Synthesis and MR Image Investigation on MRI Contrast Agent-Entrapped Mesoporous Silica Nanoparticles

Funding agency: DBT

PI: Professor Chandan Mukherjee, Department of Chemistry

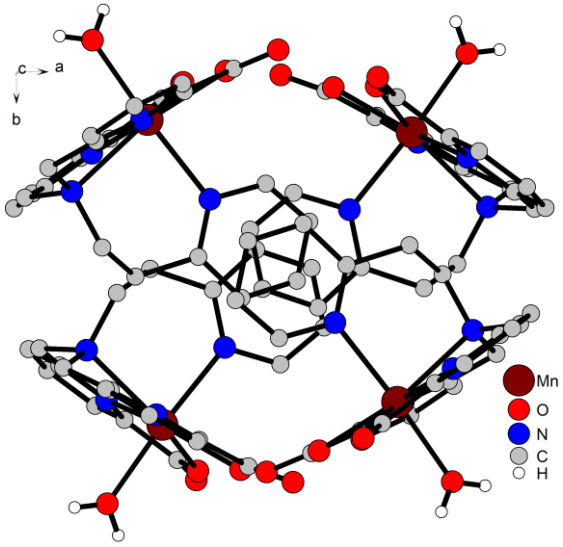
Theme: Theranostic Applications.

Objective: Development of Mn(II) and Gd(III) Complexes-Entrapped Mesoporous Nanoparticles (NPs) as Magnetic Resonance Imiging (MRI) Contrast Agents.

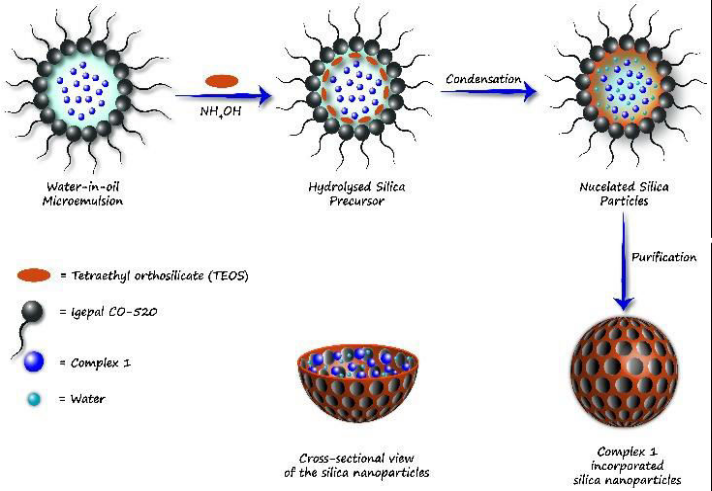
Deliverable: Early Stage Diagnosis and healing of many Diseases.

Achievements: 1. Complex Molecules-Incorporated Porous NPs Result High Contrast in Images.
2. NPs Internalization within HeLa Cells.

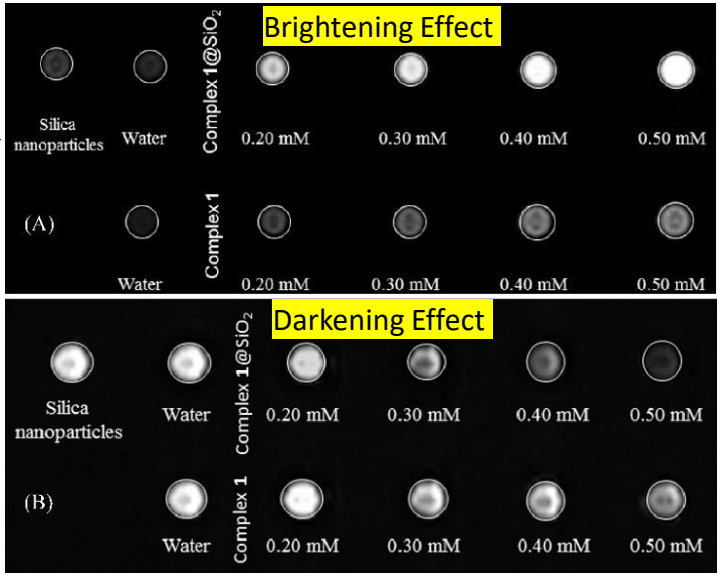
Prepared Molecules



Incorporation within NPs



A Better Contrast in the Phantom Images in the Presence of NPs



HeLa Cell Internalization