

Title (en)

MAGNETIC CORE-SHELL PARTICLES WITH HIGH SEPARATION EFFICIENCY

Title (de)

MAGNETISCHE KERN-SCHALE-PARTIKEL MIT HOHER ABTRENNUNGSEFFIZIENZ

Title (fr)

PARTICULES MAGNÉTIQUES À STRUCTURE C UR-COQUILLE À HAUT RENDEMENT DE SÉPARATION

Publication

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Application

EP 13729944 A 20130618

Priority

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Abstract (en)

[origin: WO2014009107A1] The invention relates to functionalized magnetic core-shell particles which are predominantly present in the form of insulated, substantially spherical individual particles, the core of which substantially consists of one or more magnetic iron oxides, the shell of which substantially consists of dense amorphous silicon dioxide, the functionality of which consists in that the surface of the particles has units of amino or epoxy groups, and which have an average diameter d50 of $2 < d_{50} < 10 \mu\text{m}$. The particles have an iron oxide content of 83 to 92 wt.%, a silicon dioxide content of 5 to 15 wt.%, and a carbon content of 0.5 to 3 wt.%. The amino or the epoxy groups are a component of the structural unit -OSi-alkyl-X, wherein X equals NH₂ or is an epoxy, and the alkyl is C₂-C₈. The concentration of the amino groups or of the epoxy groups is at least 30 $\mu\text{mol/g}$ particles. The particles are used to immobilize enzymes.

IPC 8 full level

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Citation (search report)

See references of WO 2014009107A1

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