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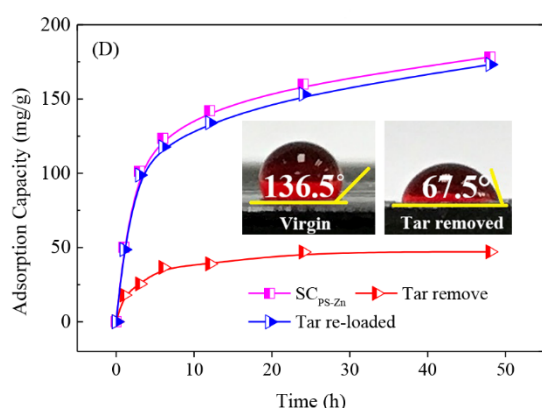
Tuning role and mechanism of paint sludge for characteristics of sewage sludge carbon: Paint sludge as a new macro-pores forming agent

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Graphical abstract



High lights

- Paint sludge was firstly proved to be an effective macro-pore forming agent
- A hierarchical pores carbon was produced using paint sludge-ZnCl₂ as a complex pore-forming agent.
- The hierarchical pores carbon showed a high adsorption capacity for various contaminants.

Key words: Paint sludge, Sewage sludge carbon, Adsorption

Abstract

For the first time, paint sludge waste (PS) was used as a pore forming agent in the preparation of sewage sludge derived carbon (SC). The tuning role and mechanism of PS for characteristics of SC were explored. It was found that a sludge carbon (SC_{PS-Zn}) with rich macro-, meso- and micro-porous could be produced by one-step pyrolytic process of sludge in the presence of PS and ZnCl₂.

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