**Supplementary Data**

**Figure A: Morelos-Gómez et al.**

Figure A: Micromagnetic simulations of an array of aligned Fe nanowires with several heights. (a) Hysteresis curves of the external magnetic field applied at 0°, 45° and 90° with respect to the nanotube axis. Vector field of the magnetization in the Fe particle array with the external magnetic field applied at (b) 0°, (c) 45° and (d) 90° with respect to the particle axis.