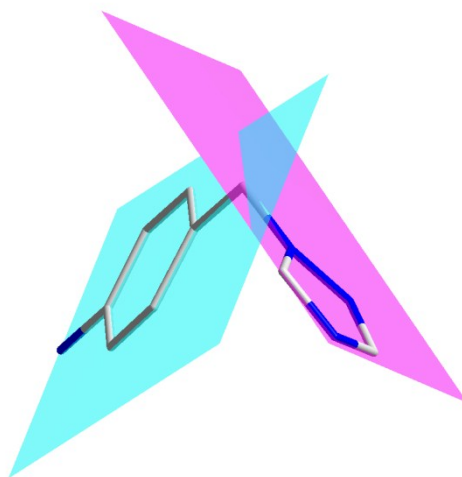
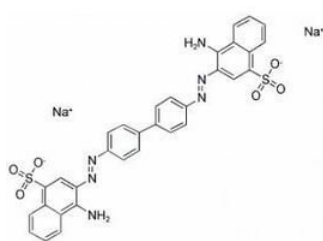


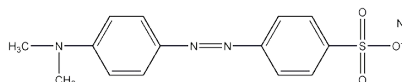
Supporting information



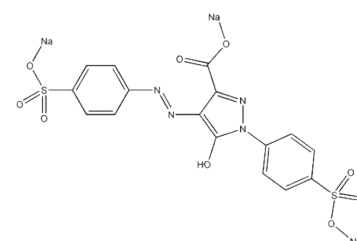
Scheme S1. The flexible dihedral angles between aromatic benzene and triazole of abtz .



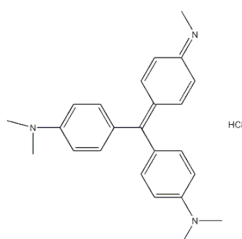
Congo Red



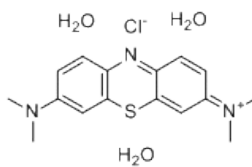
Methyl orange



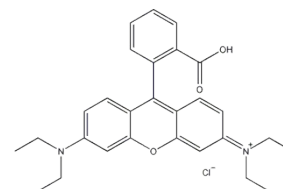
Lemon yellow



Methyl Violet



Methylene blue



Rhodamine B

Scheme S2 The structures of different dye molecules used in this work.

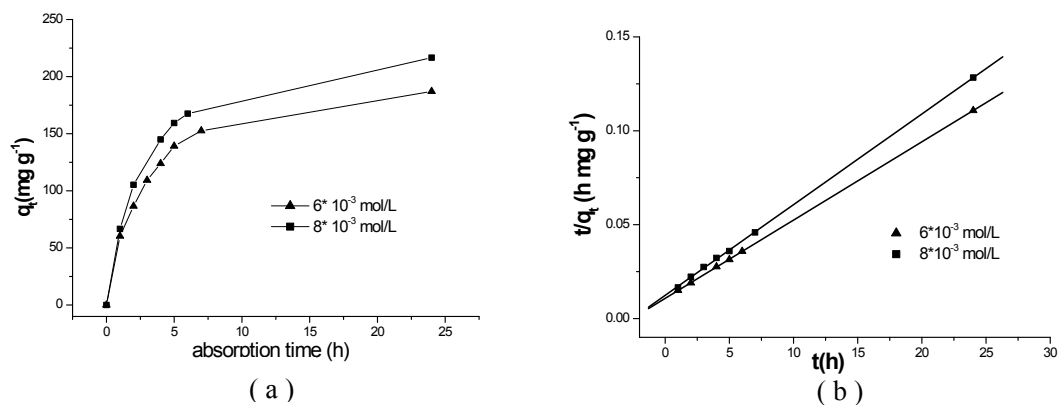


Fig. S1 (a) Adsorption kinetic at different concentrations of $K_2Cr_2O_7$ with **MONT-1**. (b) The secondary dynamics equation of absorption process.

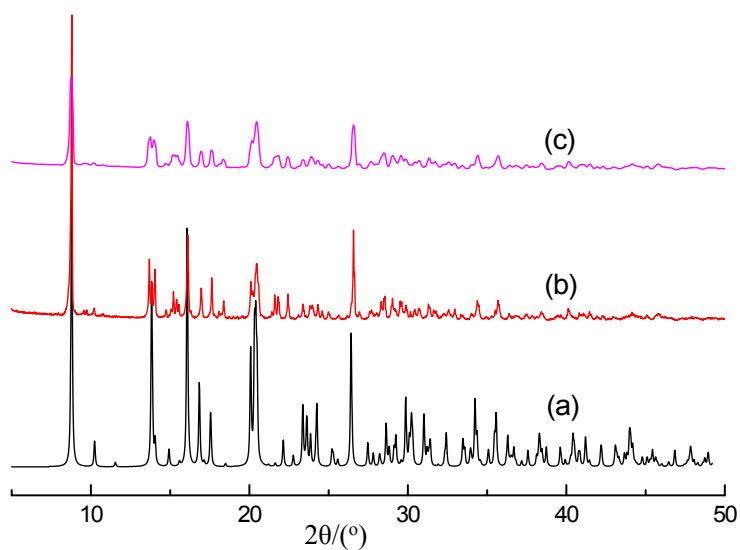


Fig. S2 PXRD patterns for (a) as-synthesized **MONT-1** (b) the samples of **MONT-1** immersed into Congo Red (0.5 mg mL^{-1}) aqueous solutions for 24 h; (c) the samples of **MONT-1** immersed into Congo Red (1 mg mL^{-1}) aqueous solutions for 24 h.

Table S1 Comparison of monolayer maximum capacities of the adsorbents to Congo red

MOF-type Adsorbents	Maximum adsorption capacity (mg g ⁻¹)	Reference		Maximum adsorption capacity (mg g ⁻¹)	Reference
MONT-1	823.3	This work	Ball-milled sugarcane bagasse	38.2	7
HKUST-1	58.3	1	Acid-activated kaolinite (AAK)/TiO ₂	38.70	8
[Zn(BDC)(TIB)]·3H ₂ O (Zn-MOF-1)	29.356	2	Fe ₂ O ₃ -Al ₂ O ₃ nanocomposite	498	9
MIL-100 (Fe)	714.3	3	Polyaniline/Fe ⁰ composite nanofibers	1150	10
MIL-68 (In)	1204	4	CaFe ₂ O ₄ MNPs	40.93	11
{[Cu ₃ (btb) ₃ (nbt) ₂](H ₂ O) ₂ } _n	642	5	Ag modified calcium hydroxyapatite (CaHAp)	554.54	12
[Cu(bipy)(SO ₄) _n]	2429	6	Bouquet-like calcium sulfate dehydrate (BCSD)	1224.09	13

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