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**Enhanced gas sensing properties of monodisperse Zn_2SnO_4 octahedron
functionalized by PdO nanoparticles**

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Highlights

1. The Zn_2SnO_4 octahedron was decorated with nanosheets, and the thickness of the nanosheets was about 20-30 nm.
2. The nanosheets decorated Zn_2SnO_4 was loaded with PdO nanoparticles.
3. The response value of PdO-loaded Zn_2SnO_4 was almost five times higher than pure Zn_2SnO_4 toward ethanol.
4. The PdO-loaded Zn_2SnO_4 possess a low detection limit of 500 ppb.

Abstract

In this work, Zn_2SnO_4 microstructures functionalized with PdO nanoparticles were successfully synthesized combination a facile one-step hydrothermal method and subsequent wet impregnation treatment. X-ray diffraction (XRD),

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