

# Novel ZnWO<sub>4</sub> yolk-shell microspheres: interface regulation and high removal efficiency for Pb<sup>2+</sup>

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## S1. Materials

All chemicals were of analytical grade and used without further purification. Na<sub>2</sub>WO<sub>4</sub>·2H<sub>2</sub>O and Ethylene glycol (EG) were all provided by Shanghai Sinopharm Group Chemical Reagent Co., Ltd. Zn(OAc)<sub>2</sub>·2H<sub>2</sub>O, Pb(NO<sub>3</sub>)<sub>2</sub> and L-Asp were purchased from Aladdin Industrial Corporation.

## S2. Characterization

The crystalline phase of the products was analyzed by XRD on a Bruker D8-Advance powder X-ray diffractometer (Cu K $\alpha$  radiation  $\lambda = 0.15418$  nm). The morphology product was observed on scanning electron microscopy (SEM, Zeiss Gemini 300). The specific surface area of powders was examined by using the Brunauer-Emmett-Teller (BET) method on an ASAP 2020 adsorption apparatus. The actual concentration of Pb<sup>2+</sup> in the supernatant after adsorption was determined by atomic absorption spectroscopy (Analytik Jena Nova A350/ZEEnit650p) and inductively coupled plasma analysis (ICP-OES Agilent Technologies Inc, USA). The Zeta potential of the product was measured by Malvern Zetasizer Nano ZS90.

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