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Preparation of ZnO nanorods and their gas sensing properties

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In this work, low dimensional ZnO nanorods with different sizes were successfully prepared using a microwave-assisted hydrothermal method. The influence of the microwave reaction time on the structural, and luminescence properties of the ZnO nanorods was studied using X-ray diffraction (XRD), Scanning electron microscope (SEM), and photoluminescence (PL). XRD analysis showed that all samples have the typical hexagonal wurtzite structure without any other new phases. The size of the ZnO nanorods was found to vary with variation of reaction time, respectively. The possible sensing mechanism and the relationship between the sensing response and the content of defects were proposed.

Are you currently a postgraduate student? (Yes/No)

Yes

At what level of studies are you currently? (Hons/MSc/PhD)

MSc

Please provide the name and email address of your supervisor.

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