



Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali (/jspui/)
/ Publications of IISER Mohali (/jspui/handle/123456789/4)
/ Research Articles (/jspui/handle/123456789/9)

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/158>

Title:	Effect of 100 MeV O ⁷⁺ ions irradiation on ethanol sensing response of nanostructures of ZnO and SnO ₂
Authors:	Chandi, Paramdeep Singh (/jspui/browse?type=author&value=Chandi%2C+Paramdeep+Singh)
Keywords:	Alumina substrates Ethanol sensing Fabricated sensors
Issue Date:	2010
Publisher:	Springer-Verlag
Citation:	Applied Physics A: Materials Science and Processing, 98 (1), pp. 161-166.
Abstract:	Tin dioxide nanoparticles and zinc oxide nanorods were synthesized chemically and thick film gas sensors on alumina substrates were fabricated of these materials. Morphology and crystallite size of synthesized powders were investigated by TEM. The fabricated sensors were irradiated with 100 MeV O ⁷⁺ ions at fluences of 1×10 ¹¹ , 1×10 ¹² and 1×10 ¹³ ions/cm ² . The X-ray diffraction analysis of the samples before and after ion bombardment was performed for structural characterization. The sensing response to ethanol before and after irradiation was carried out for each fabricated sensor. Investigation revealed that irradiated SnO ₂ based sensor's response and response time increased significantly. Results show that ZnO based sensor exhibit strong resistance to damage caused by ion irradiation which might be due to defects annihilation.
Description:	Only IISERM authors are available in the record.
URI:	http://link.springer.com/article/10.1007%2Fs00339-009-5442-5?LI=true#page-1 (http://link.springer.com/article/10.1007%2Fs00339-009-5442-5?LI=true#page-1)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format	
Need to add pdf.odt (/jspui/bitstream/123456789/158/3/Need%20to%20add%20pdf.odt)		8.63 kB	OpenDocument Text	View/Open (/jspui/bitstream/123456789/158/3/Need%20to%20add%20pdf.odt)

[Show full item record \(/jspui/handle/123456789/158?mode=full\)](/jspui/handle/123456789/158?mode=full)

[Statistics \(/jspui/handle/123456789/158/statistics\)](/jspui/handle/123456789/158/statistics)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.