

## عنوان مقاله:

On the synthesis and sintering behavior of a novel Mg-Ca alloy, Part I: Mechanical alloying

## محل انتشار:

فصلنامه سنتز و تفجوشی، دوره 2، شماره 3 (سال: 1401)

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## خلاصه مقاله:

A novel Mg- $\gamma$ -Ca alloy was prepared by the mechanical alloying (MA) process. Different variables were examined in order to obtain the optimum sample with the best milling behavior and potential sinterability. The structural studies were carried out using X-ray Diffractometer (XRD) and scanning electron microscopy (SEM). Crystallite size and lattice strain of the milled samples were examined by Scherrer and Williamson-Hall methods in order to finalize the investigation. The optimum milling time was found to be 60 minutes. In addition, a starch-containing sample with a fraction of 2.5 weight percent seemed to have the best microstructural properties, based on SEM observations and crystallite size assessments. Due discussions about the effective phenomena during the mechanical alloying were also included.

## کلمات کلیدی:

Mechanical alloying, Magnesium, Crystallite size, Morphology, Phase analysis

## لینک ثابت مقاله در پایگاه سیویلیکا:

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