Supplementary Information

Graphene Nanosheets and Graphite Oxide as Promising Adsorbents for Removal of Organic Contaminants from Aqueous Solution

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Supplementary data includes the following: Schematic chemical structures, molecular weights, and molecular sizes of the sorbates (Fig. S1); Transmission electron microscope (TEM) images of the sorbents (Fig. S2); Zeta potential ($\zeta$) of the sorbents (Fig. S3); Raman spectra of the sorbents and graphite (Fig. S4).
Supplementary figure caption

Fig. S1. Schematic chemical structures, molecular weights, and molecular sizes calculated from the software of Chem3D Program for adsorbate compounds in a vacuum. The molecular configurations for estimation were obtained using the energy minimization function in the built-in program.
(a) Naphthalene  
MW 128.17

(b) 2-Naphthol  
MW 144.17

(c) 1-Naphthylamine  
MW 143.19

(d) Tylosin  
MW 916.10

Fig. S1
Fig. S2. Transmission electron microscope (TEM) images of graphite oxide (a) and graphene nanosheets (b).
graphite oxide

graphene nanosheets

Fig. S2
Fig. S3. Zeta potential (ζ) of graphene nanosheets (○) and graphite oxide (□) as a function of pH. Error bars, in most cases smaller than the symbols, represent standard deviations calculated from triplicate samples.
Fig. S3
Fig. S4. Raman spectra of graphene nanosheets, graphite oxide, and nonporous pure graphite.
Fig. S4

Graphene nanosheets
Graphite oxide
Graphite

Raman shift (cm$^{-1}$)

Intensity (a.u.)