Supplementary Information

Multifunctional nanoparticles as coupled contrast agents

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Supplementary Figure S1. TEM images of gold shell encapsulated MNPs of two different sizes. (a-c) TEM and extinction spectrum of gold coated 10nm MNPs. (d-f) and extinction spectrum of gold coated 50nm MNPs.

Supplementary Figure S2. Curves of magnetization versus temperature of 25 nm Iron Oxide NPs, before (a) and after (b) coating of thin Au layers (~ 2-3 nm), measured under ZFC and FC conditions (in a 500 Oe field), respectively.
Supplementary Figure S3. Distribution of elastic relaxation constants (sec) within the PVA phantom showing that the MNP inclusion is slightly softer than the inclusion containing MNP-gold hybrid NPs. Images such as this can potentially be used for elasticity imaging.