

Luminescent porous silicon decorated with iron oxide nanoparticles synthesized by Pulsed Laser Ablation

Alessia Sambugaro,^{*a} Guilherme C. Concas,^b Mariana Gisbert,^b Tahir Tahir,^b Geronimo Perez,^c Bruno G. da Silva,^d Rubem L. Sommer,^d Andre L. Rossi,^d Jefferson F.D.F. Araujo,^b Anna Safonova,^a Francesco Enrichi,^a Tommaso Del Rosso,^b Nicola Daldosso^a

^a Department of Engineering for Innovation Medicine, University of Verona - Strada le Grazie 15, 37134 Verona, Italy

^b Department of Physics, Pontifical Catholic University of Rio de Janeiro - Rua Marques de São Vicente 225, 22451-900, Rio de Janeiro, Brazil

^c Department of Mechanical Engineering, Universidade Federal Fluminense - Rua Passo da Pátria, 156, 24210-240 São Domingos, Niterói, Brazil

^d Centro Brasileiro de Pesquisas Físicas, 22290-180 Rio de Janeiro, RJ, Brazil

* Corresponding author – email: nicola.daldosso@univr.it

Supplementary information

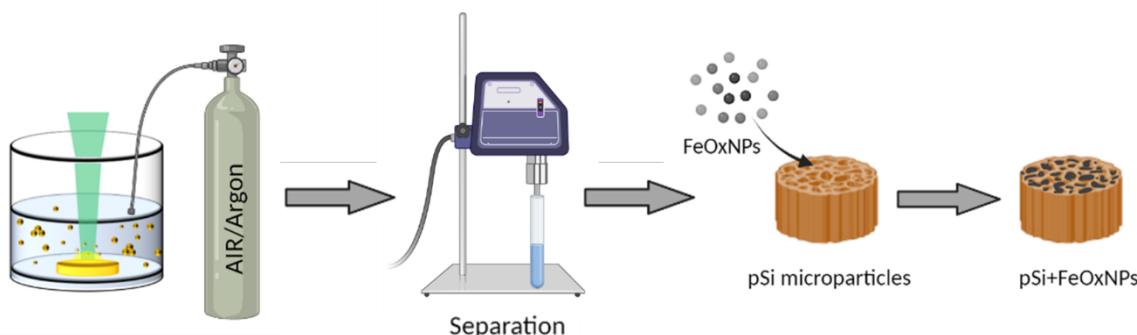


Figure SI_1 Schematic view of the experiment procedure for the carboxyl-functionalized pSi microparticles with FeOxNPs.

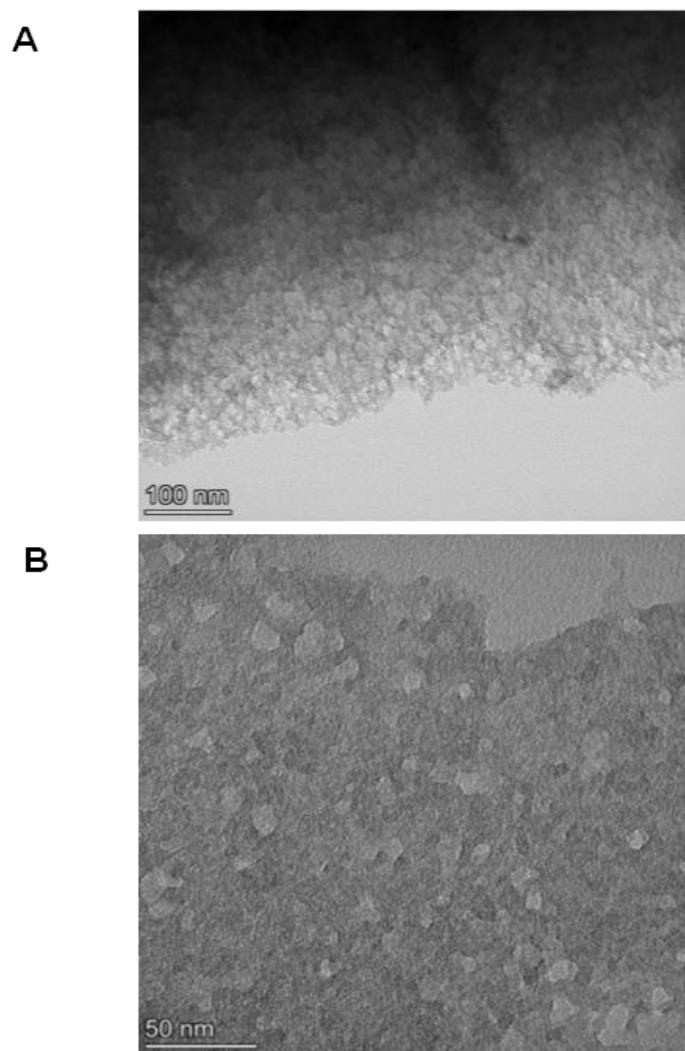


Figure SI_2. TEM images of a representative sample of carboxyl-functionalized pSi microparticles (A, 100 nm scale and B, 50 nm scale).

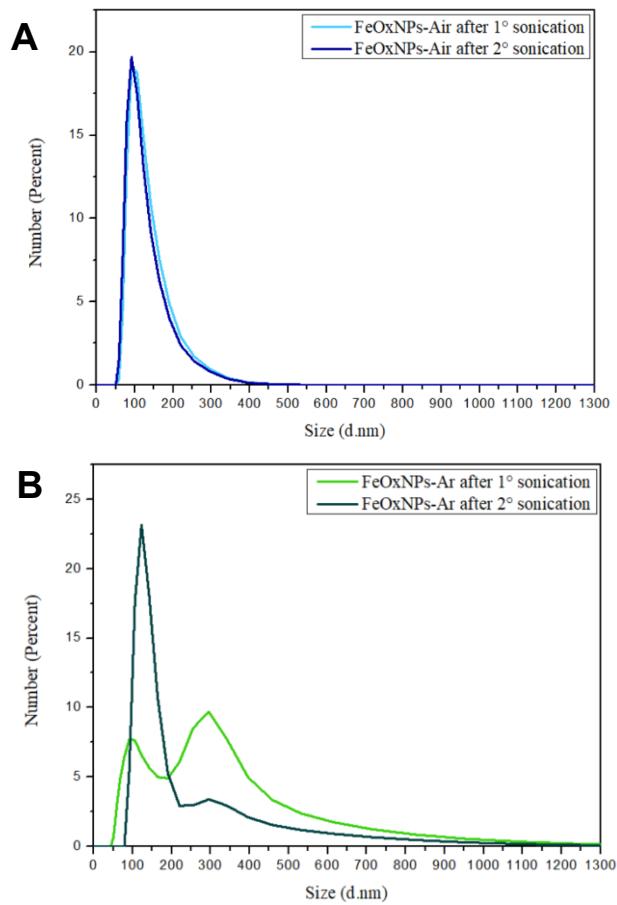


Figure SI_3. Comparison of the size distributions of FeOxNPs-Air (A) and FeOxNPs-Ar (B) after the two sonication treatments.

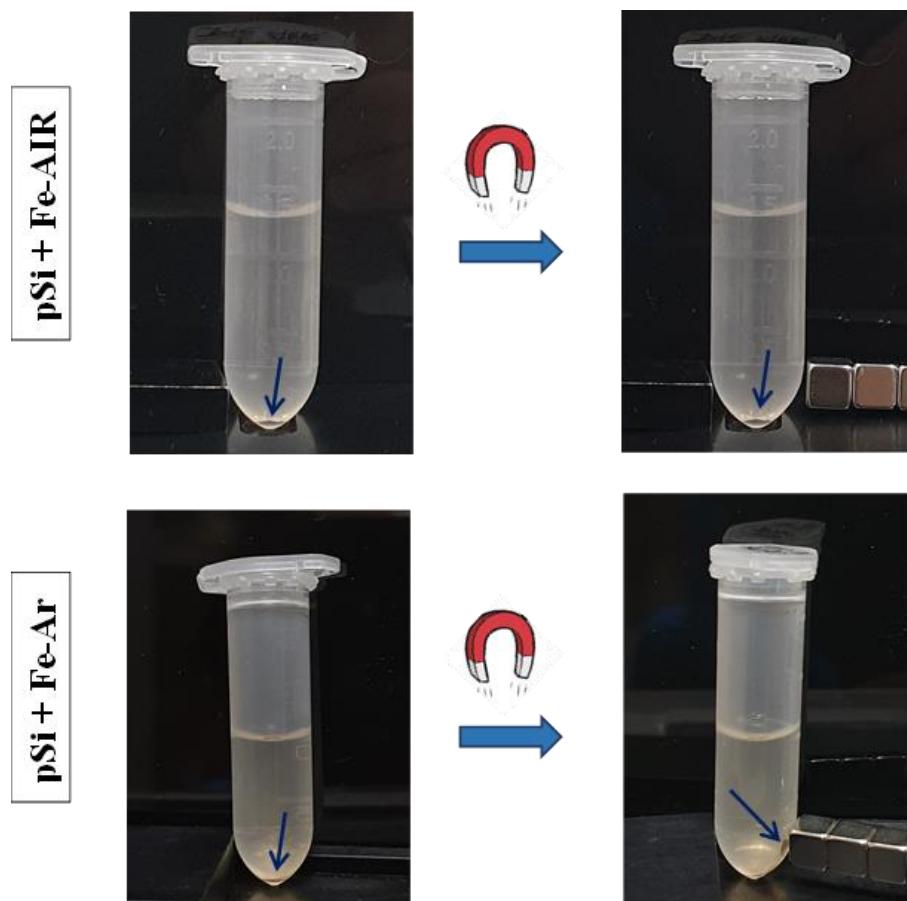


Figure SI_4. pSi +FeOxNPs-Air and pSi +FeOxNPs-Ar magnetic stability after 6 months.

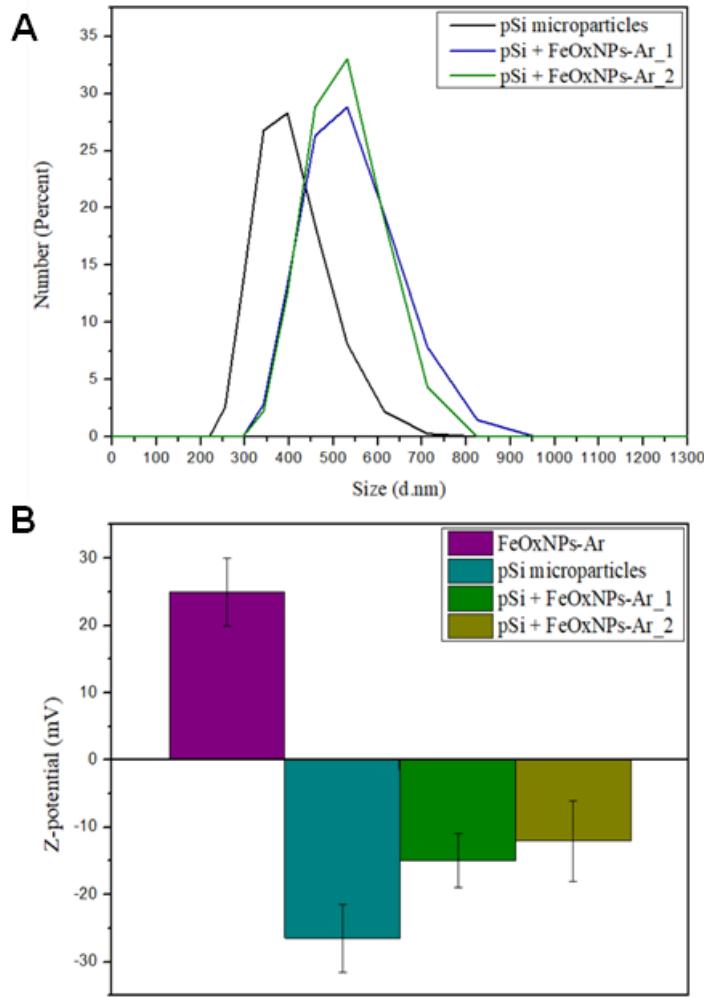


Figure SI_5. Comparison between bare pSi and pSi+FeOxNPs-Ar after the first (pSi+FeOxNPs-Ar_1) and second (pSi+FeOxNPs-Ar_2) decoration. (A) Size distribution and (B) Z-potential.