

## عنوان مقاله:

(Removal of Multifunctional Magnetic Mesoporous Silica by Novel High Gradient Magnetic Separation System (HGMS)

## محل انتشار:

دومین کنفرانس دوسالانه بین المللی نفت، گاز و پتروشیمی (سال: 1397)

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## خلاصه مقاله:

Multifunctional mesoporous microsphere has been widely used in the field of wastewater treatment. However, separation of this type of adsorbent from treated water needs to be taken into consideration to facilitate the applying of this kind of adsorbent in large scale. A novel high gradient magnetic separator (HGMS) has been constructed in this paper to address this issue. The novel design utilizing a matrix filter composed of stainless steel mesh and frame. This unique matrix enhances the separation efficiency of magnetic particles since its frame can strengthen the magnetic field. Two different experimental variables including flowrate and the magnitude of the magnetic field have been optimized in this work. Finally, experimental results illustrate that nearly 100% of the microsphere can be separated via the proposed HGMS.

## کلمات کلیدی:

Magnetic particles, matrix filter, high gradient magnetic separation, HGMS

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1041217>

