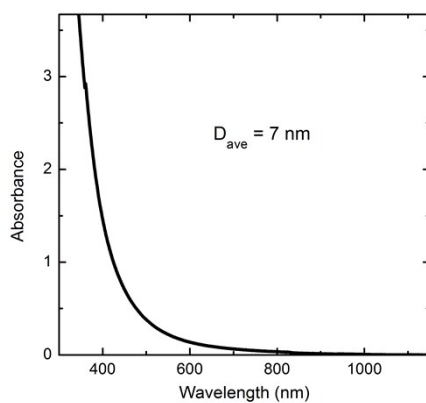


## Supporting Information

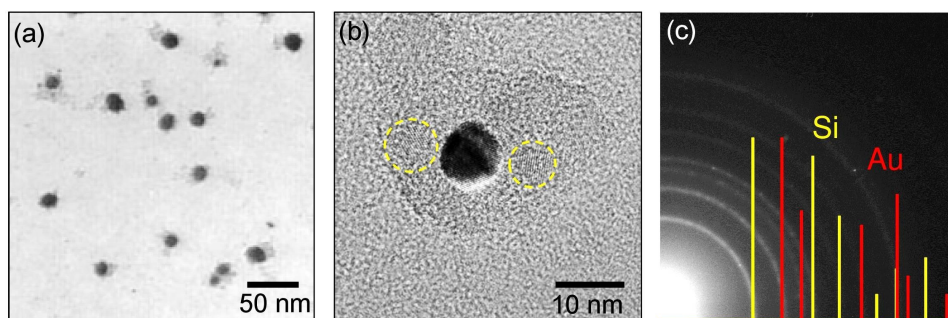
# Silicon Nanocrystal-Based Noble Metal Hybrid Nanoparticles

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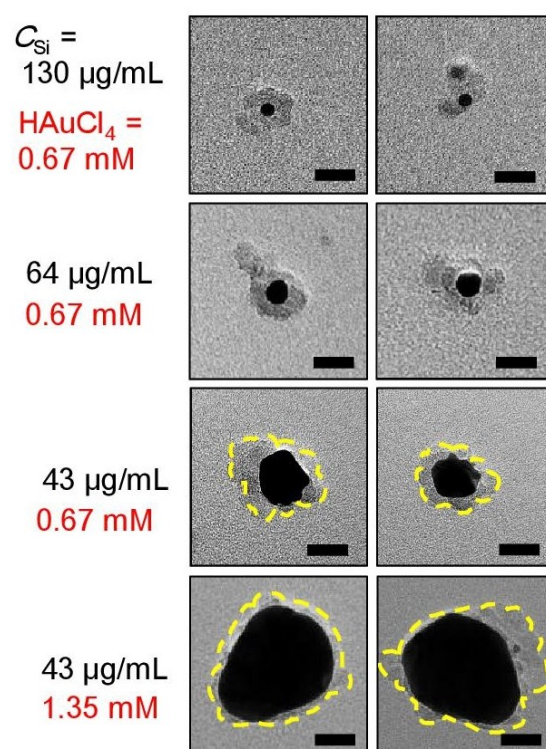
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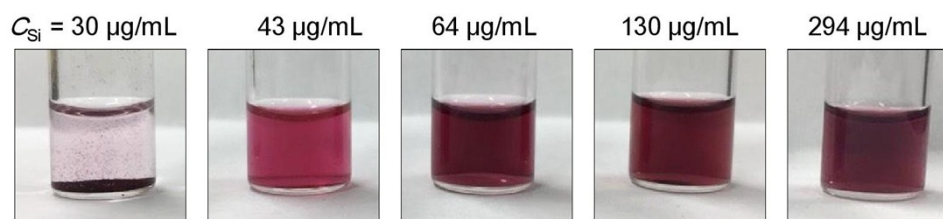
**Figure S1.** UV-Vis absorption spectrum of Si NCs ( $D_{ave} = 7 \text{ nm}$ ) dispersed in methanol



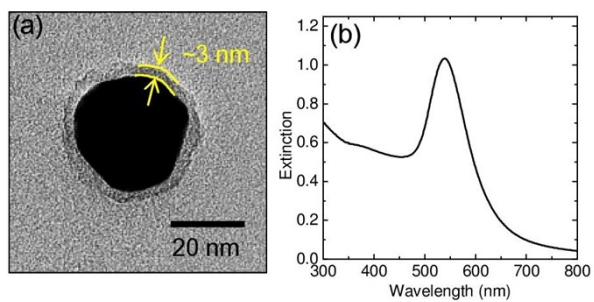
**Figure S2.** TEM images of Si-Au hybrid NPs ( $C_{\text{Si}} = 64 \mu\text{g/mL}$ ). Scale bars are 10 nm. .  
 Electron diffraction patterns from hundreds of hybrid NPs are also shown, which can be assigned to crystalline Au (PDF#04-0784) and Si (PDF#27-1402).



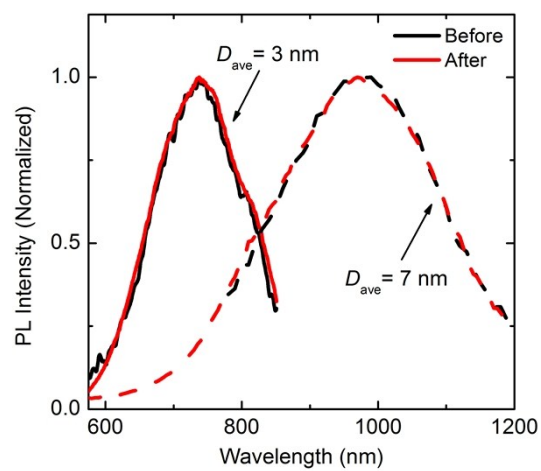
**Figure S3.** TEM images of Si-Au hybrid NPs prepared from mixture solutions with different  $C_{\text{Si}}$ . Scale bars are 20 nm.



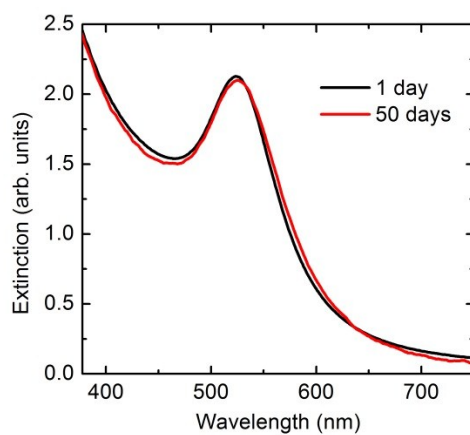
**Figure S4.** Photographs of the mixture solution of Si NCs and HAuCl<sub>4</sub> with different  $C_{Si}$  after 30 min stirring.



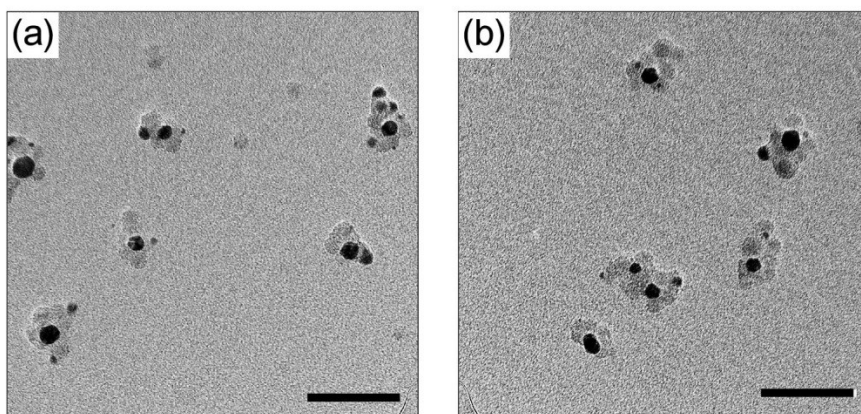
**Figure S5.** (a) TEM image of a Si-Au hybrid NP prepared from the solution of 3 nm Si NCs. (b) Extinction spectrum of the dispersion of Si-Au NPs.



**Figure S6.** Photoluminescence spectra of Si NCs with different sizes before (black) and after (red) hybridization with Au. Excitation wavelength is 405 nm.



**Figure S7.** Extinction spectra of Si-Au hybrid NPs stored in methanol for 1 day (black) and 50 days (red).



**Figure S8.** (a), (b)TEM images of Si-Ag hybrid NPs with  $C_{\text{Si}} = 32 \mu\text{g/mL}$ . Scale bars are 50 nm.