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V₂O₅ nanofibers: Potential contestant for high performance xylene sensor

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Research Highlights of this Manuscript

V₂O₅ Nanofibers: Potential Contestant for High Performance Xylene Sensor

- We report the optimum conditions for depositing vanadium pentoxide (V₂O₅) nanofibers using simple spray pyrolysis technique.
- Formation of flower like V₂O₅ nanofibers through the interconnection of neighboring fibers was observed.
- The xylene sensor based on V₂O₅ nanofibers exhibited a wide detection range of 5 to 1000 ppm with response and recovery times of 80 and 50 s respectively.
- This sensor showed an enhanced response at room temperature with high selectivity and stability.

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