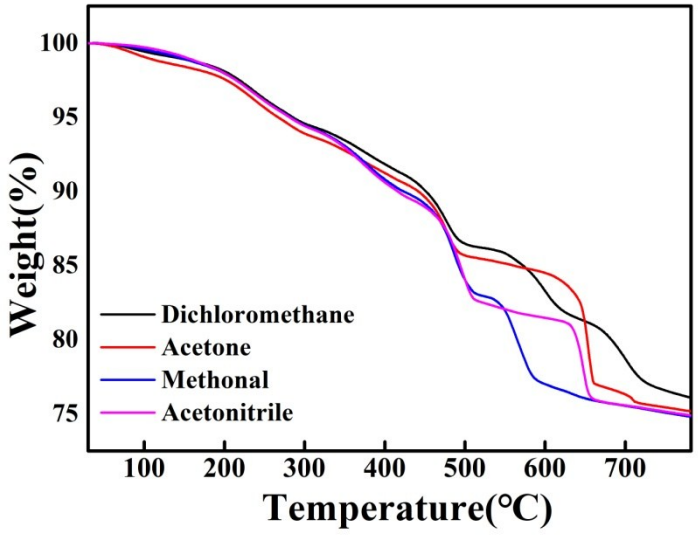


Figure S2 . TGA of Fe_3O_4@MIL-100 (Fe) in different solvents.

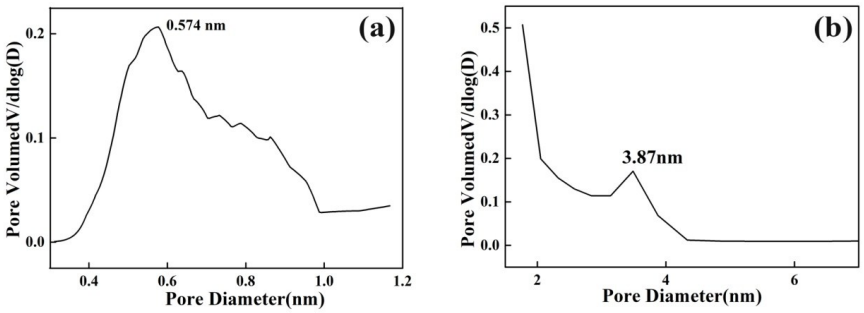


Figure S3. Pore size distribution of Fe_3O_4@MIL-100 (Fe) obtained under Barrett−Joyner−Halenda model Microporous(a), Mesoporous(b).

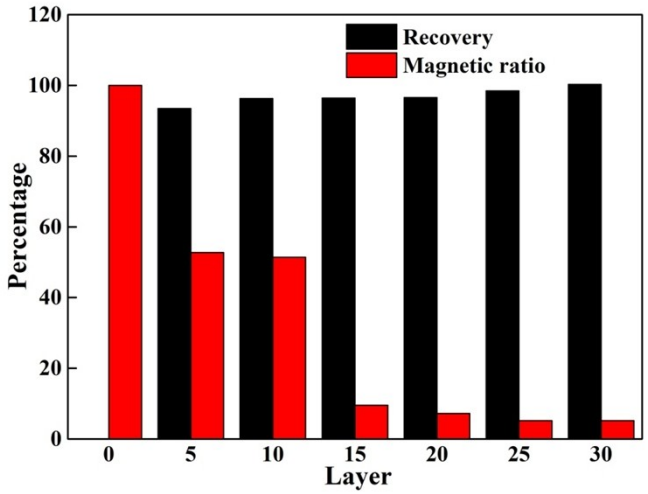
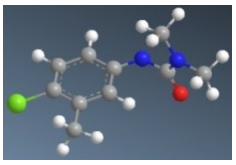
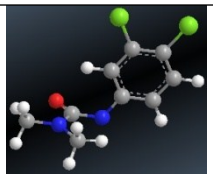
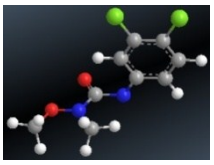
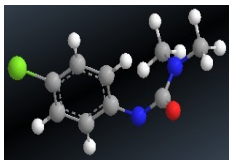


Figure S4. Compare saturation magnetization values and adsorption capacities of different layers.

Table S1. The sizes of the four PUHs molecules and the connolly solvent excluded volume were used to calculate and judge who can enter into the internal site of Fe_3O_4@MIL-100 (Fe).

Compounds	Chlorotoluron	Diuron	Linuron	Monuron
Structure				
Molecular size (Angstroms)	X: 9.5 Y: 6 Z: 5	X: 6 Y: 5.5 Z: 9.5	X: 8.5 Y: 6 Z: 6	X: 6 Y: 7.5 Z: 7.5
Connolly Solvent Excluded Volume (Angstroms Cubed)	176.612	174.087	180.476	160
Whether to enter the internal site of Fe3O4@MIL-100 (Fe)	√	√	√	√

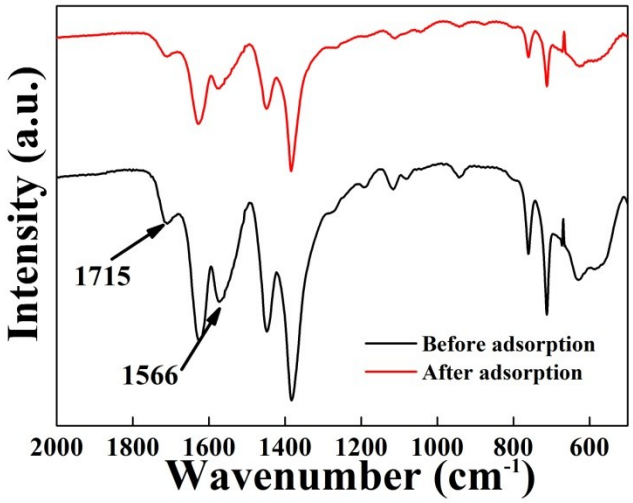


Figure S5. Comparison of infrared spectra of MNPs before and after adsorption of PUHs.