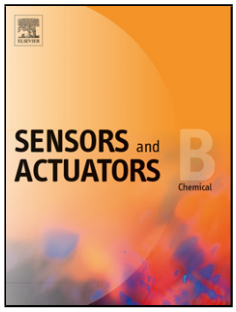

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Author: A. Mirzaei G. Neri

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Microwave-assisted synthesis of metal oxide nanostructures for gas sensing application: a review

A. Mirzaei[1], G.Neri[2]

[1]Department of Materials Science and Engineering, Shiraz University, Shiraz, Iran

[2] Department of Engineering, University of Messina, Contrada di Dio, 98166 Messina,Italy

Corresponding Author :E-mail: gneri@unime.it

ABSTRACT

This review gives a comprehensive report on the microwave-assisted synthesis of metal oxides for applications in the field of gas sensing. In recent years, microwave heating technology has gained importance in the synthesis of metal oxides because of its faster, cleaner and cost effectiveness than conventional thermal heating. Further, due to the peculiarity of microwave heating mechanism, the synthesis of metal oxides in different nanostructured forms by microwave-assisted methods has been widely pursued and the nanomaterials thus obtained have been applied as sensing elements in chemoresistive gas sensors. Their gas sensing performances are here described and discussed in detail, emphasizing the improved characteristics compared with materials produced by conventional synthesis procedures.

Keywords: *Microwave synthesis, Nanoparticles, Metal oxides, Gas sensors.*