

## عنوان مقاله:

Laboratory Investigating the Strain of Standard Concrete Specimen with FRP and Nano Silica Fiber Coating

## محل انتشار:

هفتمین کنفرانس بین المللی پژوهش های کاربردی در علوم و مهندسی (سال: 1402)

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## خلاصه مقاله:

It is important to prevent or reduce human and financial losses caused by earthquakes in the world. One of the activities carried out in this field today is the examination of existing buildings to evaluate the structures and identify their weaknesses and, if necessary, retrofitting. The use of FRP fibers in concrete members is considered as a new method for strengthening the structure. Also, today, additives such as nano-silica are used to increase the efficiency and strength of concrete. Therefore, the laboratory examination of nano-silica concrete samples reinforced with fibers is important to understand the behavior of the structure. In this research, the results of a laboratory study on the strain and compressive behavior of nano-silica concrete reinforced with four different models of FRP fibers are investigated. For this purpose, ۴۵ samples were subjected to pressure test at the ages of ۷, ۱۴ and ۲۸ days. All samples were made with nano-silica at the mixing rate suggested by the factory, which includes ۹ control samples without fibers and ۳۶ samples with fibers. In general, by comparing the results, it is clear that the samples reinforced with fibers and combined with nano-silica have different plasticity behavior, which should be considered by designers in performance base design

## کلمات کلیدی:

Pressure strain, Nano silica, FRP fibers, retrofitting

## لینک ثابت مقاله در پایگاه سیویلیکا:

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