

TOPICAL REVIEW

Hydrothermal growth of ZnO nanostructures

Sunandan Baruah *et al* 2009 *Sci. Technol. Adv. Mater.* **10** 013001 (18pp) doi: [10.1088/1468-6996/10/1/013001](https://doi.org/10.1088/1468-6996/10/1/013001) [Help](#)

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[Sunandan Baruah](#) and [Joydeep Dutta](#)

Centre of Excellence in Nanotechnology at the Asian Institute of Technology, PO Box 4, Klong Luang, Pathumthani 12120, Thailand

E-mail: joy@ait.ac.th

Abstract. One-dimensional nanostructures exhibit interesting electronic and optical properties due to their low dimensionality leading to quantum confinement effects. ZnO has received lot of attention as a nanostructured material because of unique properties rendering it suitable for various applications. Amongst the different methods of synthesis of ZnO nanostructures, the hydrothermal method is attractive for its simplicity and environment friendly conditions. This review summarizes the conditions leading to the growth of different ZnO nanostructures using hydrothermal technique. Doping of ZnO nanostructures through hydrothermal method are also highlighted.

Keywords: ZnO, hydrothermal, nanostructures, synthesis, doping

Received 5 October 2008, accepted for publication 14 November 2008

Published 13 January 2009

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