

Supplementary information

Hexamethyldisiloxane Removal from Biogas Using a Fe₃O₄-Urea-Modified Three-Dimensional Graphene Aerogel

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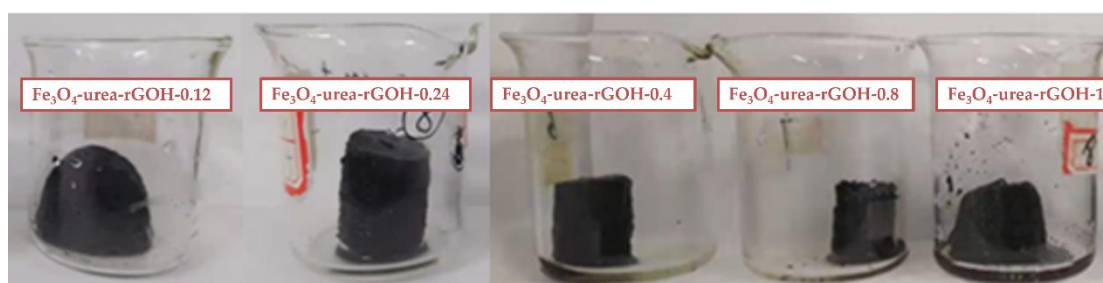


Figure S1. Photographs of the Fe₃O₄-urea-rGOHs.

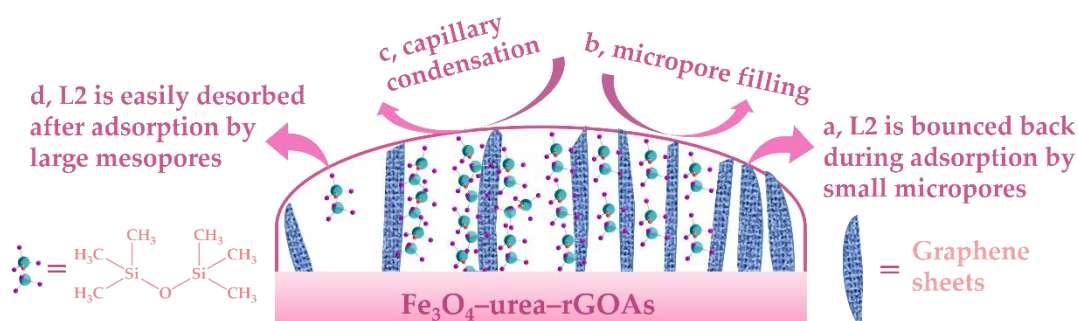


Figure S2. The schematic diagram of the adsorption mechanism of L2 on the Fe₃O₄-urea-rGOAs.

Table S1. Adsorption and regeneration capacities of different porous carbon materials for VMS.

| Adsorbent | Adsorbed gas | Q_m (mg g ⁻¹) | Regeneration Method | RE ^a (%) | Ref. |
|---|--------------|-----------------------------|--|---------------------|-----------|
| AC | D3 | 60–878 | Heating at 100–200 °C | 50 | [54] |
| AC | L2 | 10–100 | Four-step heating treatment at 80–160 °C | 70–80 | [55] |
| AC | D4 | 526 | By the oxidation with H ₂ O ₂ and O ₃ | 40–92 | [56] |
| FeMBC-3 | L2 | 356.4 | Heating at 100 °C for 270 min | 93 | [41] |
| Fe ₃ O ₄ -urea-rGOA-0.4 | L2 | 146.5 | Heating at 80 °C for 30 min | > 99 | This work |

^a Regeneration efficiency after 1 cycle (RE).