Electronic Supplementary Information for:

Hierarchical $\gamma$-BaB$_2$O$_4$ hollow microspheres: Surfactant-assisted hydrothermal formation, phase conversion, optical properties and application as adsorbents

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Fig. S1. XRD patterns (a) and SEM images (b-d, c$_1$) of the hydrothermal products synthesized at different temperatures with the molar ratio of Ba:B:OH as 1:2:2, the concentration of EDTA-2Na as 0.050 mol L$^{-1}$ and initial reactant concentration of Ba(OH)$_2$ as 0.20 mol L$^{-1}$. Temperature (ºC): a$_1$, b-120; a$_2$, c, c$_1$-150; a$_3$, d-210.
Fig. S2. XRD patterns (a) and SEM images (b-f, c₁, d₁) of the γ-BaB₂O₄ hollow microspheres hydrothermally synthesized at 180 °C for different time, with the molar ratio of Ba:B:OH as 1:2:2, the concentration of the surfactant EDTA-2Na as 0.05 mol L⁻¹ and initial reactant concentration of Ba(OH)₂ as 0.20 mol L⁻¹. Time (h): a₁, b-1.0; a₂, c, c₁-3.0; a₃, d, d₁-18.0.

Fig. S3. XRD patterns of Ba(OH)₂·8(H₂O) (a), EDTA-2Na (b), H₃BO₃ (c), and complex EDTA-Ba (d).
Fig. S4. Molecular structural formula of EDTA-2Na (a) and complex EDTA-Ba (b).