

1 **Biocompatible chitosan-based composites with properties suitable**
2 **for hyperthermia therapy**

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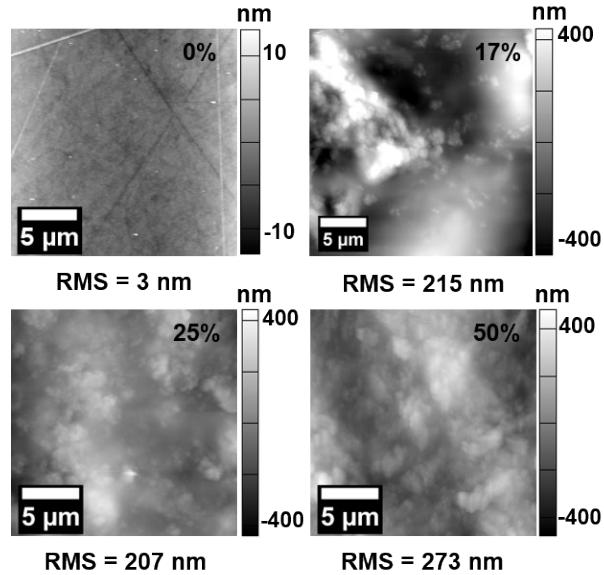
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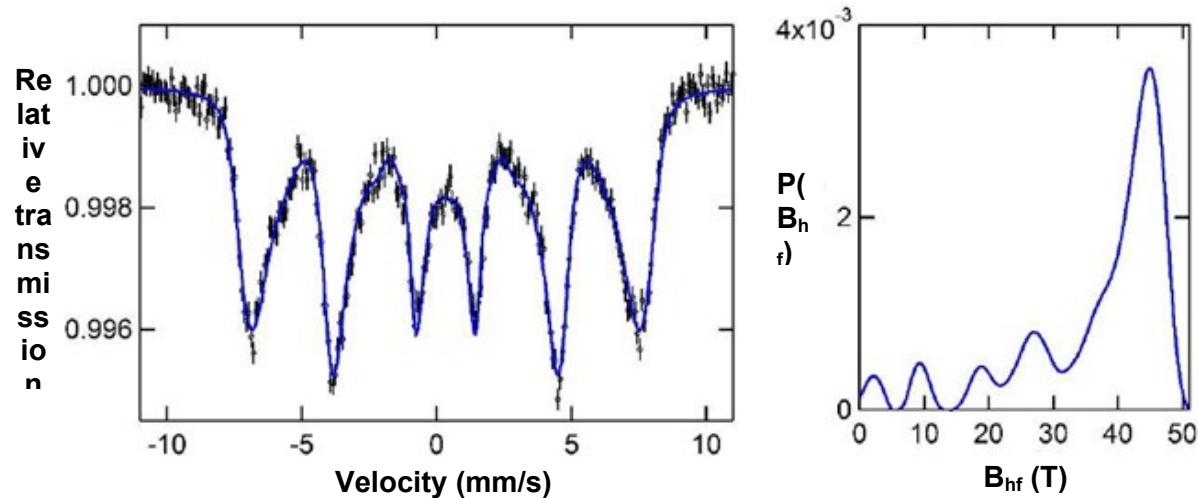
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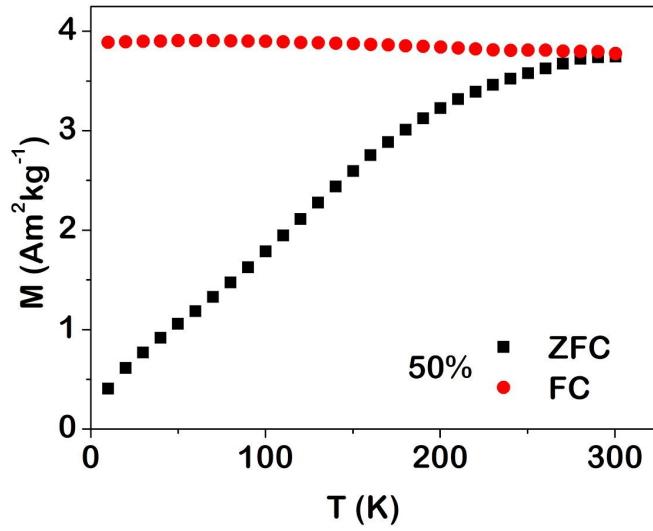


1 **Fig. S1** AFM topographical images ($20 \mu\text{m} \times 20 \mu\text{m}$) displaying the roughness root mean square
 2 (RMS) for the pristine chitosan film (0% rGO- $\text{Fe}_{3-x}\text{O}_4$) and the bionanocomposite films with 17,
 3 25 and 50% rGO- $\text{Fe}_{3-x}\text{O}_4$.

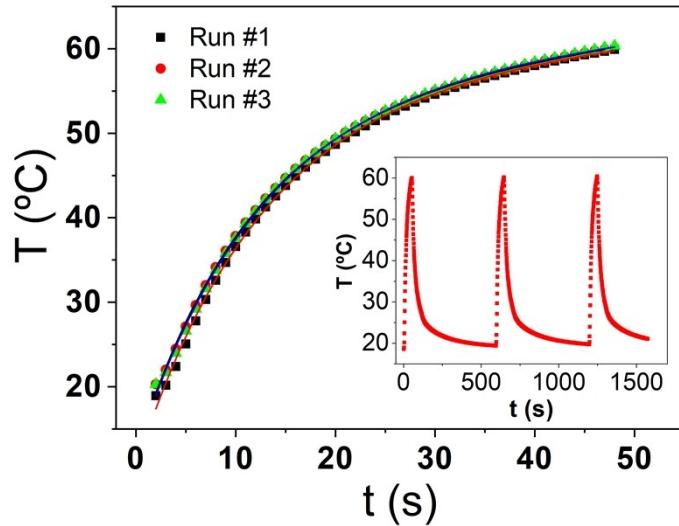
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5 **Fig. S2** ^{57}Fe Mössbauer spectrum of the chitosan-based bionanocomposite film with 50% rGO- $\text{Fe}_{3-x}\text{O}_4$ at 300 K (black line) and fit (left side) and magnetic hyperfine field distribution (right side).



1 **Fig. S3** Magnetization curves of the chitosan-based bionanocomposite with 50% rGO-Fe_{3-x}O₄ at
2 zero field cooling (ZFC) and field cooling (FC).



3

4 **Fig. S4** Heating curves obtained for the chitosan-based bionanocomposite with 50% rGO-Fe_{3-x}O₄
5 filler when exposed to a magnetic field with a frequency of 276 kHz and a strength of 14 kA/m
6 measured in three different runs. The complete dataset is shown as an inset.

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