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Title:	Synthesis of zinc oxide nanorods and nanoparticles by chemical route and their comparative study as ethanol sensors
Authors:	Chandi, Paramdeep Singh (/jspui/browse?type=author&value=Chandi%2C+Paramdeep+Singh)
Keywords:	Ethanol Grain size and shape Nanoparticles Nanorods
Issue Date:	2008
Publisher:	Elsevier B.V.
Citation:	Sensors and Actuators, B: Chemical, 135 (1), pp. 352-357.
Abstract:	<p>A comparative study of sensing response of zinc oxide nanoparticles and nanorods to ethanol vapours has been reported in this paper. Zinc oxide powder has been synthesized as nanoparticles and nanorods by following a chemical route. The reaction temperature is found to be playing a critical role in the selective synthesis of morphologically distinct nanostructures. Synthesized zinc oxide powder was characterized by using TEM and XRD techniques. Zinc oxide samples were deposited as thick films to act as gas sensors and their comparative response to ethanol vapours was investigated at different temperatures and concentrations. In this work the effect of sintering temperature on the particle size and sensor sensitivity was also studied. The studies revealed that particle size increases with the sintering temperature while sensitivity decreases. The investigations also revealed that sensing response of ZnO nanoparticles is exceptionally higher than that of ZnO nanorods.</p>
Description:	Only IISERM authors are available in the record.
URI:	<a href="http://www.sciencedirect.com/science/article/pii/S0925400508005959">http://www.sciencedirect.com/science/article/pii/S0925400508005959</a> ( <a href="http://www.sciencedirect.com/science/article/pii/S0925400508005959">http://www.sciencedirect.com/science/article/pii/S0925400508005959</a> ) <a href="http://dx.doi.org/10.1016/j.snb.2008.09.004">http://dx.doi.org/10.1016/j.snb.2008.09.004</a> ( <a href="http://dx.doi.org/10.1016/j.snb.2008.09.004">http://dx.doi.org/10.1016/j.snb.2008.09.004</a> )
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