

Multifunctional iron oxide/silk-fibroin (Fe₃O₄-SF) composite microspheres for the delivery of cancer therapeutics

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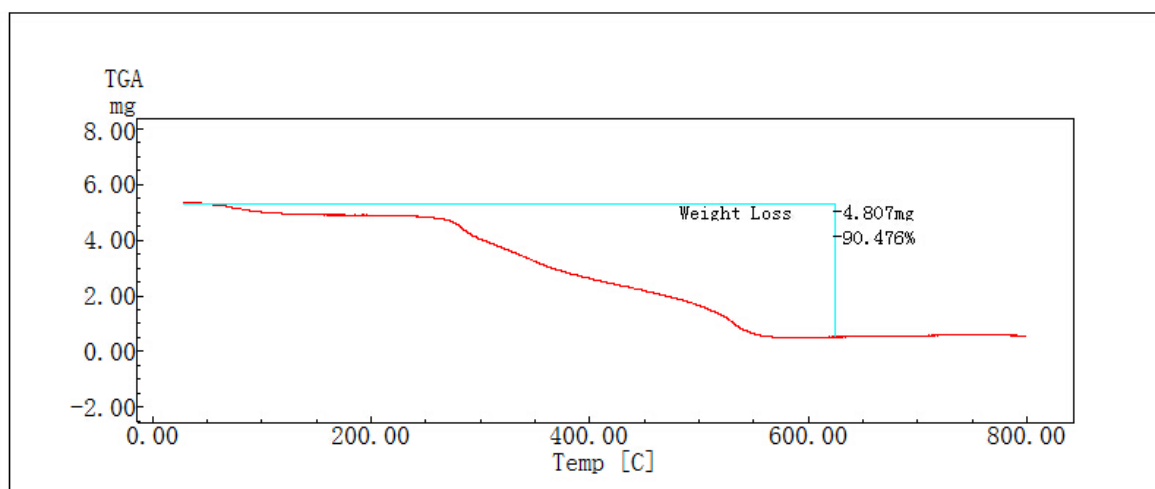
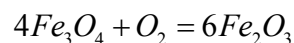


Fig.S1 TGA image of Fe₃O₄-SF composite microspheres at 800°C under the air atmosphere (5.313mg).

In order to calculate iron oxide particles content, TGA test was studied under the air atmosphere. From fig.S1, the silk was completely lost at ~630°C and the residuum was Fe₂O₃. According to the chemical equation, we can calculate that the quality percentage of Fe₃O₄ is ~9.2%.



In the process of preparation, 0.5wt% SF solution and 0.5wt% Fe₃O₄ solution were mixed in a volume ratio of 40:1. The Fe₃O₄ content should be 2.5% theoretically. However, not all the silks were precipitated in the salting out process and part of them were lost. Then the Fe₃O₄ content was increased and the quality percentage of Fe₃O₄ is ~9.2%.