

## عنوان مقاله:

Characterization of Metal Oxide-Based Gas Nanosensors and Microsensors Fabricated via Local Anodic Oxidation Using Atomic Force Microscopy

## محل انتشار:

دهمین کنفرانس بین المللی علوم و توسعه فناوری نانو (سال: 1402)

تعداد صفحات اصل مقاله: 15

## نویسنده:

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## خلاصه مقاله:

This work reports on nanoscale and microscale metal oxide gas sensors, consisting of metal-semiconductor-metal barriers designed via scanning probe microscopy. Two distinct metal oxides, molybdenum and titanium oxides, were tested at different temperatures using CO<sub>2</sub> and H<sub>2</sub> as test gases. Sensitivities down to ppm levels are demonstrated, and the influence of dry and humid working atmospheres on these metal oxide conductivities was studied. Furthermore, the activation energy was evaluated and analyzed within working sensor temperature range. Finally, full morphological, chemical, and structural analyses of the oxides composites are provided allowing their identification as ..MoO<sub>3</sub> and TiO<sub>2</sub>-

## کلمات کلیدی:

Nano sensors, Microsensors, Nanotechnology, Force microscopy

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1701155>

