

## عنوان مقاله:

Synthesis and characterization of nickel oxide/gadolinium doped ceria nano powder

## محل انتشار:

کنفرانس بین المللی پژوهش های نوین در علوم مهندسی (سال: 1395)

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## نویسندگان:

Somayeh. Ghamari - *Department of Chemical Technologies, Iranian Research Organization for Science and Technology (IROST), P.O*

Maryam. Ranjbar - *Department of Chemical Technologies, Iranian Research Organization for Science and Technology (IROST), P.O*

## خلاصه مقاله:

In this paper two different kinds of nickel oxide/gadolinium doped ceria (NiO-GDC) (I and II) nanocomposites were prepared by sol-gel method. Ni(II)-pyridine containing supramolecule and Ni(NO<sub>3</sub>)<sub>2</sub>·6H<sub>2</sub>O compounds have been used as new precursors. Characterization of the products carried out by elemental analysis, FTIR, scanning electron microscope (SEM), Energy-dispersive X-ray spectroscopy (EDS), X-ray powder diffraction (XRD), zeta potentials and BET measurements. The XRD results showed that the crystal lattice of the compounds (I) was obtained cubic fluorite structure. To compare zeta potential between compounds (I) and (II), it seems that compound (II) carried a more positive charge, therefore, stuck afford extending three phase boundaries (TPB) in SOFC electrode. Also, SEM images of compound (I) indicated that the large pores can causes enabled electrons and O<sub>2</sub>- ions to rapidly flow and allowed the fuel to be easily accessible and increase performance SOFCs

## کلمات کلیدی:

NiO-GDC powder, SOFC, Sol-gel method, Ni(II) nano composite

## لینک ثابت مقاله در پایگاه سیویلیکا:

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