Kinetically Controlled Self-assembly of Atom-Precise Gold Nanoclusters into Multicolor Emissive Supramolecular Assemblies

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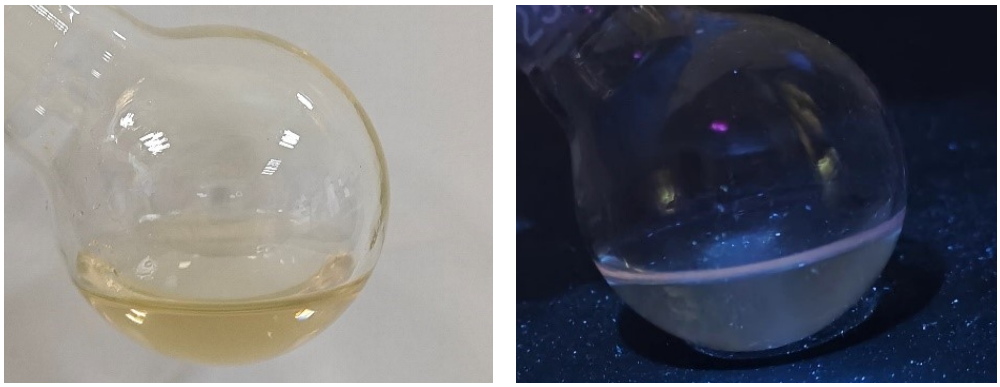

Figure S1. Sample solution of individual Au_5 NCs under visible and UV light irradiations.

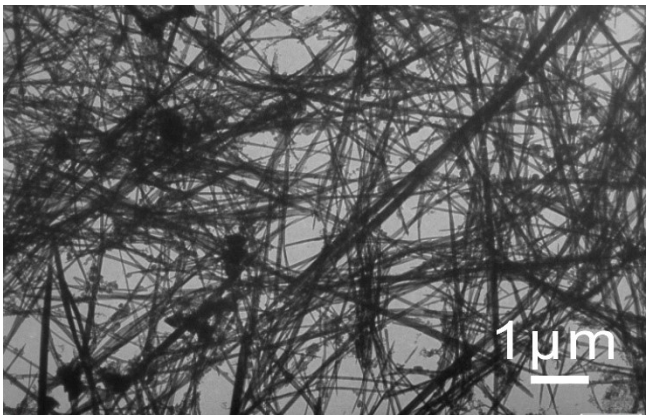

Figure S2. TEM image of Au_5 NCs self-assembly.

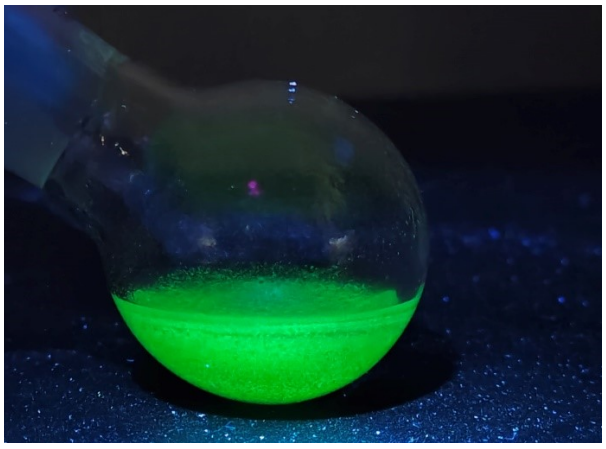

Figure S3. The sample solution of Au_5 NCs self-assembly under UV light irradiation.

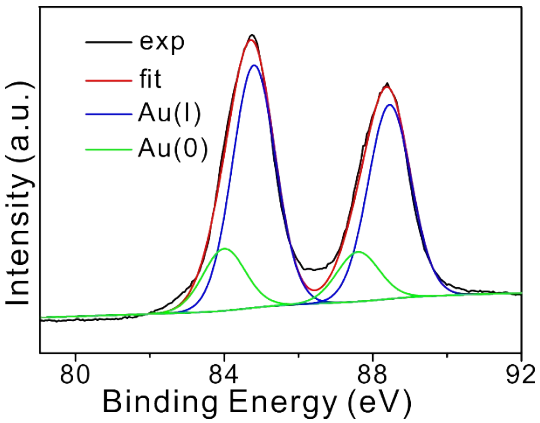

Figure S4. XPS spectra of Au_5 NCs self-assembly with fitting results. The Au(0)/Au(I) ratio was 1/4.

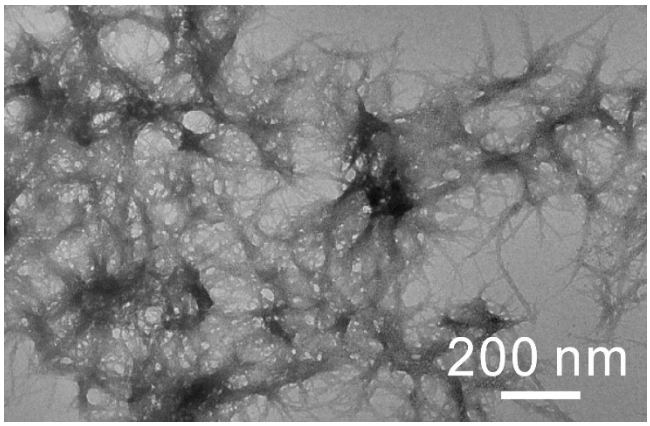

Figure S5. TEM image of the reaction products at 1 h in the Au_5 self-assembly system by adding 1 M of $MgCl_2$ for further reaction for 2 h.

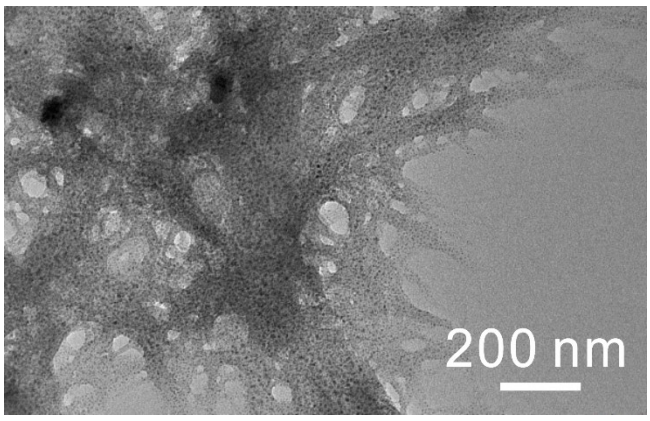

Figure S6. TEM image of the reaction products at 1 h in the Au_5 self-assembly system by adjusting the pH to 6 for further reaction for 2 h.

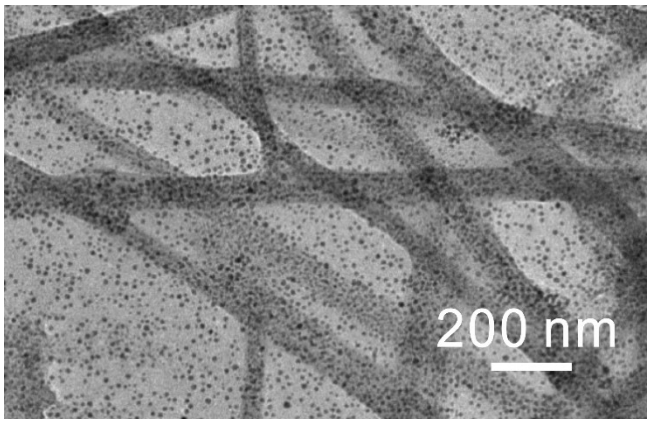

Figure S7. TEM image of the products by using mercaptoethylamine for ligand exchange with DMP ligand at the reaction time of 3 h in the Au_5 self-assembly system.

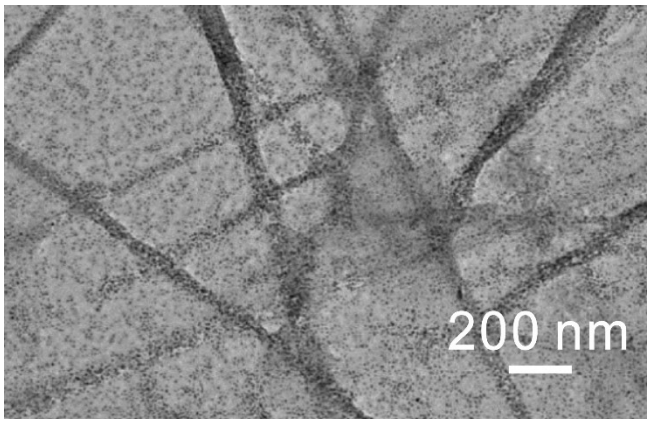

Figure S8. TEM image of the products at the reaction time of 3 h in the Au_5 self-assembly system for further reaction at 60°C for 1 h.

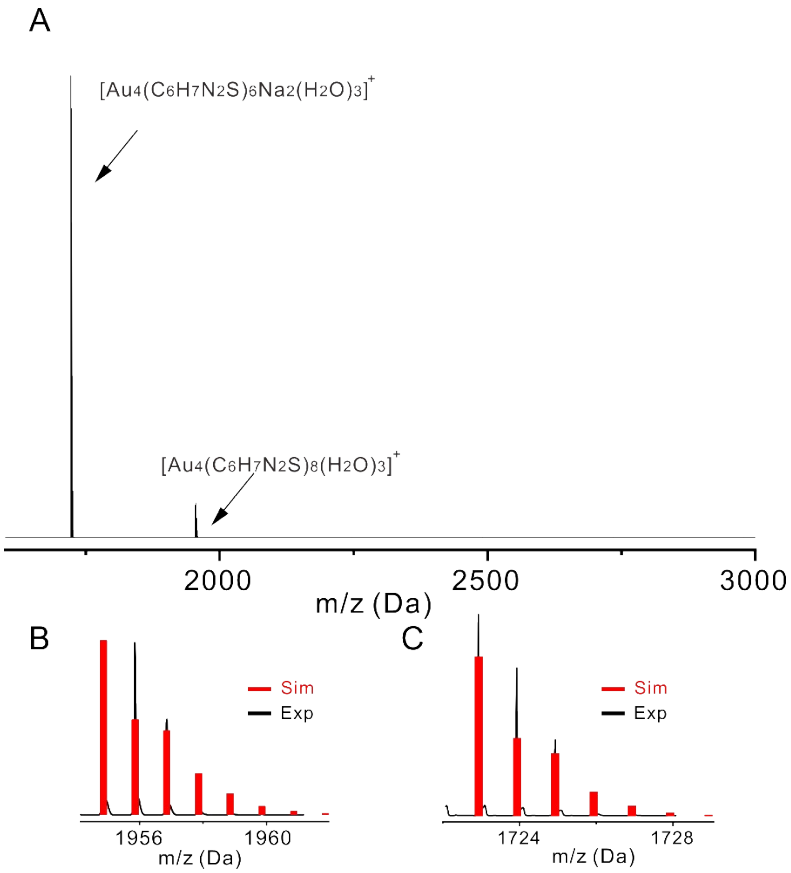

Figure S9. ESI-MS of the individual Au_4 NCs synthesized in the modified self-assembly systems.

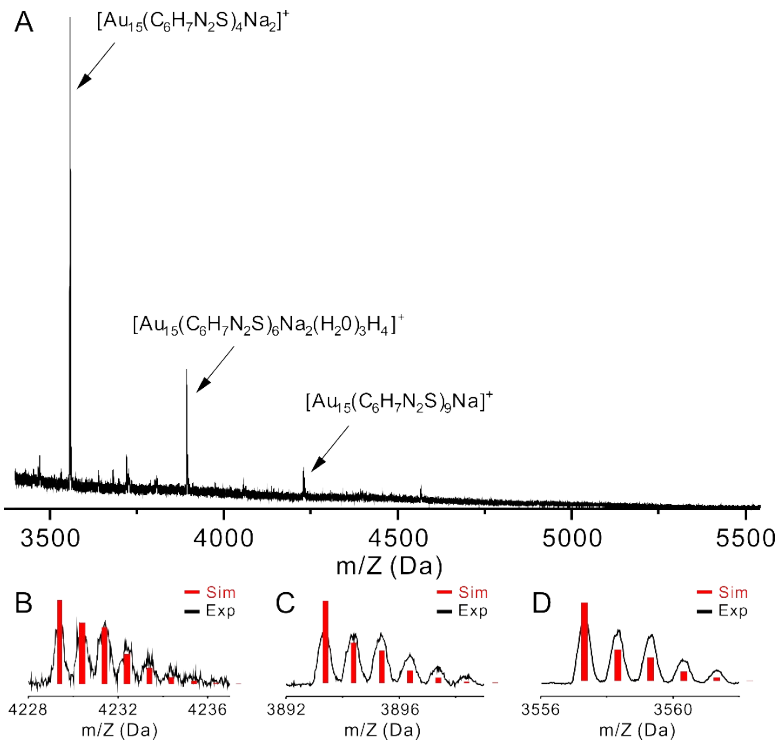

Figure S10. ESI-MS of the individual Au_{15} NCs synthesized in the modified self-assembly systems.

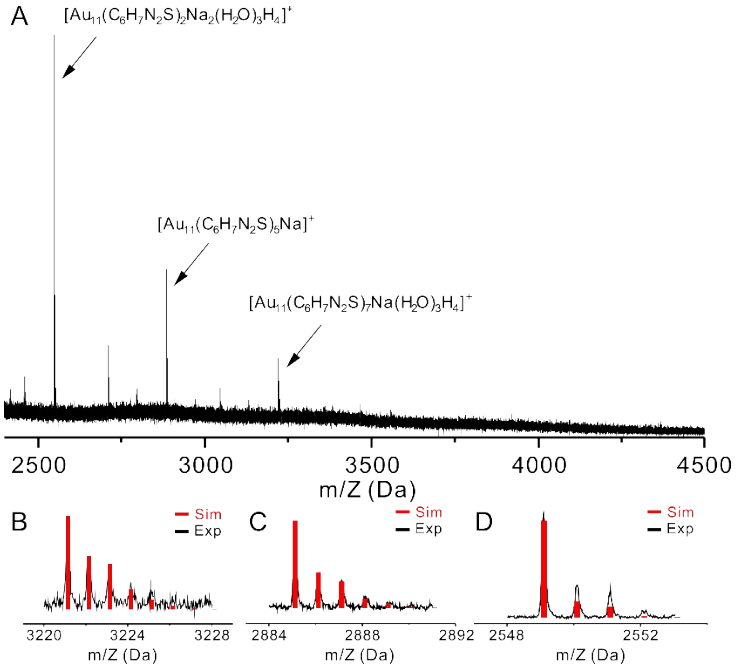

Figure S11. ESI-MS of the individual Au_{11} NCs synthesized in the modified self-assembly systems.

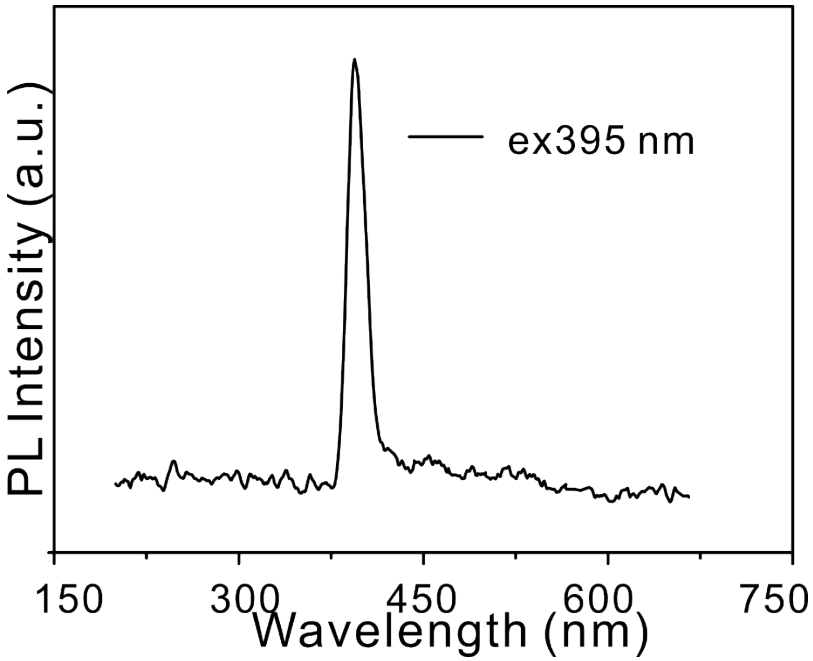

Figure S12. PL spectra of the individual Au_4 NCs.

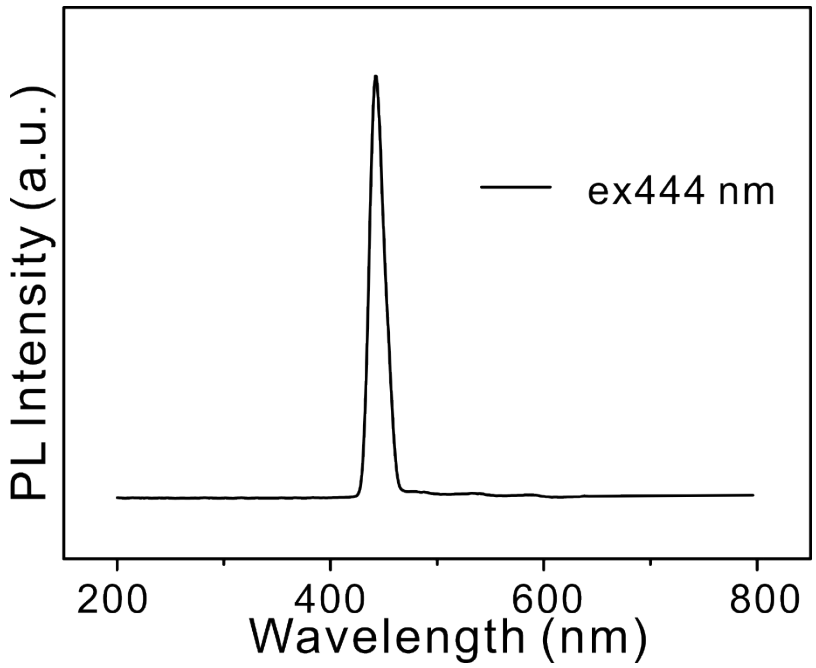

Figure S13. PL spectra of the individual Au_{15} NCs.

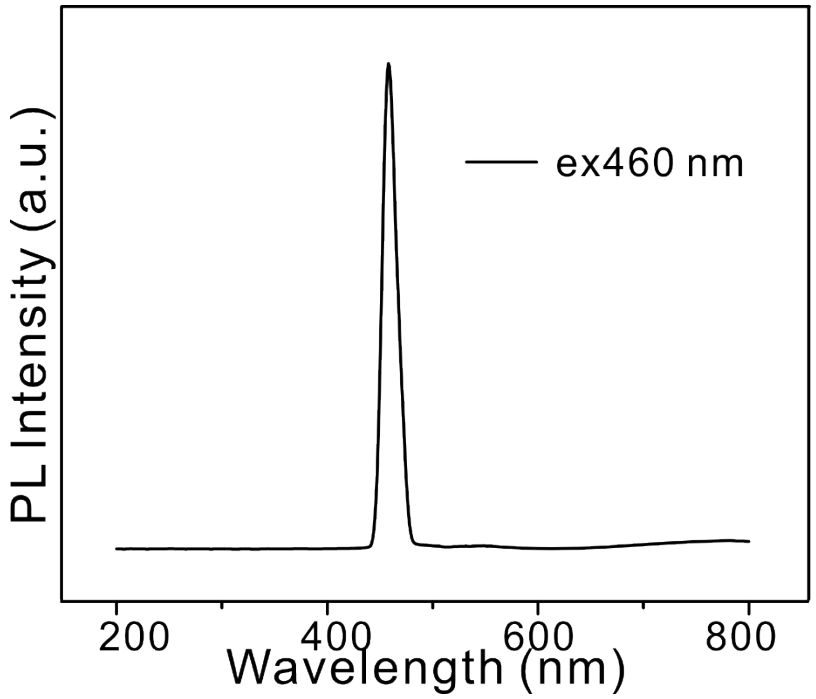

Figure S14. PL spectra of the individual Au_{11} NCs.

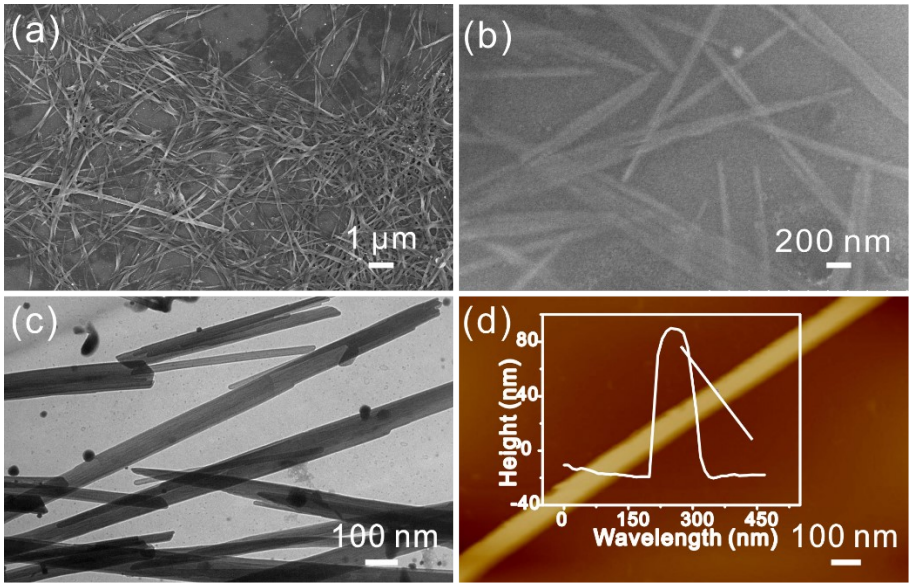

Figure S15. The morphological characterizations for Au_4 NCs self-assembly. (a-b) SEM images at different magnifications. (c) TEM image. (d) AFM image. Inset: height profile along the indicated line.

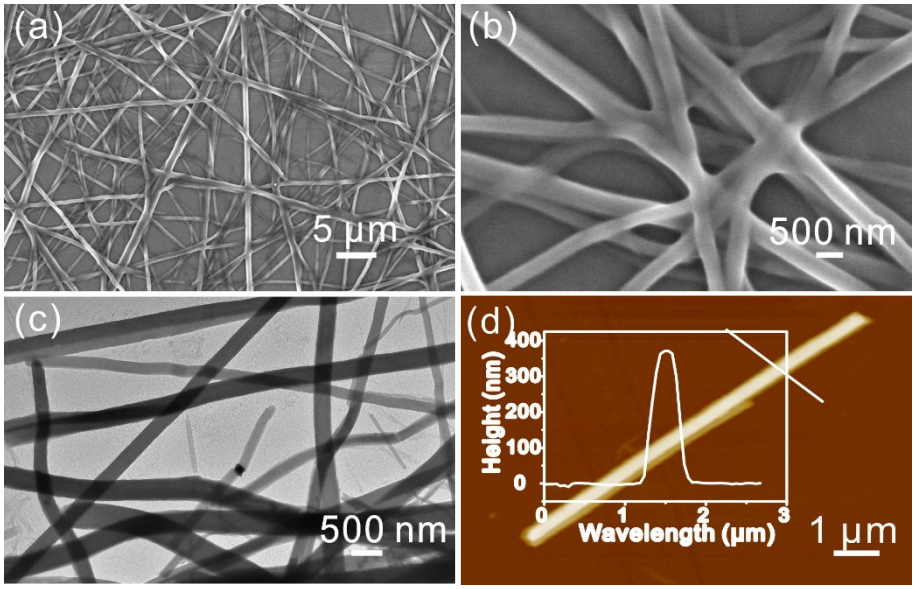

Figure S16. The morphological characterizations for Au_{15} NCs self-assembly. (a-b) SEM images at different magnifications. (c) TEM image. (d) AFM image. Inset: height profile along the indicated line.

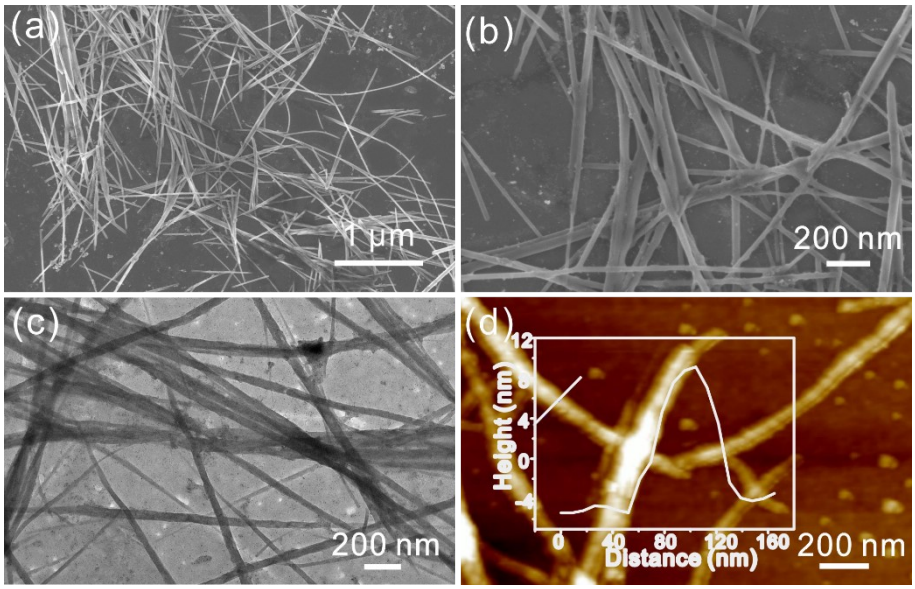

Figure S17. The morphological characterizations for Au_{11} NCs self-assembly. (a-b) SEM images at different magnifications. (c) TEM image. (d) AFM image. Inset: height profile along the indicated line.

Figure S18. The sample solutions of the self-assembly products of Au_4 NCs, Au_{15} NCs and Au_{11} NCs under UV light irradiation.

Table S1. PL lifetimes of the four kinds of nanofibers with fitting data.

	λex (nm)	λem (nm)	B1(%)	τ1 (μs)	B2(%)	τ2 (μs)	Tavg (μs)	$\chi 2$
Au_4 NCs	395	460	64.71	1.959	35.29	11.001	5.14	1.070
Au_5 NCs	453	530	66.56	1.377	33.44	9.654	4.14	0.990
Au_{15} NCs	444	590	62.64	2.240	37.36	8.673	4.64	0.802
Au_{11} NCs	460	670	64.38	1.436	35.62	9.516	4.31	0.804