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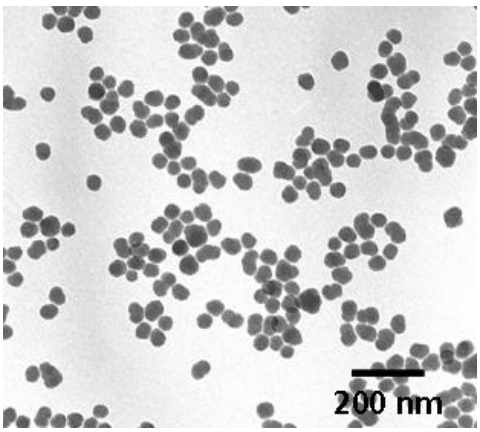
Surface-Modified Organic Dye Labeled Luminescent SiO_2 Nanoparticles

- Manufactured by sol-gel method
- Diameter range 40 – 1400 nm as monodisperse (polydispersity 3 – 12%) and non-porous particles doping with different organic dyes
- Available organic dyes: Rhodamin and Fluorescein derivatives, ATTO 488, ATTO 565, ATTO 610, ATTO 665, ATTO 725, ATTO 647N, IRDye® 800CW, IRDye® 800RS
- Hydrophilic surface with terminal Si-OH groups
- Stable in organic medium and aqueous buffers separation through sedimentation or centrifugation
- Different surface functionalities (e. g. -OH, -SH, $-NH_2$, -COOH) for the covalent bonding of proteins, antibodies or other molecules manufactured with covalent bonded antibodies or proteins (e. g. streptavidin)

Suspensions of dye-labeled SiO_2 nano-particles under excitation with UV lamp (λ = 365 nm)



TEM micrograph of dye-labeled SiO_2 nanoparticles

Luminescent Nanoparticles for Diagnostics

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