

# Supplementary Material: Precise Controlled Target Molecule Release through Light-Triggered Charge Reversal Bridged Polysilsesquioxane Nanoparticles

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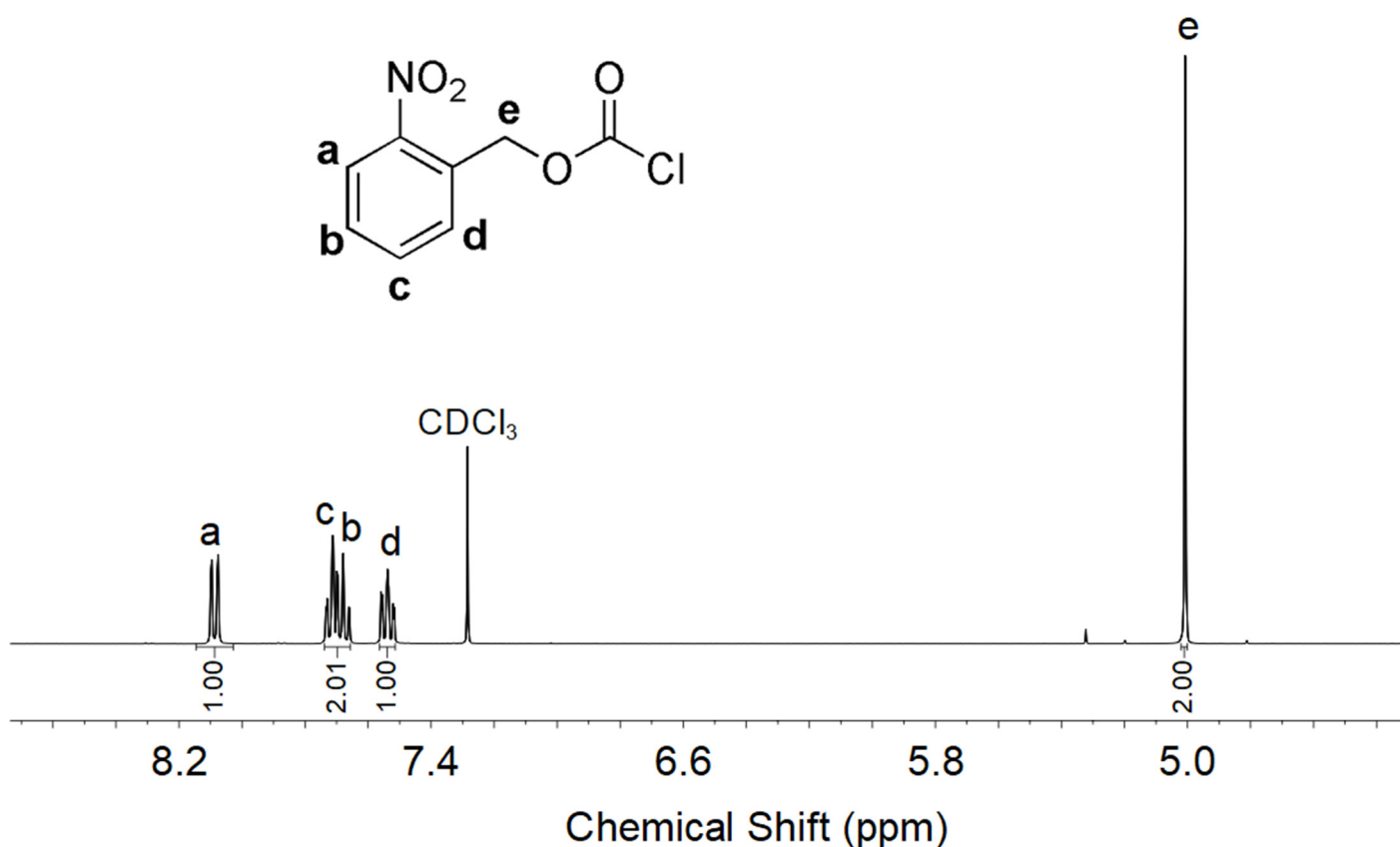


Figure S1. <sup>1</sup>H NMR spectrum of *o*-nitrobenzyl chloroformate.

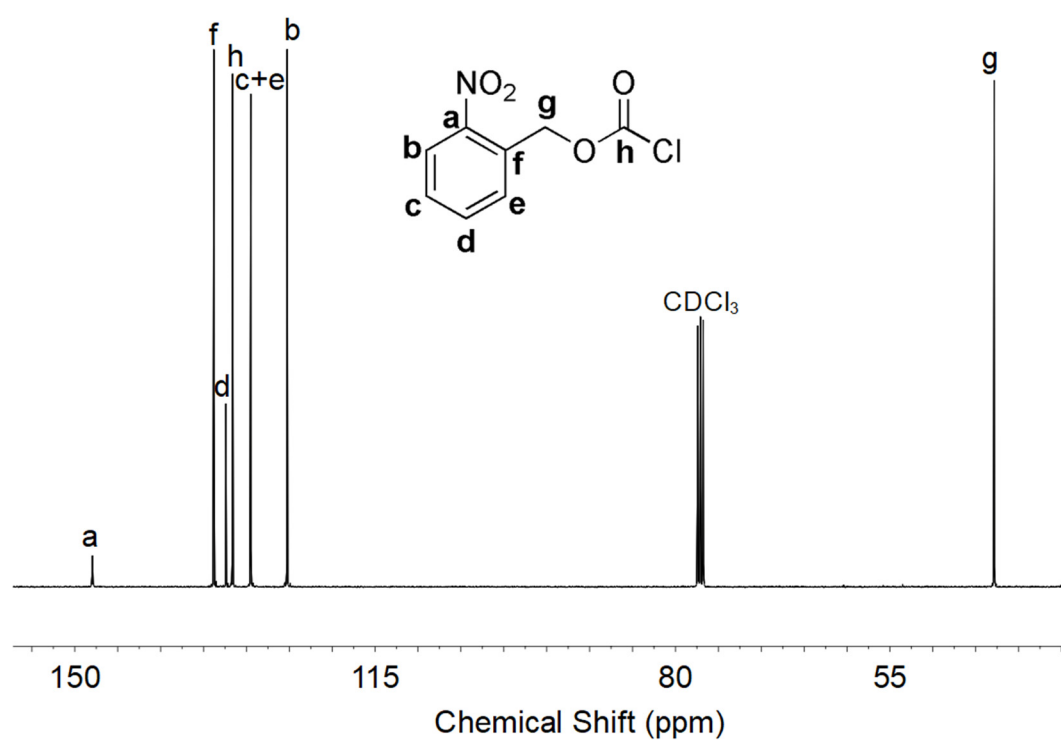


Figure S2.  $^{13}\text{C}$  NMR spectrum of *o*-nitrobenzyl chloroformate.

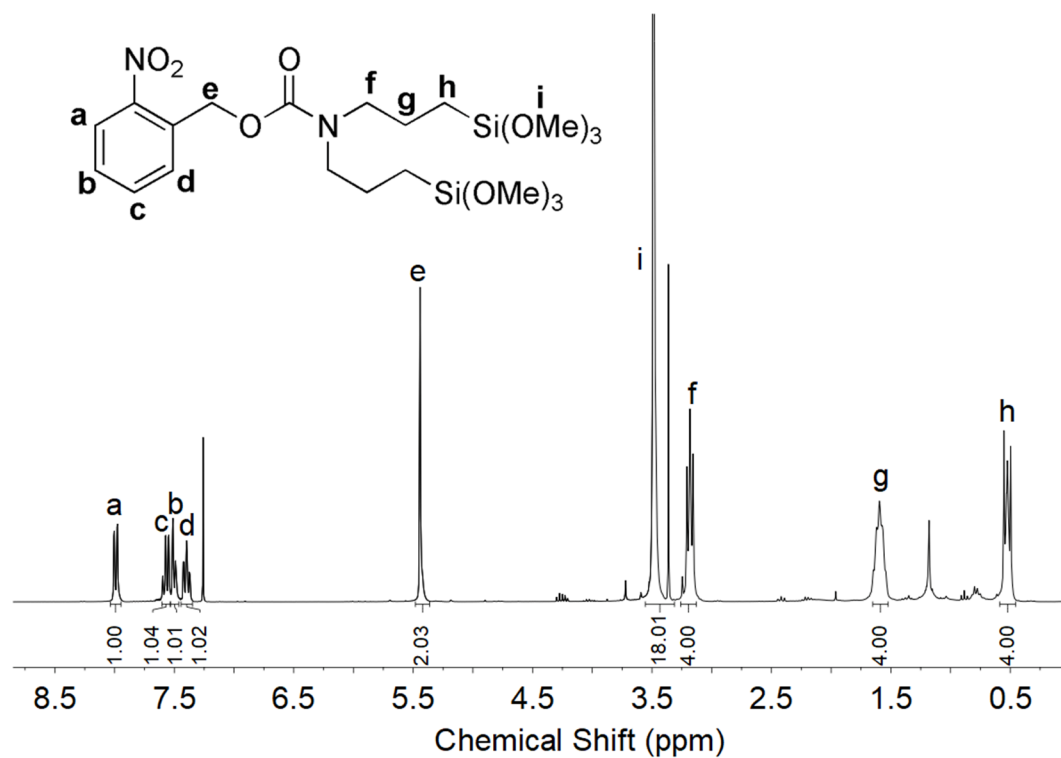
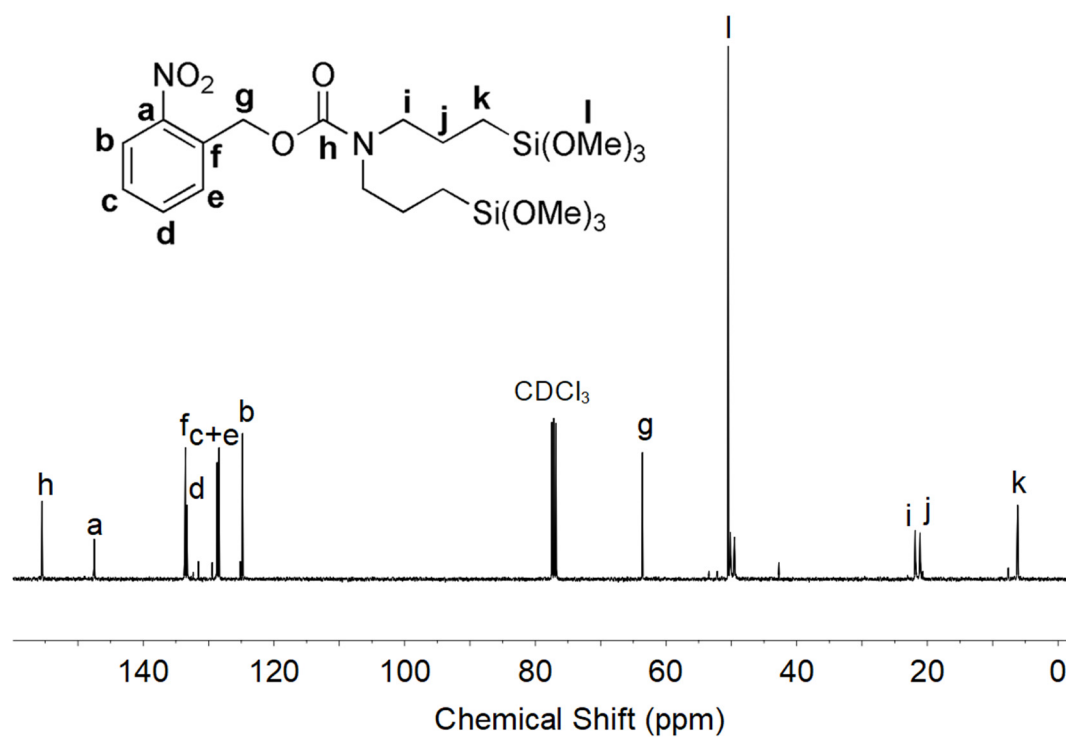
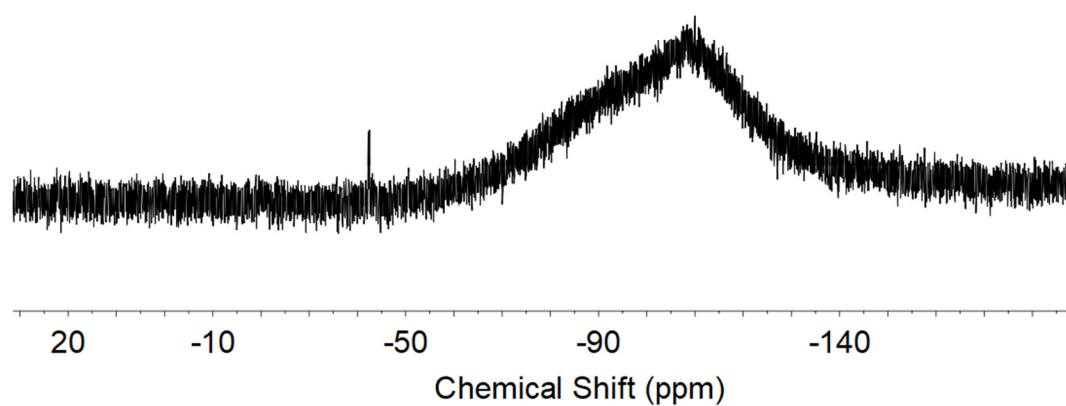


Figure S3.  $^1\text{H}$  NMR spectrum of *o*-nitrobenzyl bis-trimethoxysilylpropyl carbamate.



**Figure S4.**  $^{13}\text{C}$  NMR spectrum of *o*-nitrobenzyl bis-trimethoxysilylpropyl carbamate.



**Figure S5.**  $^{29}\text{Si}$  NMR spectrum of *o*-nitrobenzyl bis-trimethoxysilylpropyl carbamate.

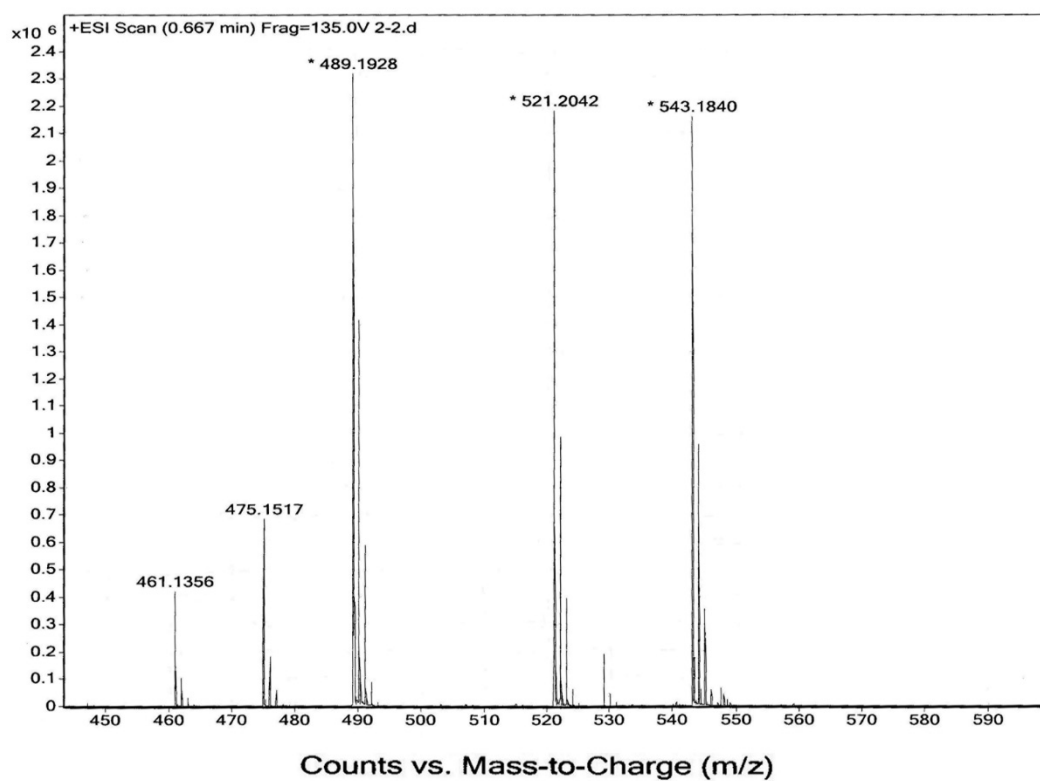


Figure S6. MS spectrum of *o*-nitrobenzyl bis-trimethoxysilylpropyl carbamate.

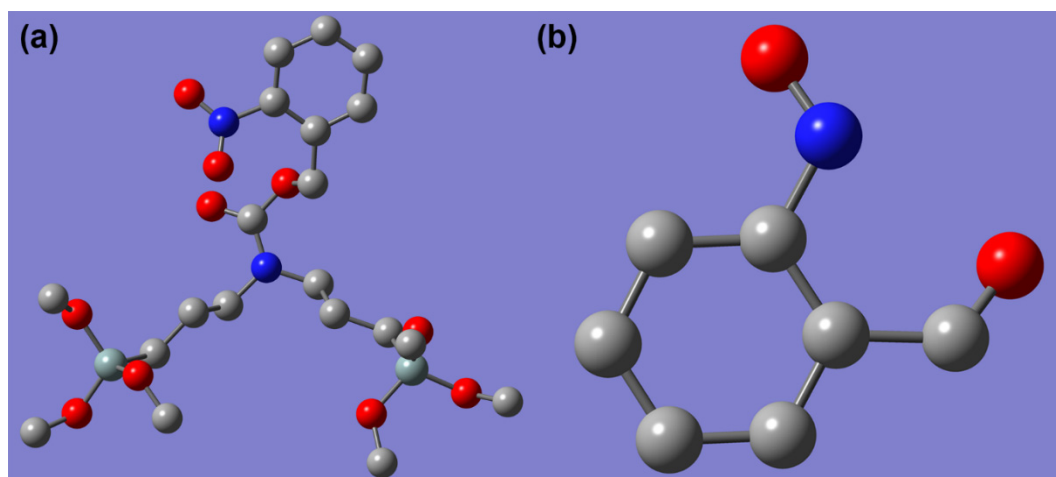
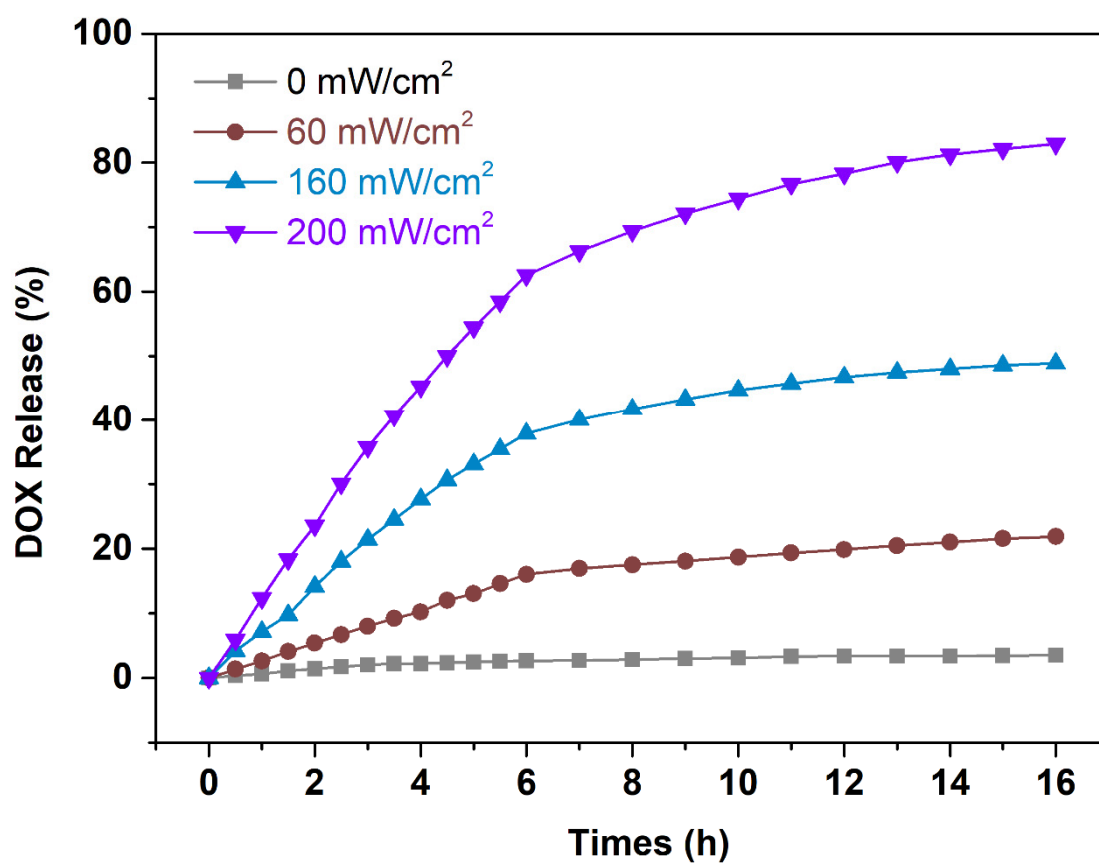


Figure S7. The theoretical calculated chemical structures of *o*-NB monomer (a) and photolysis by-product *o*-nitrosobenzaldehyde (b).



**Figure S8.** DOX release profiles of DOX@BPS from 0 to 16 h at different laser intensities (0, 60, 160, and 200 mW/cm<sup>2</sup>) in PBS buffer solution (pH 7.4) at 37 °C.