

## عنوان مقاله:

PIEZOELECTRIC PROPERTIES OF ZNONANOWIRE ARRAYS GROWN IN ORDERED ANODIC ALUMNUM OXIDE TEMPLATE

## محل انتشار:

سومین کنفرانس بین المللی مواد فوق ریزدانه و نانوساختار (سال: 1390)

تعداد صفحات اصل مقاله: 9

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## خلاصه مقاله:

In this research, the anodic aluminum oxide (AAO) template is produced by two-step anodizing method in 0.3 M oxalic acid. The SEM and AFM images of the produced AAO are presented. The optimum condition of anodizing resulted to the production of AAO template with the pore dimension less than 70 nm. The zinc oxide nanowires were successfully deposited by the Hydro-thermal method. The raw material used in this method has been Zinc Nitrate. The SEM and AFM images of the nanowires are presented, too. To check the piezoelectric characteristics of the zinc oxide nanowires, the AFM microscope is used in contact mode. The scanned area was 5  $\mu\text{m}^2$  and the affected force was 2nN. As a result of scanning of each nanowire with conductive AFM tip in contact mode, a voltage peak was visible in 2D voltage image. The mentioned peak was found in -30 mV for each nanowire

## کلمات کلیدی:

anodic aluminum oxide (AAO) template, ZnO Nanowires, Hydro-Thermal Method, piezoelectricity characteristics

## لینک ثابت مقاله در پایگاه سیویلیکا:

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