

**The Serbian Ceramic Society
Vinča Institute of Nuclear Sciences, University of Belgrade
Institute for Multidisciplinary Research, University of Belgrade
Institute of Physics, University of Belgrade**

PROGRAM AND THE BOOK OF ABSTRACTS

**1st Conference of the Serbian Ceramic Society
March 17-18. 2011.
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1CSCS-2011**

**Edited by:
Snežana Bošković
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VARIATION IN OPTICAL AND ELECTRONIC PROPERTIES OF ZnO INDUCED BY MECHANICAL MILLING AND THERMAL TREATMENT

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Zinc oxide ceramics have been prepared from ZnO powders obtained by mechanical milling for 300 min in air in different high-energy mills. Structural disorder induced in ZnO powder by mechanical activation (MA) and partial structural ordering observed after proposed thermal treatment (TT) in ZnO ceramic has been characterized by XRD and Raman spectroscopy. The influence of defect creating during MA and TT on optical and electronic properties of ZnO has been analyzed using spectroscopic ellipsometry and photoluminescence spectroscopy. It was found the strong influence of intrinsic and extrinsic defects on band-gap widening and change in PL spectra shape and intensity.