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Large-pore diameter nano-adsorbent and its application for rapid lead(II) detection and removal from aqueous media

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Research highlights:

- Nano-adsorbent was synthesized on mesoporous silica by ligand scaffolding method.
- Adsorbent was used for colorimetric Pb(II) detection/removal from water sample.
- The limit of detection and maximum sorption capacity was 0.29 µg/L & 169.34 mg/g, respectively.
- The adsorbent can be recycled without significant deterioration of sorption capacity.

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