

## عنوان مقاله:

Fractal Dimension Control of Hydroxyapatite Nanoparticles by a High Efficiency Sonication Method

## محل انتشار:

سومین کنفرانس نانوساختارها (سال: 1388)

تعداد صفحات اصل مقاله: 4

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## خلاصه مقاله:

A rapid, environmentally friendly and low cost method to prepare hydroxyapatite nanoparticles with homogeneous fractal dimension is proposed. In this method hydroxyapatite is produced in a sonicated pseudo body solution. The sonication time was found effective in the crystalline phase of nanoparticles. For our experimental condition 15 min sonication resulted in the most pure hydroxyapatite phase. The particles formed by sonication are generally smaller and more spherical than those obtained without sonication. Sonication increased the hydroxyapatite crystal growth rate up to 5.5 times those not sonicated. It also causes the unique fractal dimension for all sizes of particles which is about 2.4 to 2.6, while without sonicating the fractal dimensions is 1.8 for particles smaller than 18 nm and 3 for those bigger than 18nm.

## کلمات کلیدی:

Hydroxyapatite; pseudo body solution; sonication; fractal dimension

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/84958>

