Electronic Supplementary Information

Herceptin-Conjugated Plasmonic Gold Nanocapsules for Targeted NIR-II Photothermal Therapy

Prem Singh, Ankita Sarkar, Nivedita Mukherjee, Amit Jaiswal*

School of Biosciences and Bioengineering, Indian Institute of Technology Mandi,

Kamand, Mandi-175075, Himachal Pradesh, India

*Corresponding author email: AJ: j.amit@jitmandi.ac.in



Figure S1: SEM image of gold nanocapsules. The inset displays the size histogram of the gold nanocapsules, with a mean size of $110 \text{ nm} \pm 6 \text{ nm}$, as measured from the SEM image.

Name	Peak BE	Au Ncap	Au Ncap-HER
		Area (P) CPS.eV	Area (P) CPS.eV
C1s	285.84	1293974.37	1502741.61
01 s	532.76	119884.36	744429.47
N1s	402.85	not detected	56338.67
S2p	162.17	not detected	8675.51

Table S1: Summary of the area under the curve for the C1s, O1s, N1s, and S2p regions for bare Au Ncap and Au Ncap-HER.



Figure S2. Represents the linear time data (*t*) versus $-ln(\theta)$ obtained from the cooling period of figure 3 (c).



Figure S3: Photothermal heating performance of bare gold nanocapsules and Herceptinconjugated gold nanocapsules at a concentration of 50 μ g/ml with a laser power of 0.5 W/cm².