## Supplementary material



Fig. S1. XRD patterns of S1 and S2 samples. All the reflection peaks refer to  $TiO_2$  anatase phase.



Fig. S2. EPR spectra of the samples S1 and S2 in a wide range of magnetic fields.



**Fig. S3.** IR spectra of the samples S1 and S3. The wide band in the  $3300 - 3600 \text{ cm}^{-1}$  region is typical for the stretching vibration of OH<sup>-</sup> groups (in water molecules adsorbed on nanoparticle surface).



Fig. S4. Temperature dependence of magnetic susceptibility of powders S1 and S3.