Electronic Supplementary Material (ESI) for Materials Chemistry Frontiers.

Supplementary Information

HSPA1A-siRNA nucleated gold nanorods for stimulated photothermal therapy through strategic heat shock to HSP70

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Table S1. Zeta-potential analysis of GNRs and siRNA.

S. No.	Sample	Zeta Potential (mV)
1.	GNRs	+46.8 (± 0.8)
2.	siRNA	-11.2 (± 0.6)

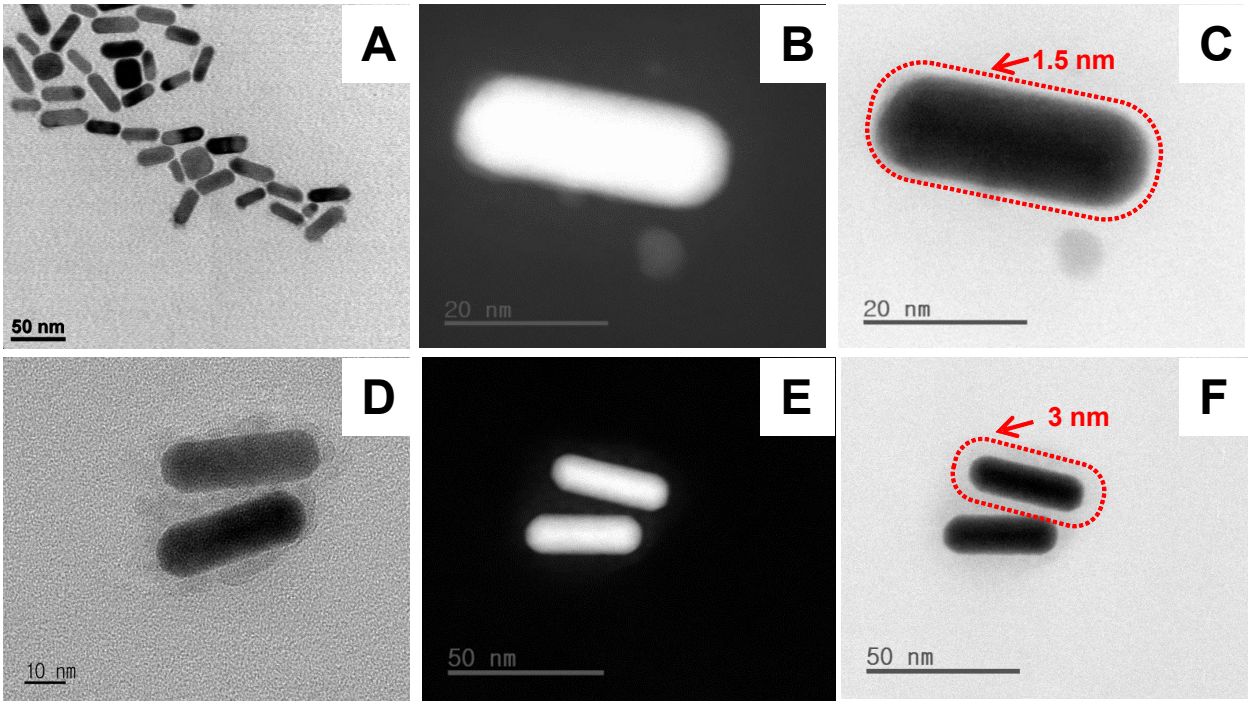

Fig. S1 **(A)** TEM image, **(B)** dark field STEM, and **(C)** bright field STEM image of siRNA@GNRs. **(D)** TEM image, **(E)** dark field STEM, and **(F)** bright field STEM image of mPEG@siRNA@GNRs.

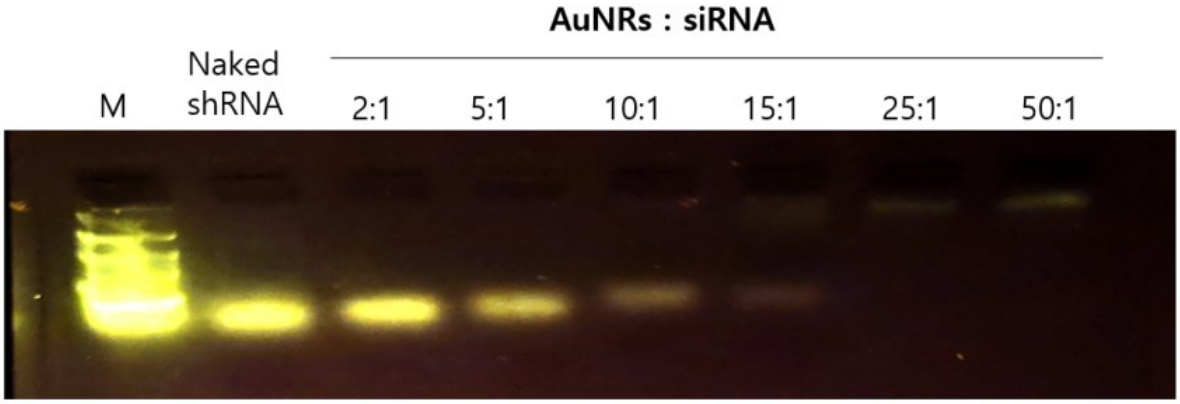

Fig. S2 Agarose gel electrophoresis retardation assay. GNRs:siRNA at different ratios (2:1, 5:1, 10:1, 15:1, 25:1 and 50:1). M:DNA marker

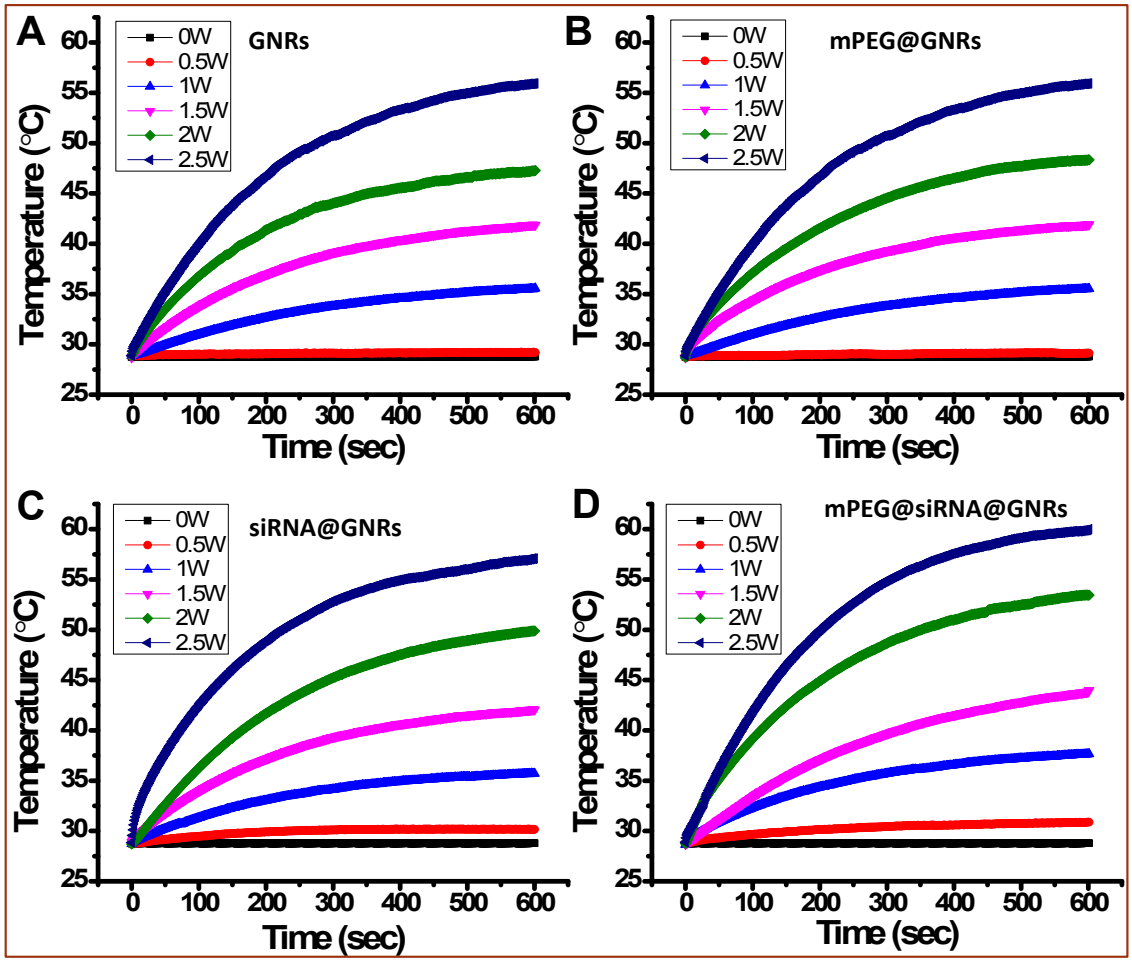

Fig. S3 The photothermal effect of **(A)** GNRs, **(B)** mPEG@GNRs, **(C)** siRNA@GNRs, and **(D)** mPEG@siRNA@GNRs at different laser power densities such as 0.5, 1.0, 1.5, 2.0, and 2.5 W.

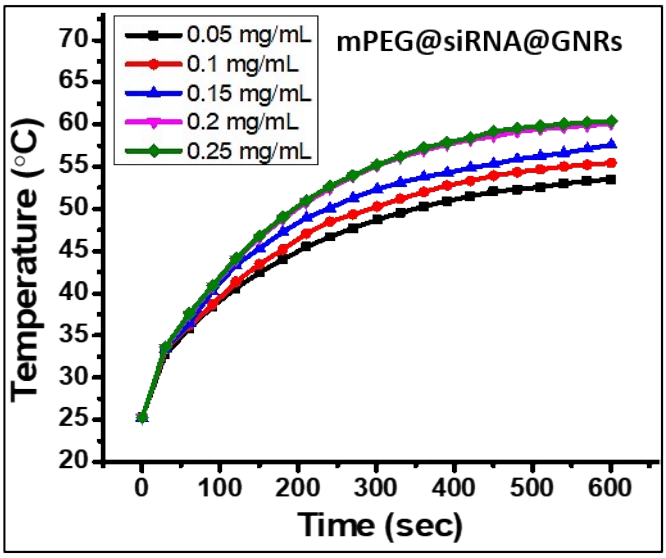

Fig. S4 The photothermal effect of mPEG@siRNA@GNRs with different concentrations using 2W NIR laser power for 10 min.

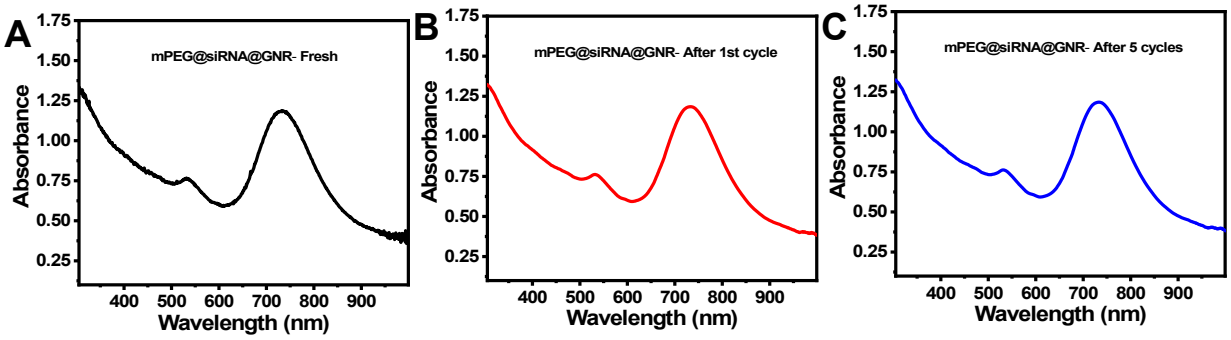

Fig. S5 UV-Visible spectrum of mPEG@siRNA@GNRs **(A)** fresh, **(B)** after 1 cycle, and **(C)** after 5 cycles.