

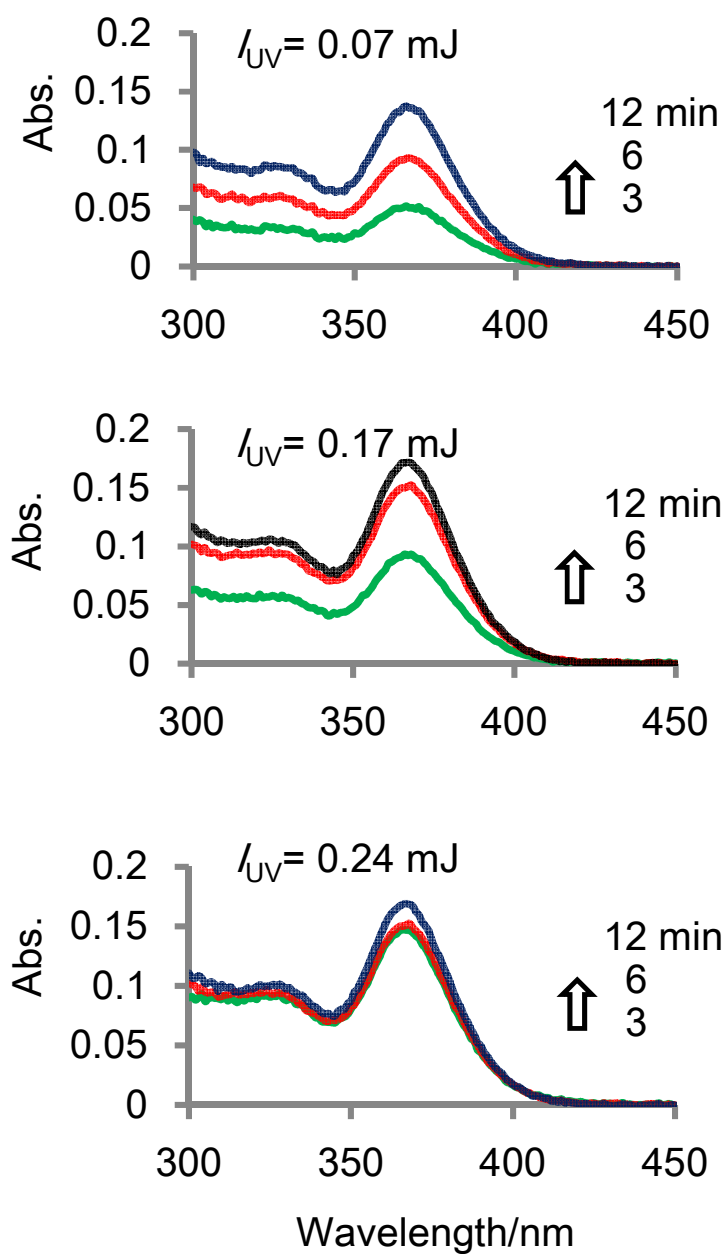
Reduction of Yb(III) to Yb(II) by Two-Color Two-Photon Excitation

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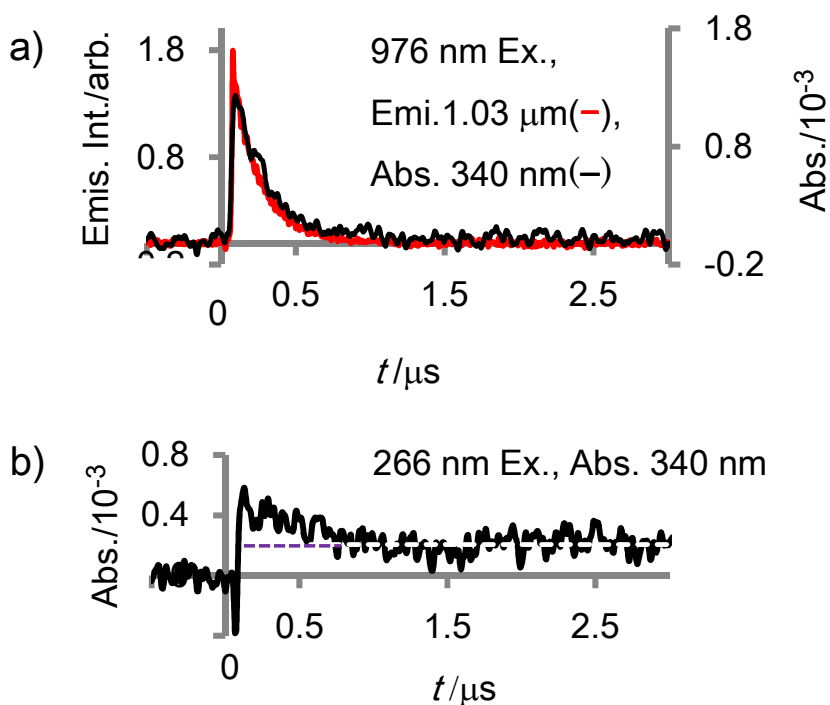
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Supporting Information 1.

The time evolution of difference spectra after two-color two-photon excitation with a delay time of 14 ns between the first IR pulse at 975 nm (at a fixed energy of 4 mJ/pulse) and the second UV pulses at 355 nm at pulses of 0.07, 0.17, and 0.24 mJ with 10 Hz for YbCl_3 in MeOH solution.



Supporting Information 2

Time dependencies by nanosecond laser photolysis after (a) IR (976-nm) and (b) UV (266-nm) pulse excitations. The concentrations of YbCl_3 in EtOH are 0.7 M for IR and 0.08 M for UV photolysis. The emission at 1.03 μm (the red line) and the transient absorption at 340 nm (the black line) have the same decay time of 0.2 μs . The transient absorption at 340 nm for the UV photolysis has a decay component due to the $\text{CT} \leftarrow 4f^*$ and the residual constant due to Yb^{2+} . The dotted line is the average of absorbance between 1 and 3 μs .