

## عنوان مقاله:

Effect of growth temperature on structure, morphology and optical Properties of flower-like ZnO nanostructure arrays on porous Si substrate

## محل انتشار:

ششمین کنفرانس بین المللی فیزیک، ریاضی و توسعه علوم پایه (سال: 1401)

تعداد صفحات اصل مقاله: 10

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## خلاصه مقاله:

The direct growth of nanostructured zinc oxide (ZnO) was successfully synthesized on porous Si substrates with absence of seed-layer, using an electric field-assisted aqueous solution technique. The surface morphologies of the 1D ZnO nanostructures at various growth temperatures were studied using field emission scanning electron microscopy. Changing the deposition temperature can efficiently control the morphologies of the nanostructures. The strong intensity and narrow width of XRD peaks indicate that ZnO nanostructures with growth temperature of ۱۰۵ °C, have good crystallinity. Furthermore, the flower-like ZnO nanostructures exhibited sharpest and most intense UV emission .to visible emission ratio, in the room temperature PL results compared with other samples

## کلمات کلیدی:

Electric field-assisted aqueous solution method, Porous silicon, Flower-like ZnO nanostructures

## لینک ثابت مقاله در پایگاه سیویلیکا:

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