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# Facile synthesis of a $\text{SnO}_2@\text{rGO}$ nanohybrid and optimization of its methane-sensing parameters

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## Abstract

Stannic oxide nanoparticles and various compositions of  $\text{SnO}_2@\text{rGO}$  (reduced graphene oxide) nanohybrids were synthesized by a facile hydrothermal method and utilized as chemiresistive methane gas sensors. To characterize the synthesized nanohybrids, BET (Brunauer-Emmett-Teller), XRD, FESEM, TEM, FTIR, and Raman techniques were used. Sensing elements were tested using a U-tube flow chamber with temperature control. To obtain the best sensor

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