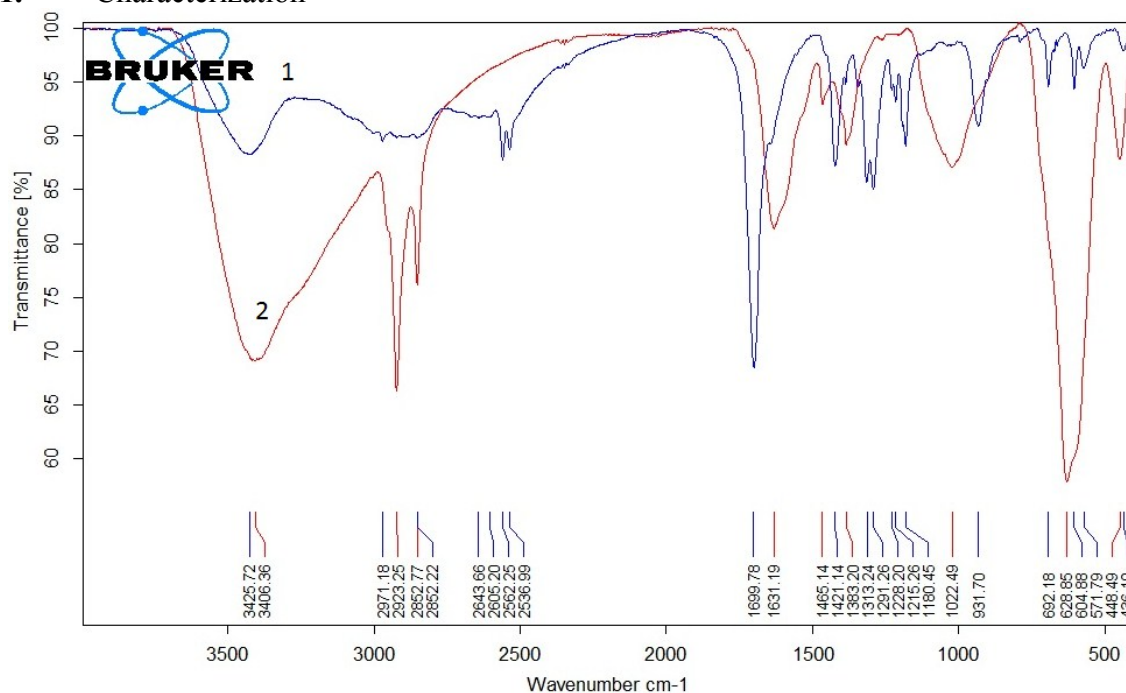


## Supporting Information

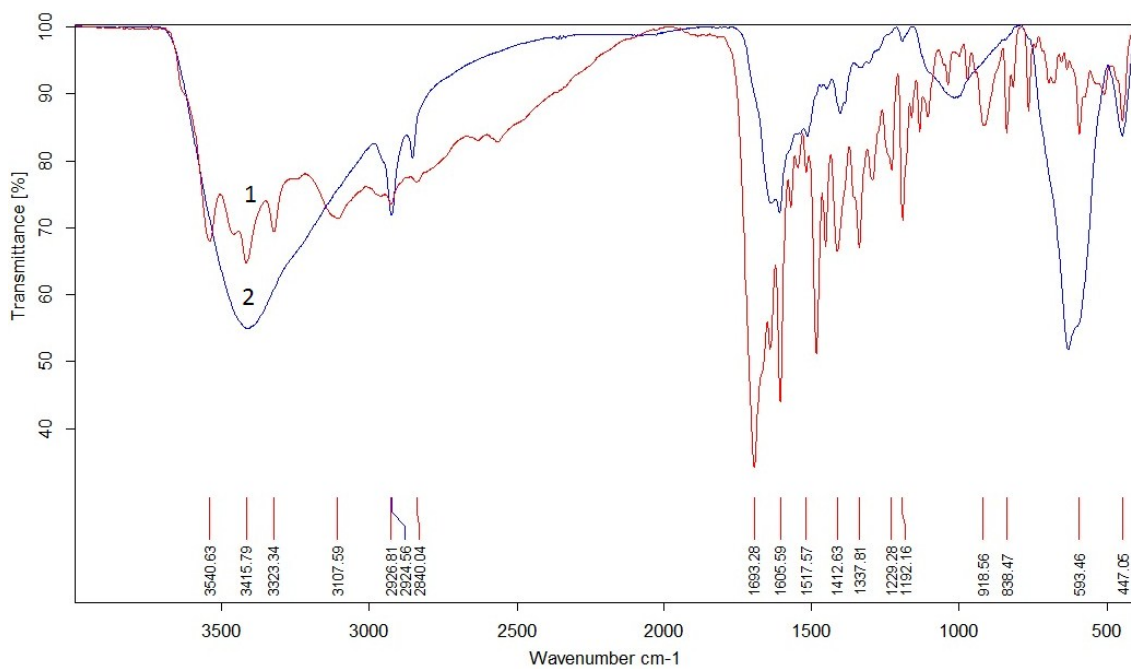
### Fast microwave-assisted conjugation of magnetic nanoparticles with carboxylates of biological interest

M. S. Gutiérrez,<sup>a</sup> M. N. Piña<sup>a</sup> and J. Morey

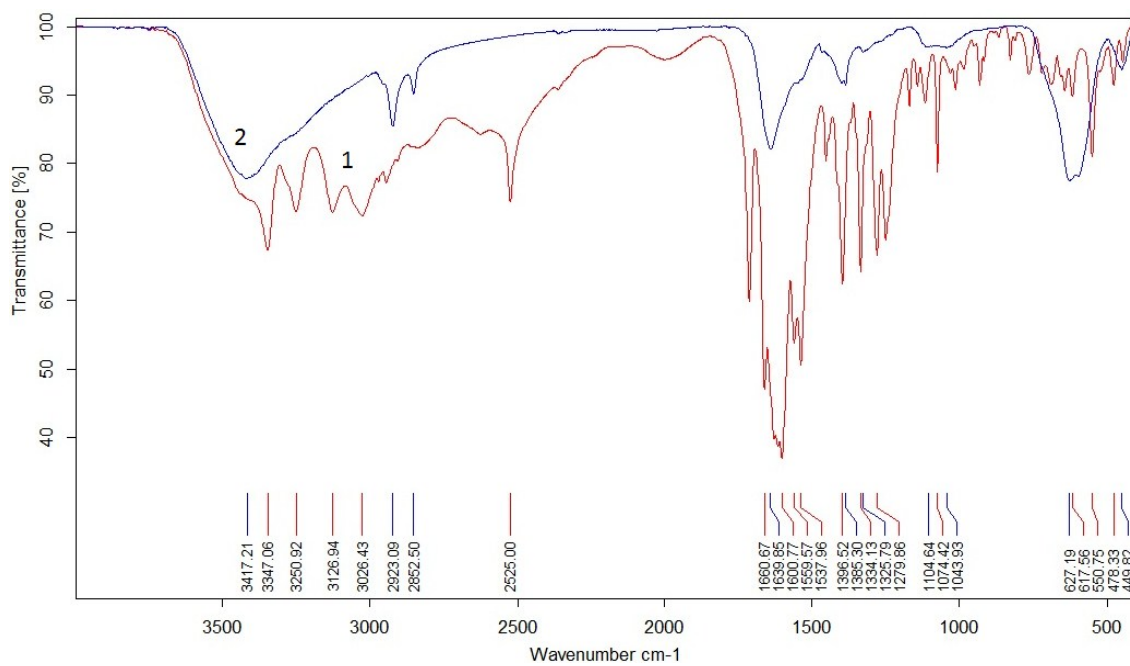
#### 1. Characterization



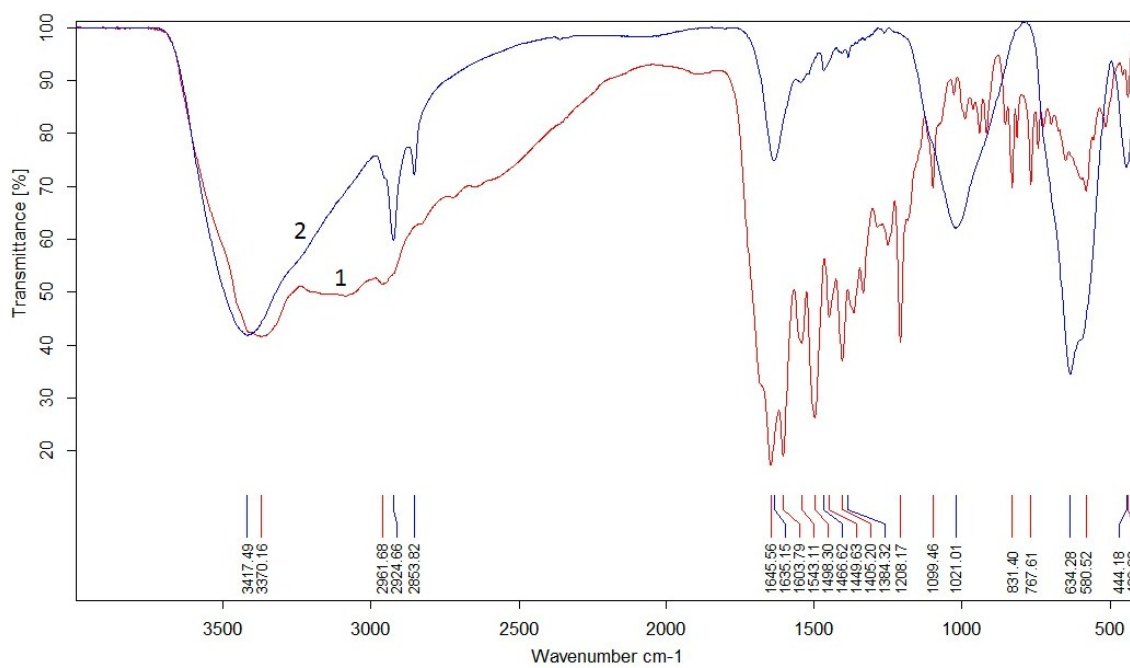
**Figure S1.** FTIR of Fe<sub>3</sub>O<sub>4</sub>-NP-APTES-DMSA. (1) DMSA free, (2) Fe<sub>3</sub>O<sub>4</sub>-NP-APTES-DMSA.



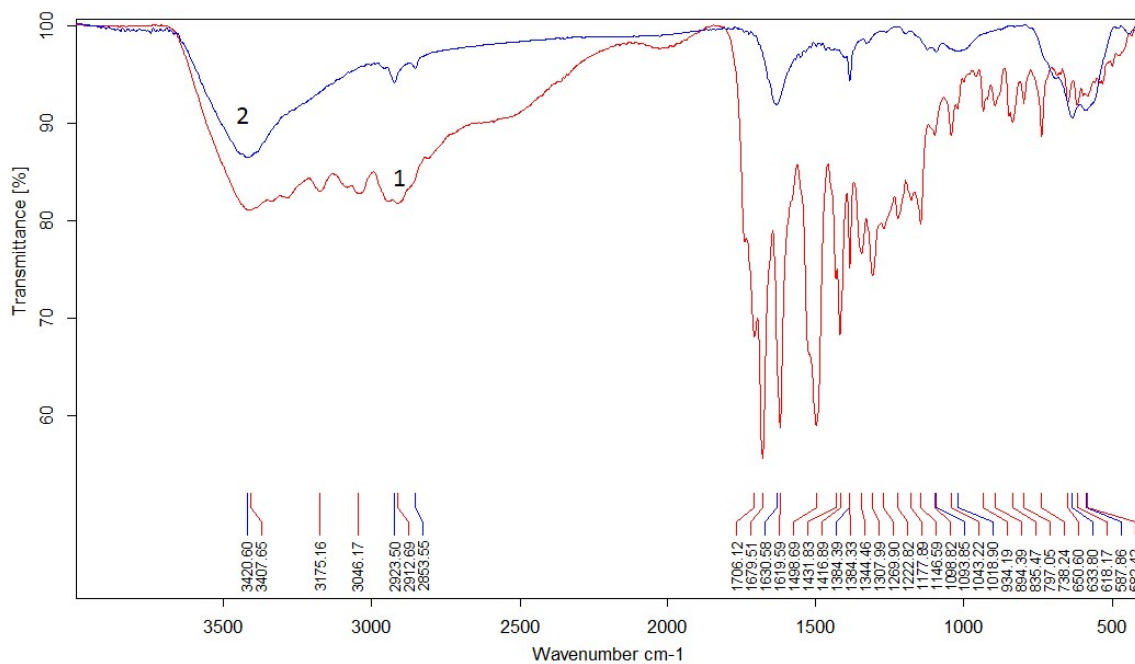
**Figure S2.** FTIR of Fe<sub>3</sub>O<sub>4</sub>-NP-APTES-FA. (1) FA free, (2) Fe<sub>3</sub>O<sub>4</sub>-NP-APTES-FA.



**Figure S3.** FTIR of NP Fe<sub>3</sub>O<sub>4</sub>-NP-APTES-GSH. (1) GSH free, (2) Fe<sub>3</sub>O<sub>4</sub>-NP-APTES-GSH.

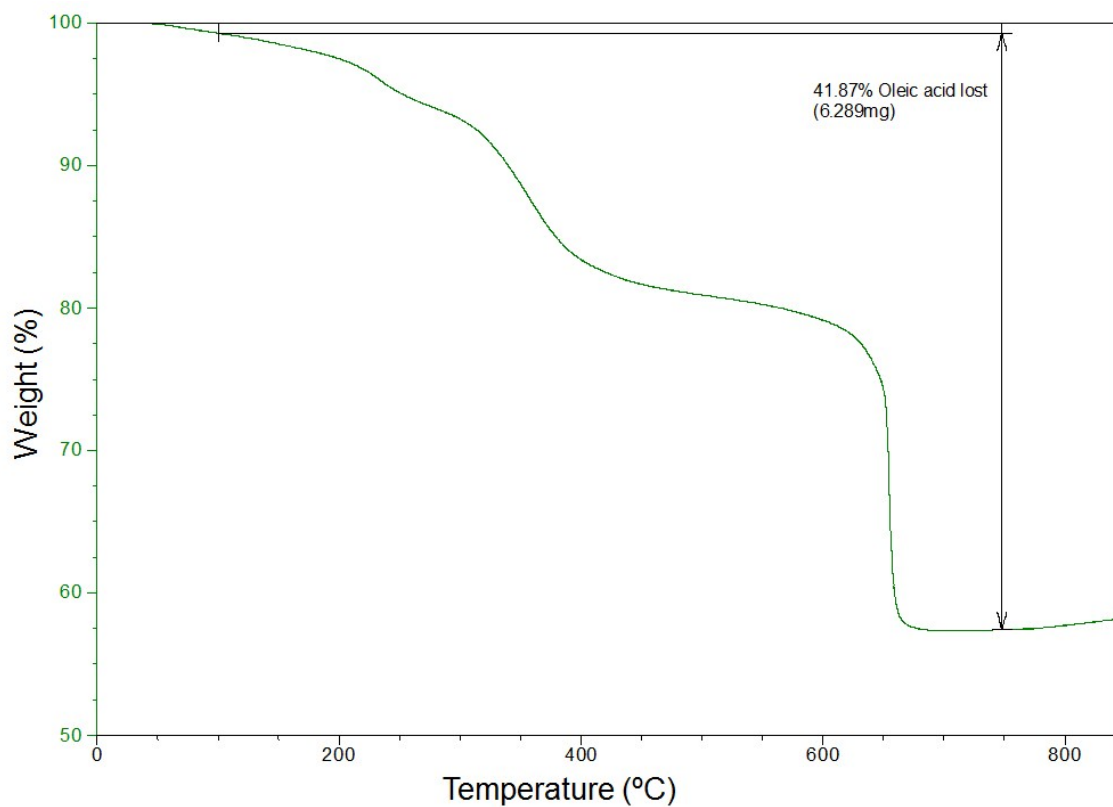


**Figure S4.** Fe<sub>3</sub>O<sub>4</sub>-NP-APTES-MTX. (1) MTX free, (2) Fe<sub>3</sub>O<sub>4</sub>-NP-APTES-MTX.

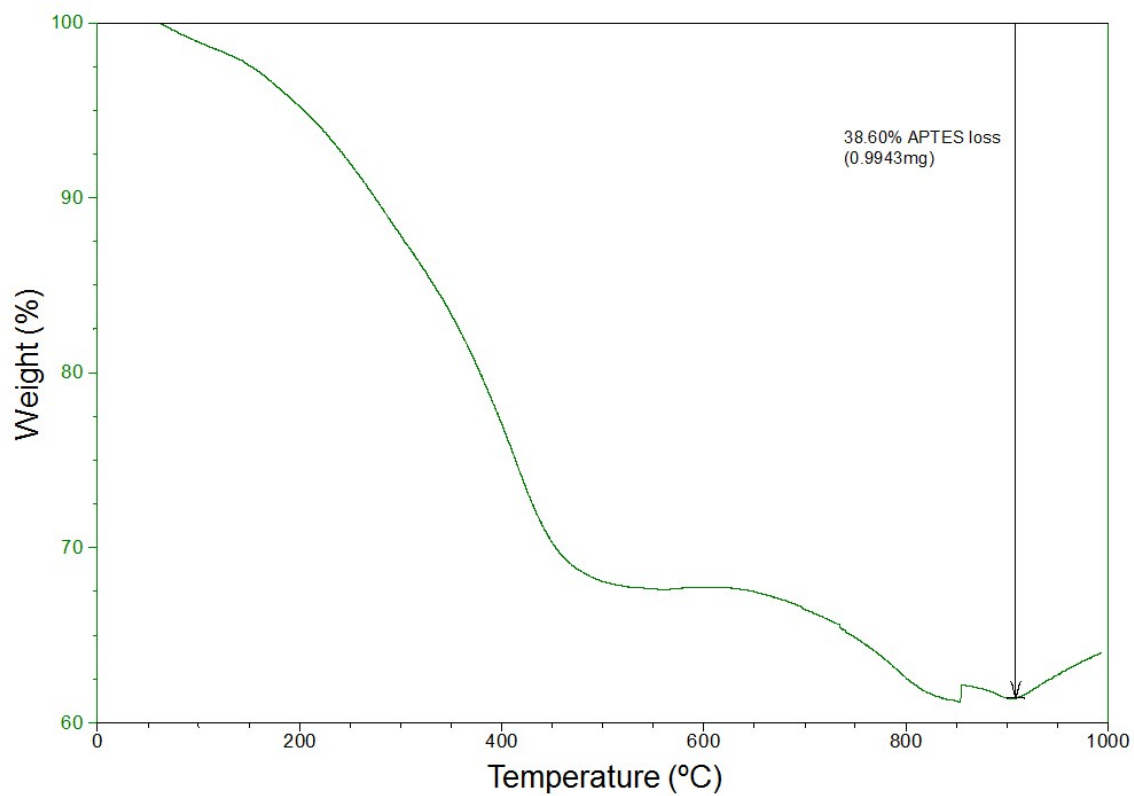


**Figure S5.** FTIR of Fe<sub>3</sub>O<sub>4</sub>-NP-APTES-RTX. (1) RTX free, (2) Fe<sub>3</sub>O<sub>4</sub>-NP-APTES-RTX.

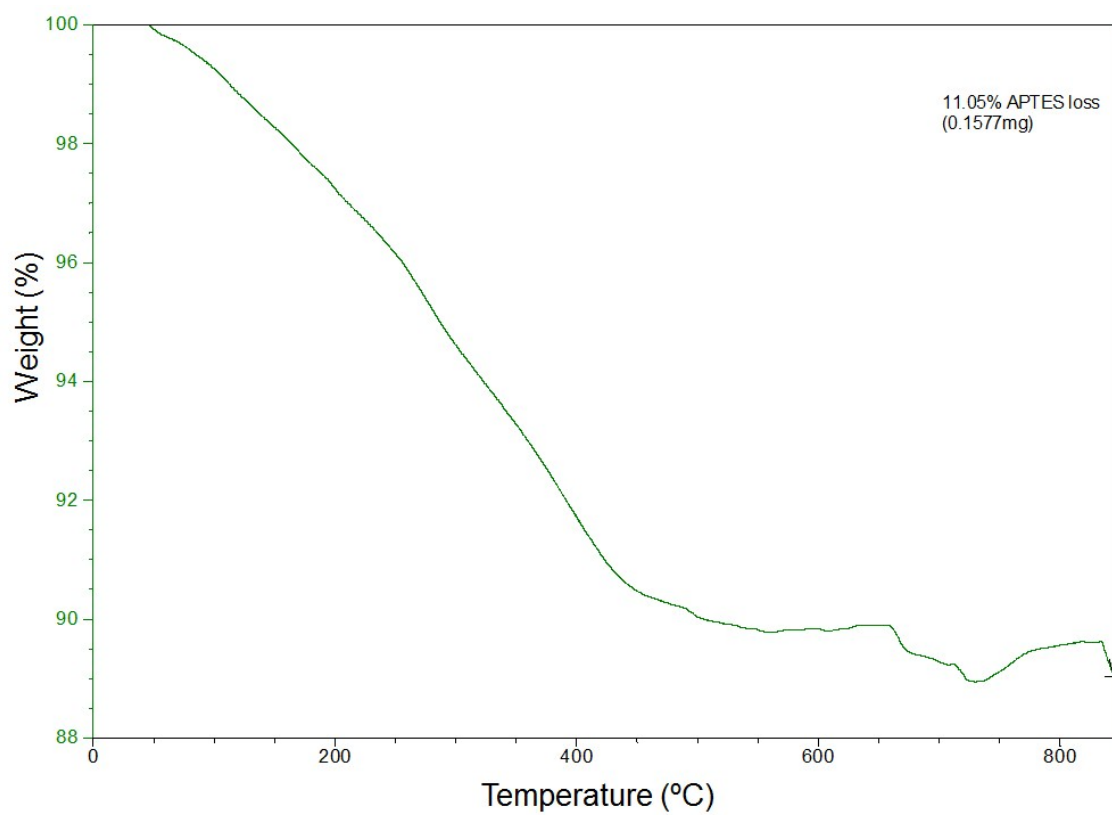
## 2. Thermogravimetric analysis



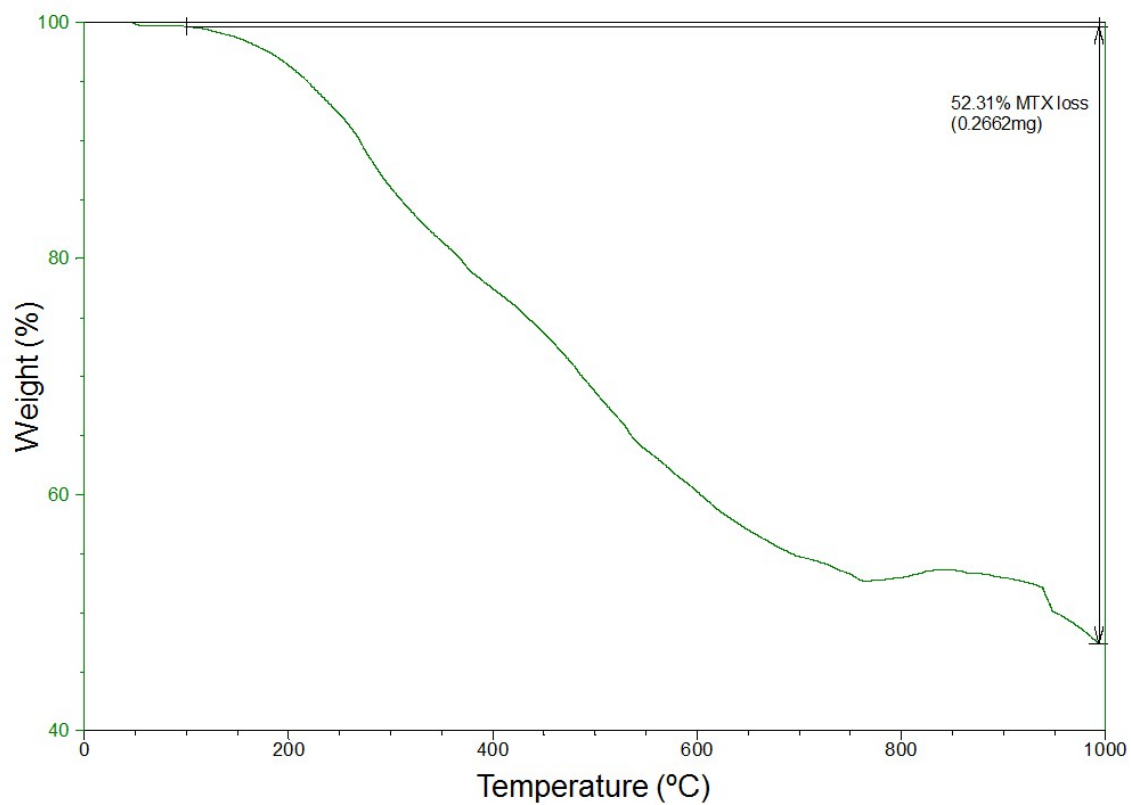
**Figure S6.** TGA of Fe<sub>3</sub>O<sub>4</sub>-NP-oleic acid



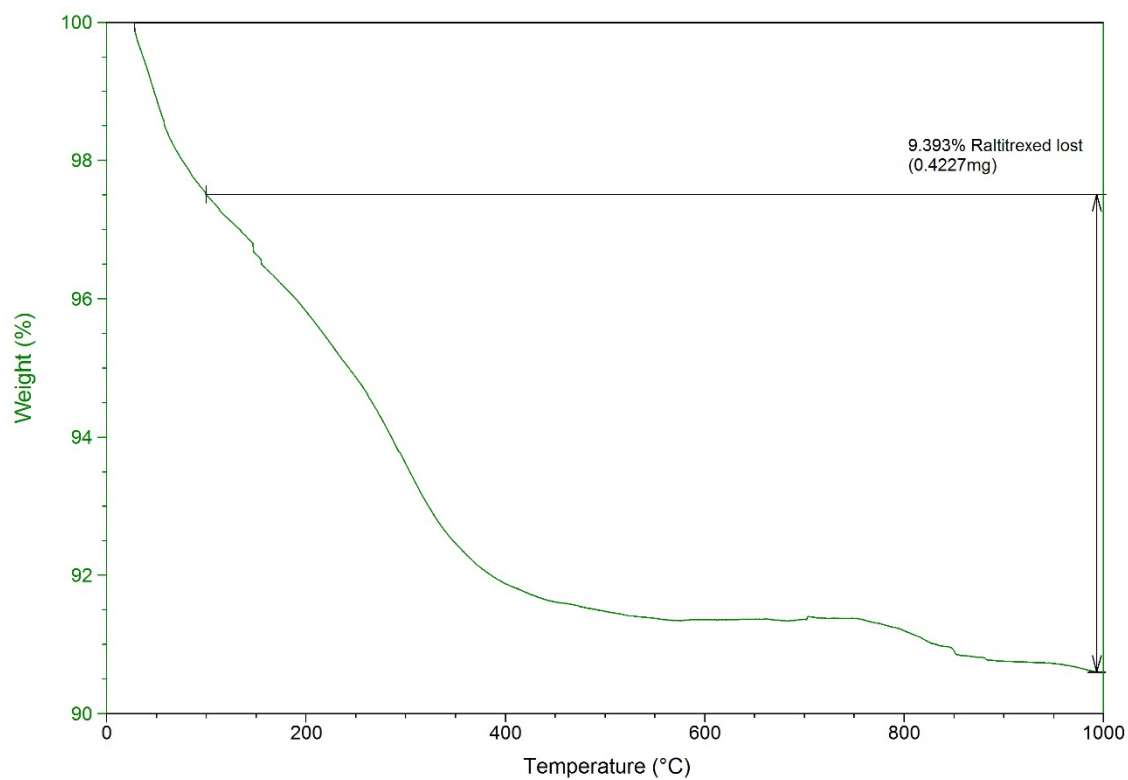
**Figure S7.** TGA of Fe<sub>3</sub>O<sub>4</sub>-NP-APTES via microwave.



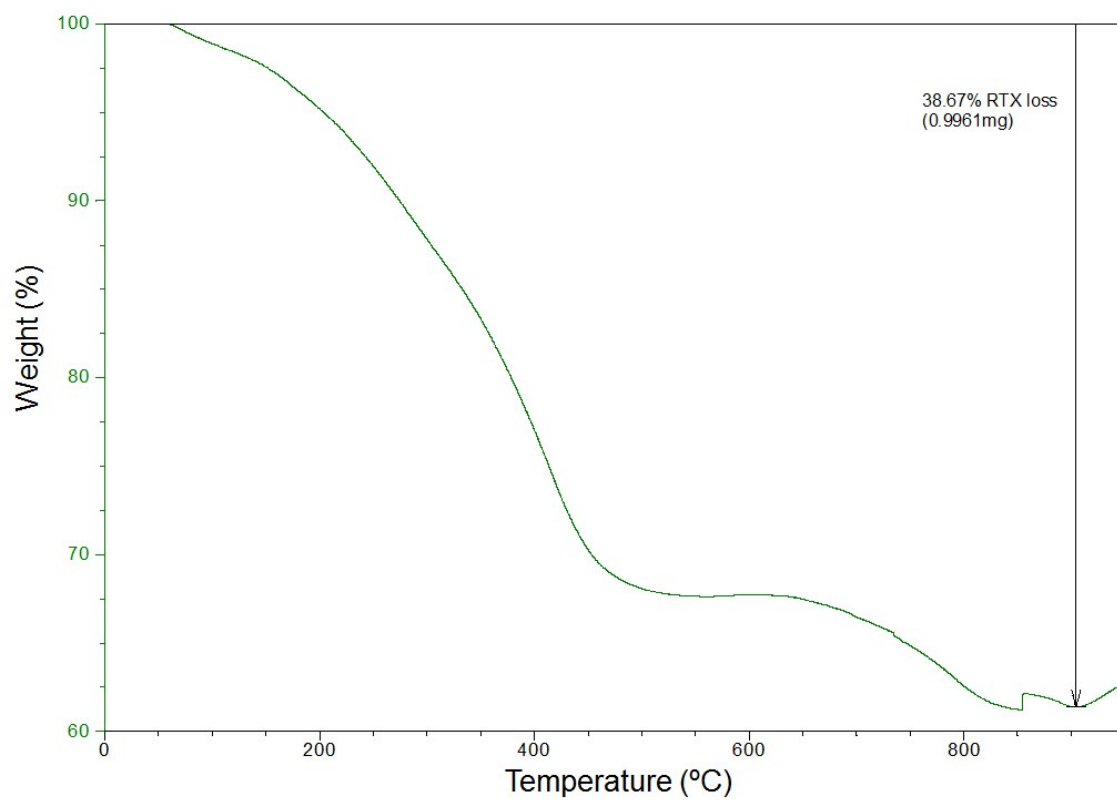
**Figure S8.** TGA of Fe<sub>3</sub>O<sub>4</sub>-NP-APTES via traditional.



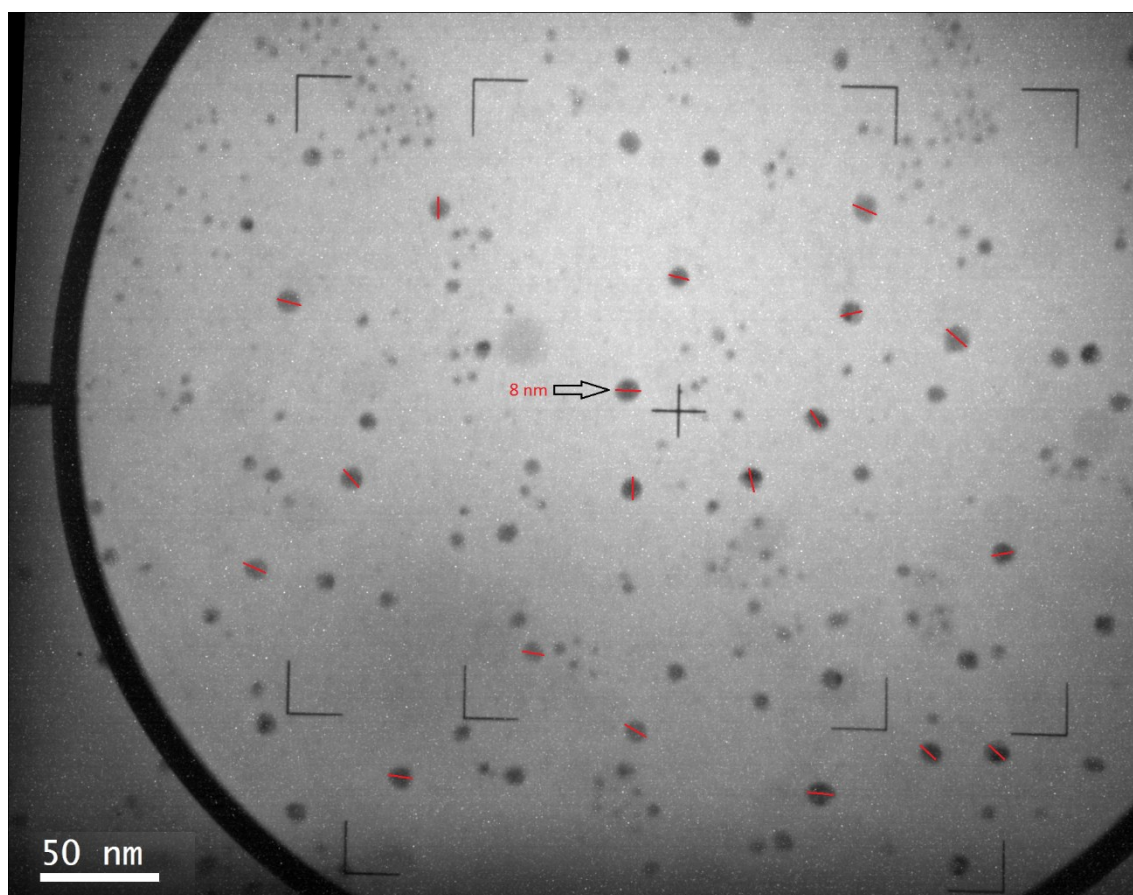
**Figure S9.** TGA of  $\text{Fe}_3\text{O}_4\text{-NP-APTES-MTX}$  via microwave.



**Figure S10.** TGA of  $\text{Fe}_3\text{O}_4\text{-NP-APTES-RTX}$  via traditional.

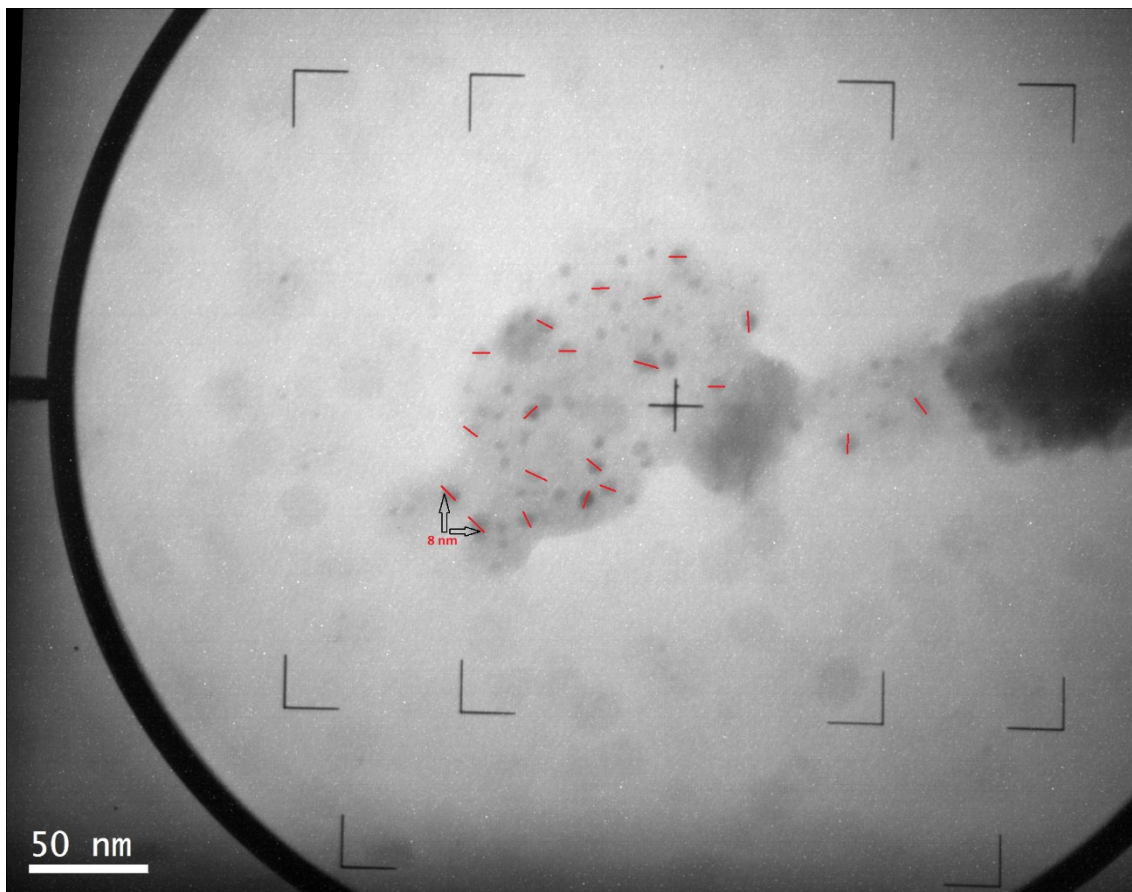


**Figure S11.** TGA of  $\text{Fe}_3\text{O}_4\text{-NP-APTES-RTX}$  via microwave.



**Figure S12.** TEM microphotograph of  $\text{Fe}_3\text{O}_4\text{-NP-Oleic acid}$ .





**Figure S13.** TEM microphotograph of  $\text{Fe}_3\text{O}_4$ -NP-FA.