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Facile synthesis of mesoporous ZnO sheets assembled by small nanoparticles for enhanced NO₂ sensing performance at room temperature

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Highlights

- Mesoporous ZnO sheets were prepared by calcination of the sheet-like δ -Zn(OH)₂ precursor at low temperature (100°C)
- The as-prepared mesoporous ZnO sheets displayed a unique nanoparticle-assembled structure
- The high specific surface area, rich mesopores and oxygen vacancies of the mesoporous ZnO sheets are beneficial to NO₂ sensing applications
- The small crystal size of the ZnO nanoparticles enhances the radial modulation of the conduction channel in NO₂ sensing applications
- Mesoporous ZnO sheets assembled by small nanoparticles showed improved NO₂ sensing performance at room temperature

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