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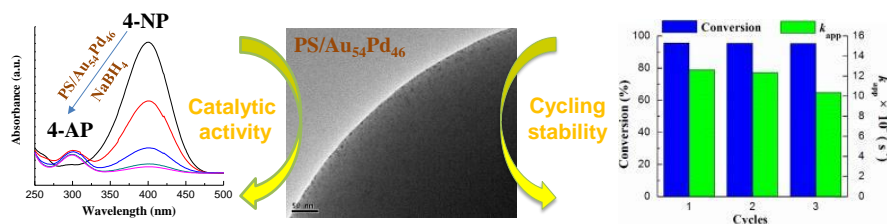
Facile fabrication of polystyrene microsphere supported gold-palladium alloy nanoparticles with superior catalytic performance for the reduction of 4-nitrophenol in water

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Graphical abstract



Herein is reported a facile and controllable fabrication of the polystyrene/gold-palladium composite particles with high catalytic activity and good recyclability for the reduction of 4-nitrophenol by NaBH₄.

Research highlights

- A facile and controllable method for the fabrication of PS/Au-Pd composite particle is proposed.
- Surface pretreatments of PS microsphere and Au-Pd alloy nanoparticles are avoidable.
- The composition of Au-Pd alloy nanoparticles on the PS microspheres can be easily controlled.
- PS/Au-Pd composite particle shows excellent catalytic activity and reusability.

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