Hydrophobically-coated magnetic nanoparticles for biological and chemical applications

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Magnetic nanoparticles (NP) exhibit promise for therapeutic and diagnostic applications. We describe the construction of magnetic NPs encapsulated with hydrophobic moieties (lipids, surfactants, others) and studying their structures, organization at the air/water interface, and interactions with vesicles (small vesicles, as well as giant vesicles mimicking cell environments).