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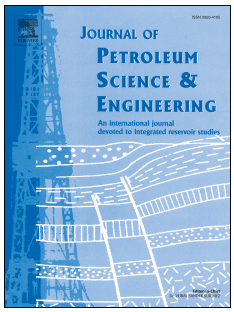

Potential applications of magnetic nanoparticles within separation in the petroleum industry

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Magnetically driven separation is one of the major potential application areas. The nanoparticles are dispersed in a medium. Then, the targeted chemical, ion, surface, or functional group is adsorbed onto the nanoparticle surface. Finally, a magnetic field is introduced, and the nanoparticles, with the adsorbed material, are removed from the medium.