Silicon Colloids. Fundamentals and applications

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We have developed a completely new type of Silicon we call it as Silicon Colloids (SCs). They are polydisperse [1] or monodisperse [2,3] micro and nanoparticles, ranging from 400 nm to 7 micrometres with a perfect spherical shape. Silicon Colloids constitute the new material platform that could bring together several areas of research as colloidal sciences, metamaterials and semiconductor science. Moreover, metallurgical grade silicon colloids can lead to technological application where neither high purity nor regular shape is required.
We will report on the applications and properties of silicon colloids:

1) Silicon Colloids based sun light management [4]
2) Silicon colloids for Mie-assisted Raman scattering amplification [5]
3) Silicon colloids based metamaterials [3,6]

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