Supporting Information

Genetically Programmable Thermoresponsive Plasmonic Gold/Silk-Elastin Protein Core/Shell Nanoparticles

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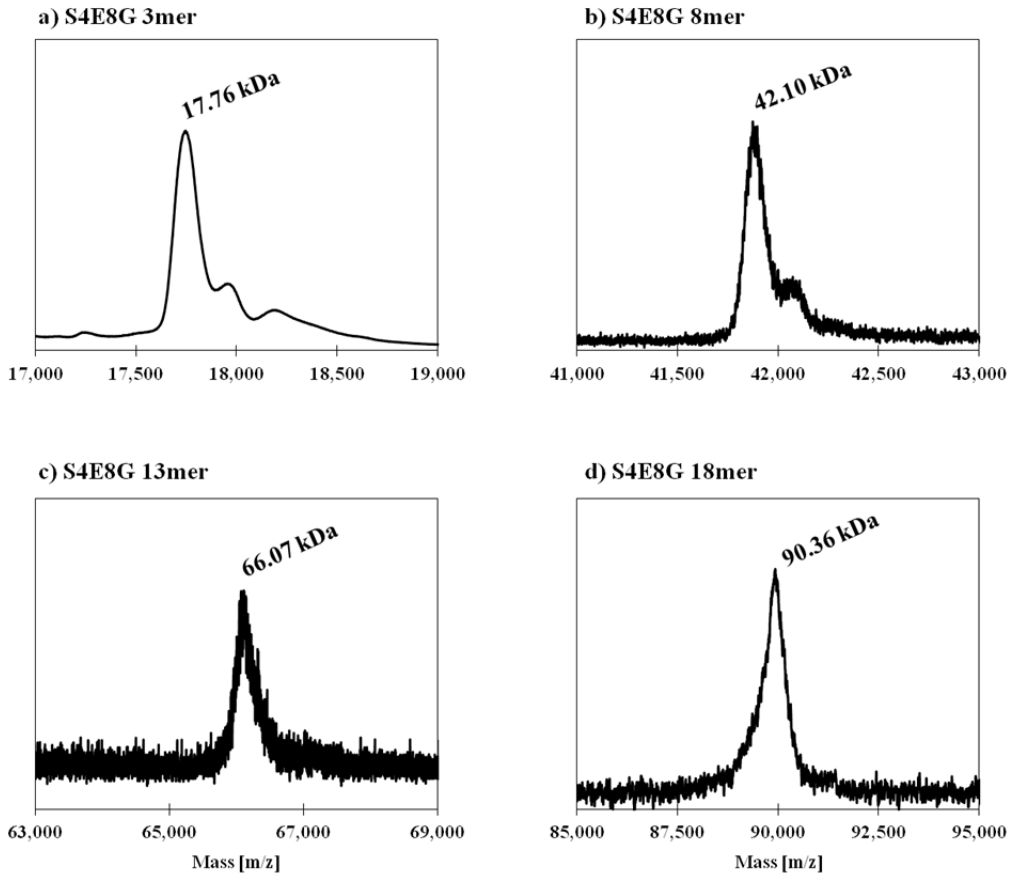

Figure S1. MALDI-TOF mass spectra of the recombinant SELPs: (a) S4E8G-3mer, (b) -8mer, (c) -13mer and (d) -18mer.

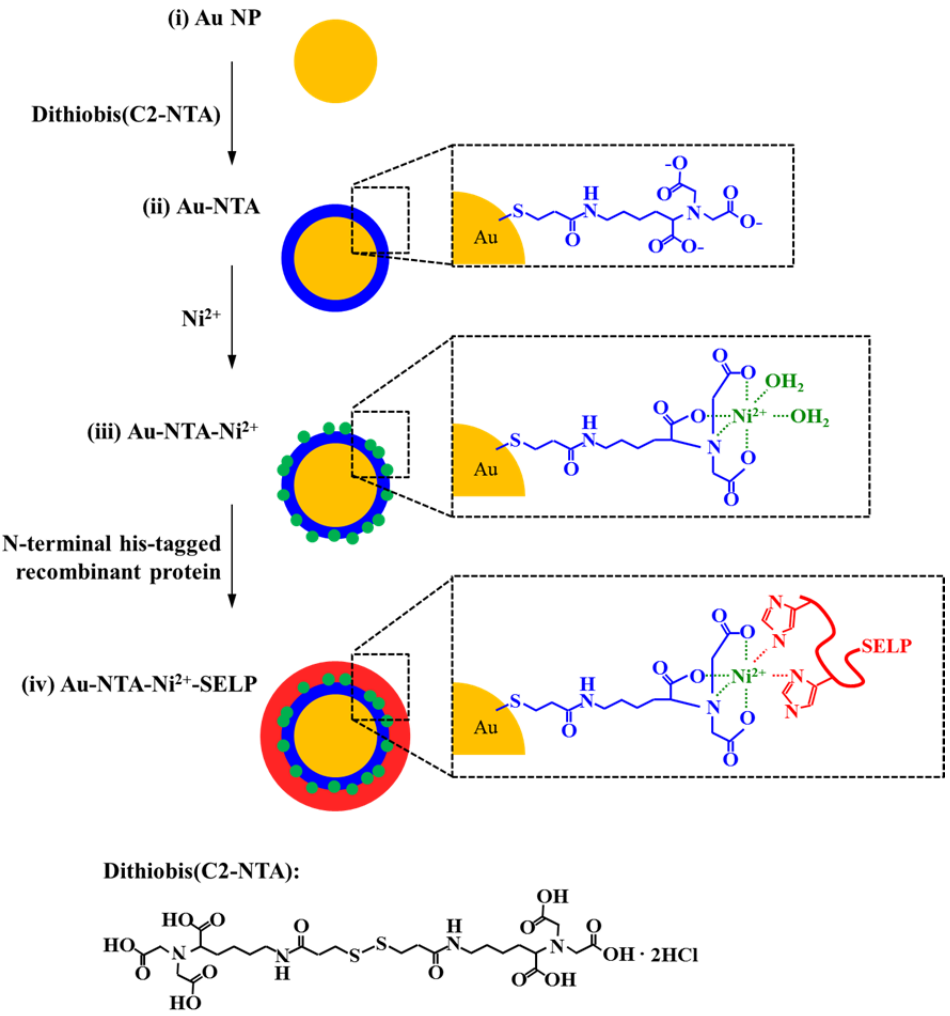

Figure S2. Surface functionalization of gold nanoparticles for molecular recognition of the histidine-tagged S4E8Gs following the method published by Kitai *et al.*[1]

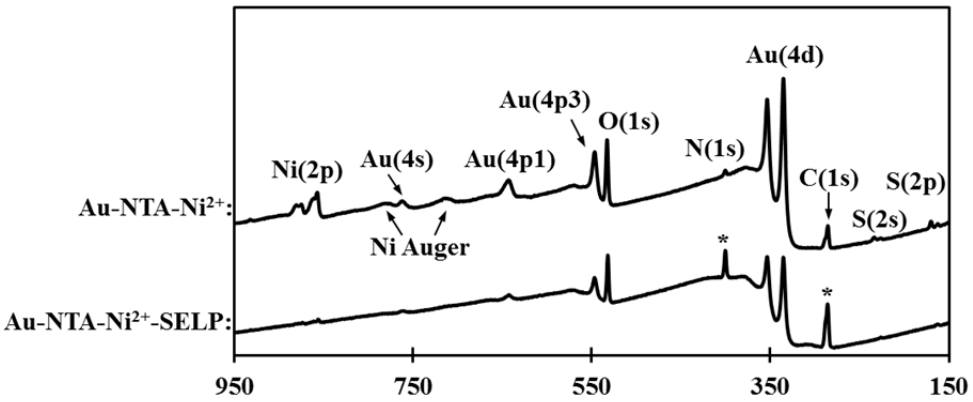

Figure S3. X-ray photoelectron spectroscopy (XPS) characterizations of the Au-NTA-Ni^{2+} and Au-NTA-Ni^{2+}-SELP NPs deposited on silicon wafers.

Purification of Au-S4E8G NPs:

After the incubation of S4E8G with gold nanoparticles, the mixture was then centrifuged at 13,000 rpm for 15 minutes, followed by another two times of wash with Tris buffer (10 mM, pH = 8.0) to remove excess SELP. The obtained purified SELPs functionalized nanoparticles were then dispersed in Tris buffer for TEM, DLS, and UV-Vis spectroscopy studies.

References

S1 T. Kitai, Y. Watanabe, Y. Y. Toyoshima, T. Kobayashi, T. Murayama, H. Sakaue, H. Suzuki, T. Takahagi, *Japanese Journal of Applied Physics* **2011**, *50*, 095002.