

Supplementary Information

Macroporous magnetic poly(styrene-divinylbenzene) nanocomposites prepared *via* magnetite nanoparticles-stabilized high internal phase emulsions

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Characterization:

We further analyse the content of magnetite in polyHIPE for sample 1 by TGA (see Fig.S1) in order to investigate the possibility that the ester groups between the hydroxyl groups of the magnetite nanoparticles and the carboxylic groups of AOA may undergo partial hydrolysis under alkalescent condition. The initial weight loss of 0.39% until 260°C can be due to the evaporation of physically adsorbed water, and then the loss of 93.82% is described to the decomposition of all polymers in the range of 260–450 °C. The residual weight of 5.79% should be that of magnetite. So the content of pure magnetite nanoparticles is 5.81% ($5.79/99.61 \times 100\%$) in polyHIPE, which is close to the loaded amounts of 4.65% [$6\%/(1+6\%) \times (1-17.91\%) \times 100\%$] within the experimental error range. This hints that the hydrolysis of the ester is not detected, further verifying the important role of AOA-modified magnetite particles via their synergistic effect.

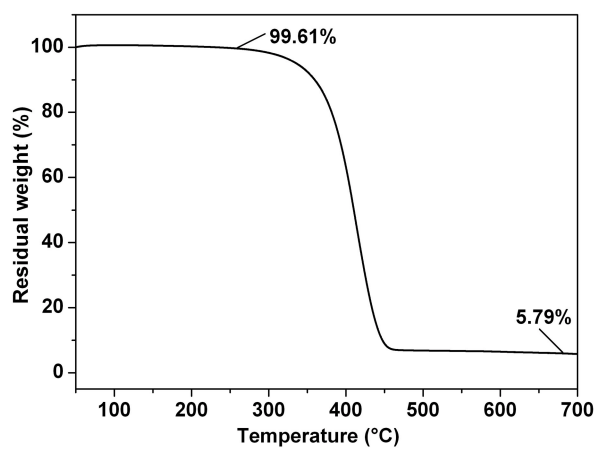


Fig. S1 TGA curve of sample 1 listed in Table 2.