

Supporting Information for

# Photoacoustic and Colorimetric Visualization of Latent Fingerprints

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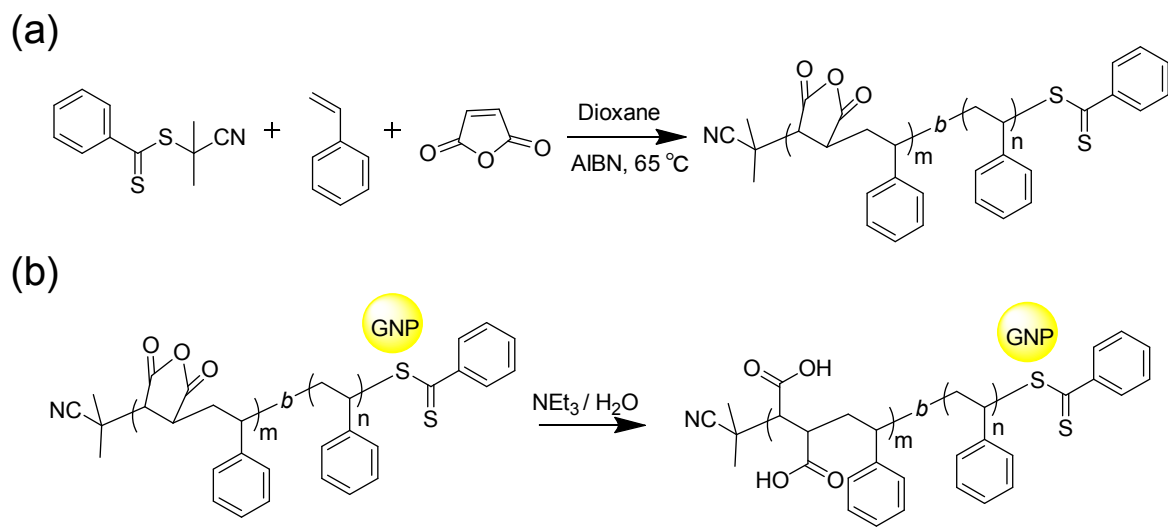
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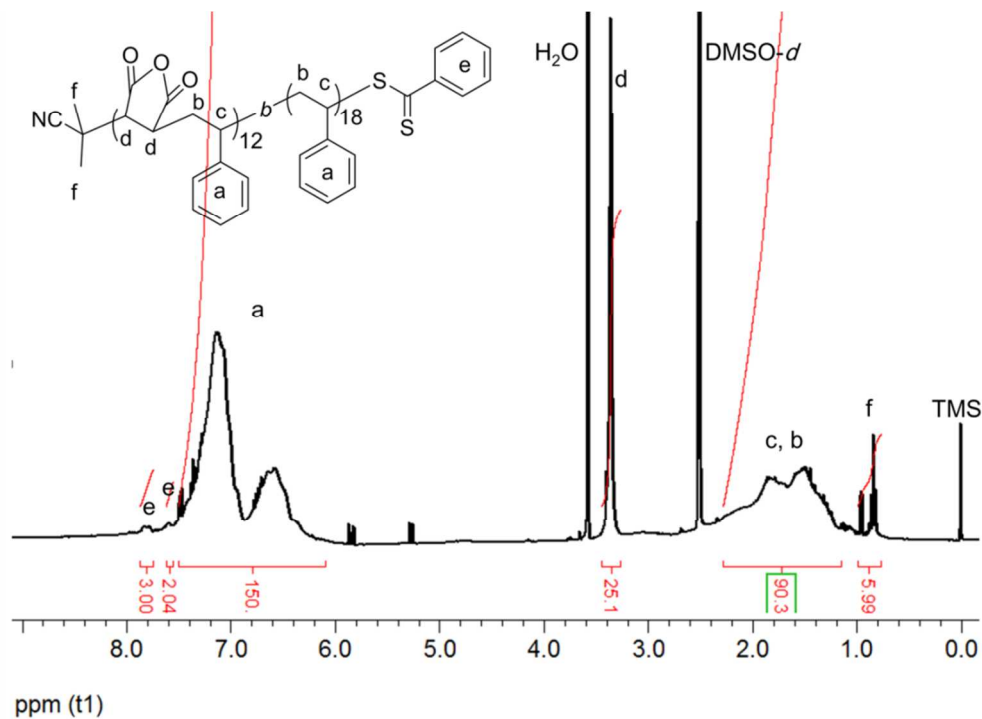
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Biomedical Imaging and Bioengineering (NIBIB), National Institutes of Health, Bethesda,  
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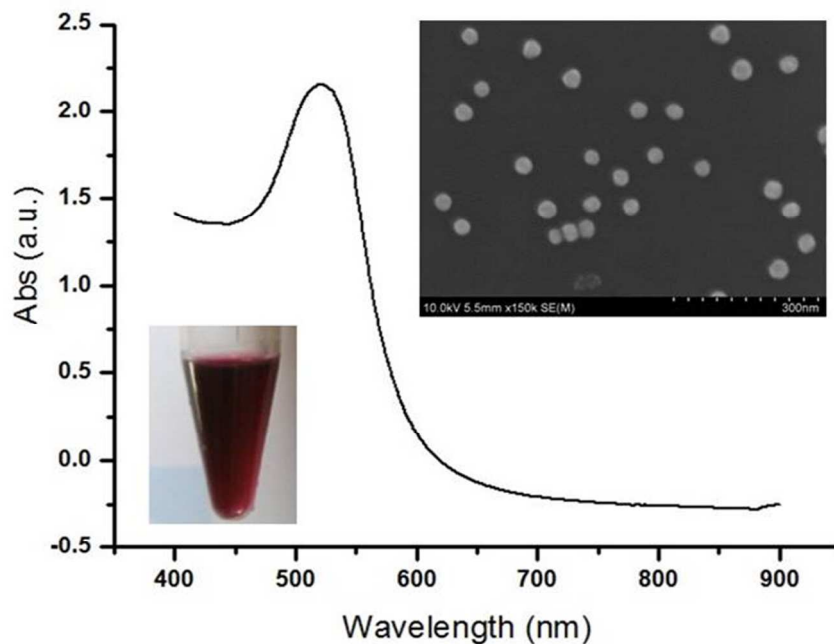
<sup>§</sup>The authors equally contributed to this article.



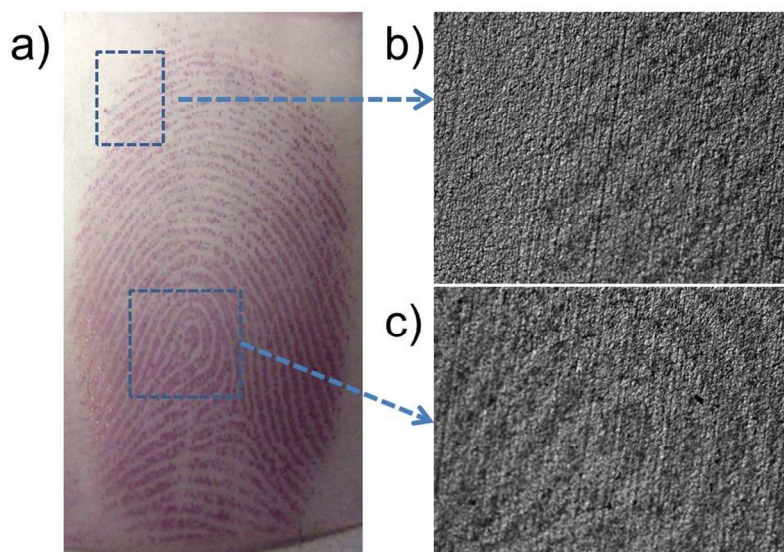
**Figure S1.** (a) The synthetic route of amphiphilic block copolymer (BCP) poly(styrene-*alt*-maleic anhydride)-*b*-polystyrene (PSMA-*b*-PS). (b) The hydrolysis of the PSMA-*b*-PS on the surface of GNPs.



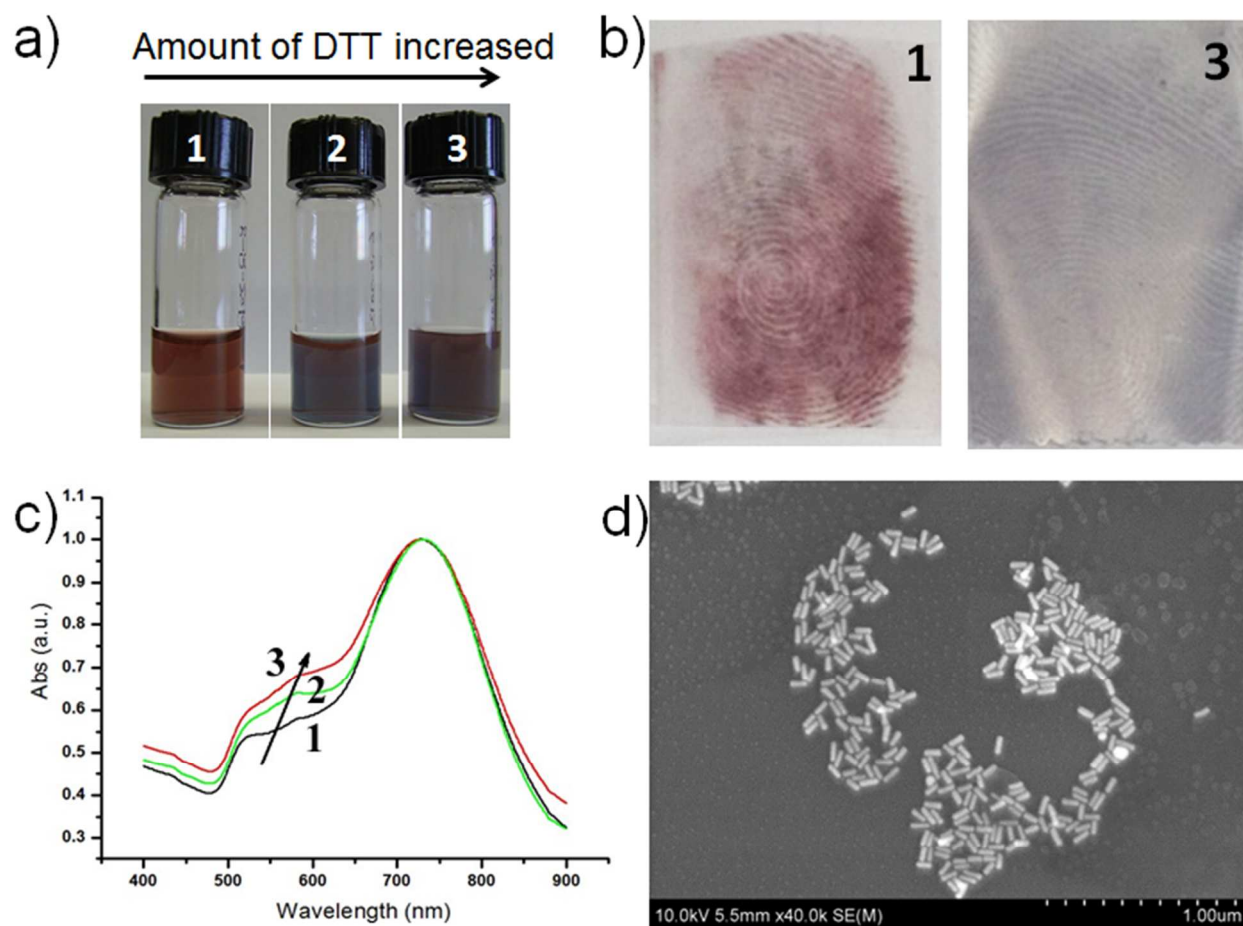
**Figure S2.**  $^1\text{H}$  NMR spectrum of poly(styrene-*alt*-maleic anhydride)-*b*-polystyrene (PSMA-*b*-PS).



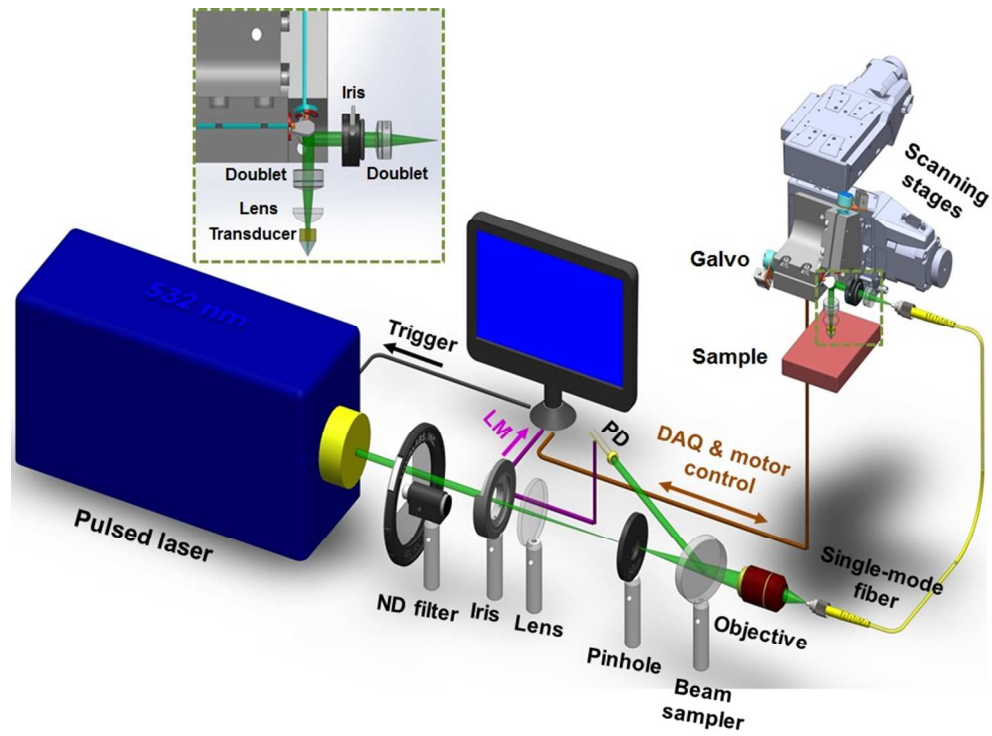
**Figure S3.** Characterization of PSMA-*b*-PS functionalized spherical GNPs. SEM image, UV-vis spectrum, and photograph.



**Figure S4.** Colorimetric image of LFP using amphiphilic BCP PSMA-*b*-PS functionalized GNPs.



**Figure S5.** Self-assembly-dependent colorimetric imaging of LFPs using BCP PSMA-*b*-PS functionalized gold nanorods (GNRs). (a) Photograph of 1-Dodecanethiol-induced self-assembly-dependent color change of as-prepared GNRs aqueous solutions (From **1** to **3**: 1, 2, and 4  $\mu$ L, respectively). (b) Colorimetric images of LFPs using the corresponding **1** and **3** GNPs solutions. (c) UV-vis spectra of as-prepared GNRs aqueous solutions at different self-assembly levels. (d) The corresponding SEM images of **3**.



**Figure S6.** System schematic of the photoacoustic microscope platform with the blow-up of the scan head boxed. DAQ, data acquisition. LM, laser monitoring. PD, photodiode. ND, neutral density.