

## Supporting information

# Investigation of the factors affecting the photothermal potential of small iron oxide nanoparticles over the 730-840 nm spectral region

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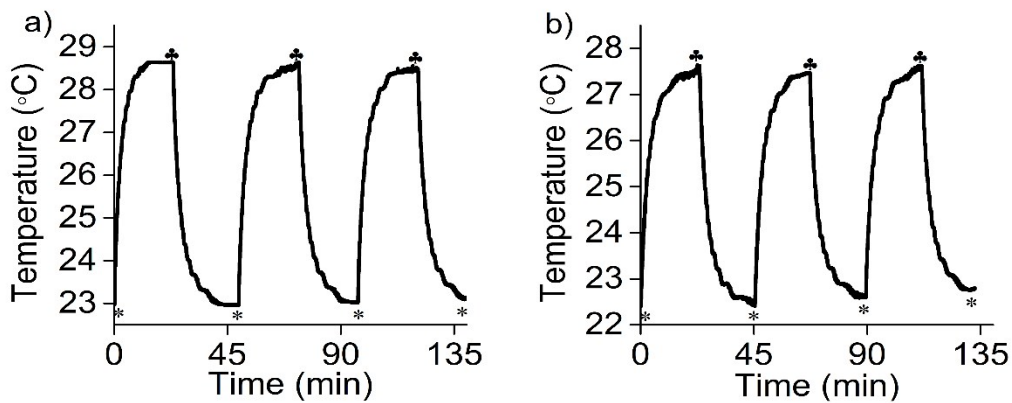
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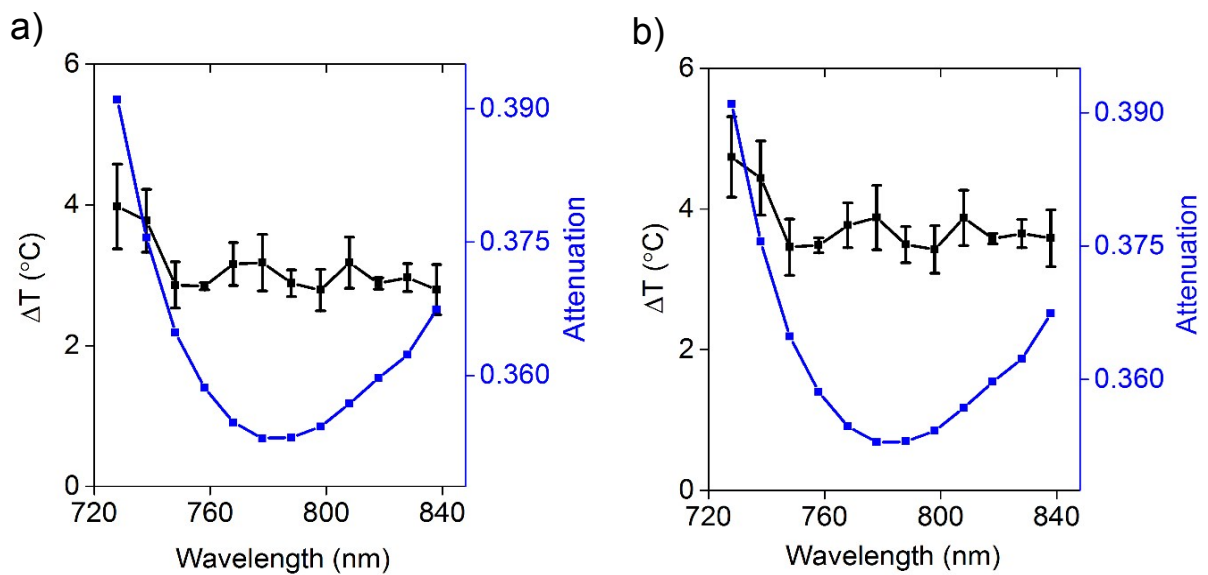
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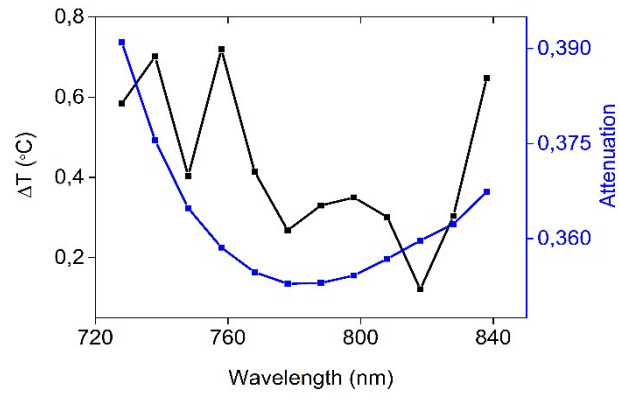
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**Fig. S1** Laser on/off experiments of colloidal PAA/SPION solution (laser turned on at \* and laser turned off at ♣). Irradiation wavelength, power, spot size: (a) 728 nm, 260 mW, 1.68 mm and (b) 808 nm, 260 mW, 1.68 mm.



**Fig. S2** Temperature increase ( $\Delta T$ ) recorded for colloidal PAA/SPION irradiated (a) 5 min and (b) 10 min at different wavelengths (728-838 nm, power 260 mW, spot size 1.68 mm)



**Fig. S3** Temperature increase of water at 728–833 nm region after 20 min irradiation with 260 mW laser power (spot size 1.68 mm).