Table 1. Particle radii determined by TEM, organic content determined by thermogravimetry analysis and features determined by fitting magnetization data to Langevin function for the different magnetite nanoparticle samples.

Sample	*Langevin fit*			
	D (nm)	*σ (nm)*	*Ms (emu/gFe3O4)*	χ^2
MNP16≡31	8.4	2.4	64.9	4.390
MNP18≡1	6.2	1.6	74.2	4.446
MNP30≡12	5.7	1.7	73.9	11.57
MNP41≡16	4.1	0.9	70.3	0.452

Figure 1. Preparation scheme of the magnetite monolayer film and TEM micrograph of the resulting monolayer.

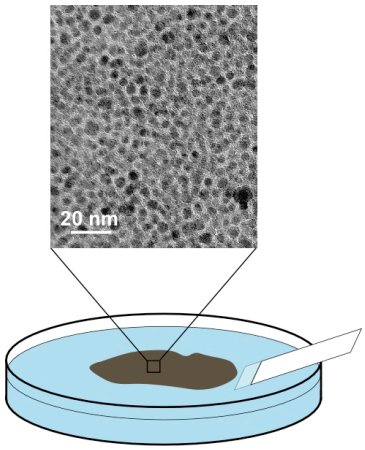

Figure 2. Thermal decomposition in air atmosphere for samples MNP18, MNP30, MNP40, MNP41 and in Ar atmosphere for sample MNP16.