

# Photoremovable protecting groups as controlled release device for pheromone

*Sanghamitra Atta,<sup>1</sup> Mohammed Iqbal,<sup>1</sup> Nishitha Boda,<sup>1</sup> Samiran S. Gauri<sup>2</sup> and N.D. Pradeep  
Singh<sup>1\*</sup>*

<sup>1</sup>Department of Chemistry, Indian Institute of Technology, Kharagpur-721302, India.

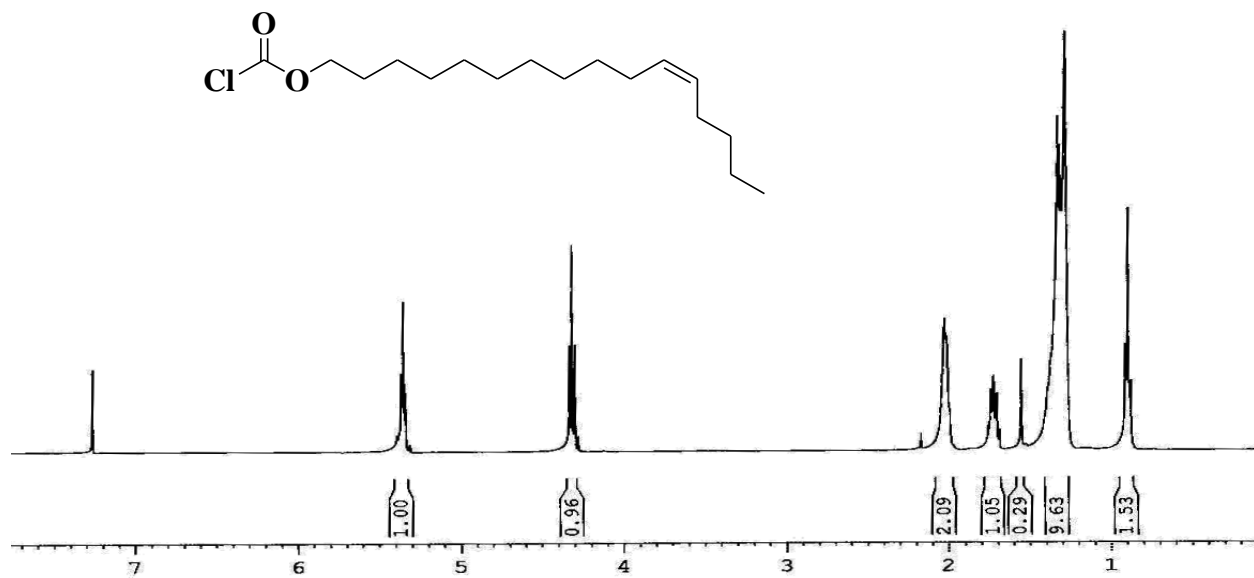
<sup>2</sup>Department of Biotechnology, Indian Institute of Technology, Kharagpur-721302, India.

\*Corresponding author: Phone: (+) 91-3222-282324; Fax: (+) 91-3222-282252

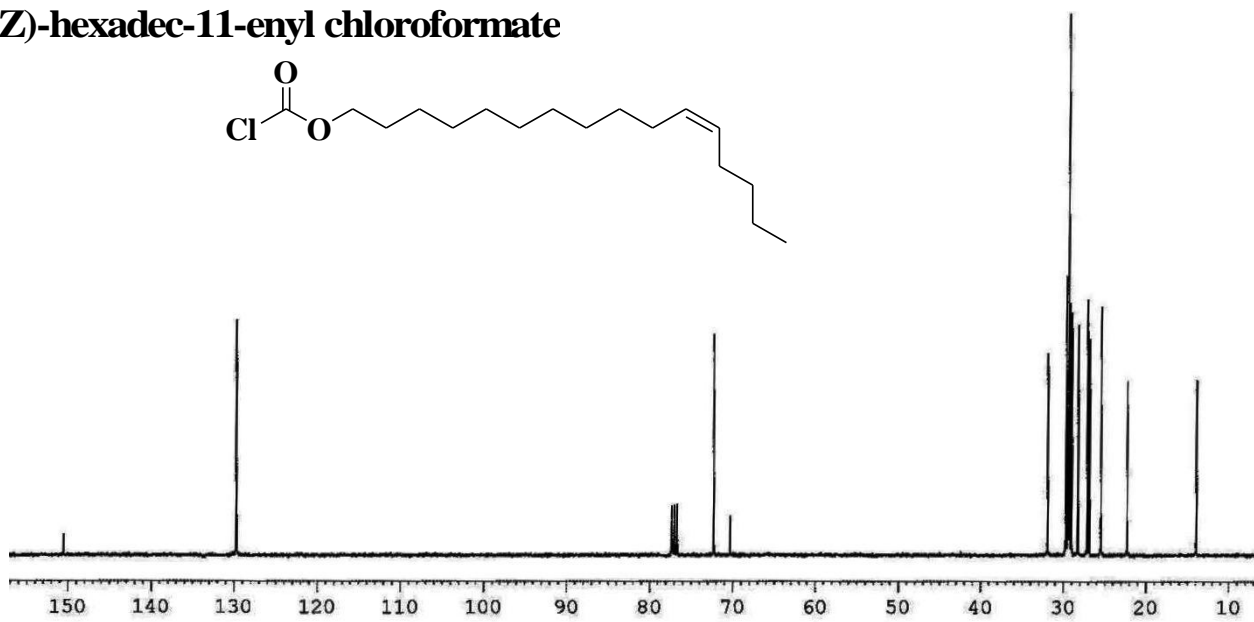
*E-mail:* [ndpradeep@chem.iitkgp.ernet.in](mailto:ndpradeep@chem.iitkgp.ernet.in)

Content:	Pages
(1) $^1\text{H}$ NMR and $^{13}\text{C}$ NMR spectra of caged compounds ( <b>3a-d</b> ) and pheromone Chloroformate <b>1a</b> .	3-7
(2) $^1\text{H}$ NMR spectra of caged compound <b>3c</b> at regular intervals of UV ( $\geq 350$ nm) irradiation ( <b>Fig. S1</b> ).	8
(3) Absorption spectra of caged compound <b>3d</b> in aqueous ethanol solution at regular intervals of irradiation by UV light ( $\geq 350$ nm) ( <b>Fig. S2</b> ).	9
(4) Absorption (A) and emission (B) spectra of caged compound <b>3a</b> in aqueous ethanol solution at regular intervals under direct sunlight irradiation ( <b>Fig. S3</b> ).	10
(5) Absorption (A) and emission (B) spectra of caged compound <b>3c</b> in loam soil at regular intervals under direct sunlight irradiation ( <b>Fig. S4</b> ).	11

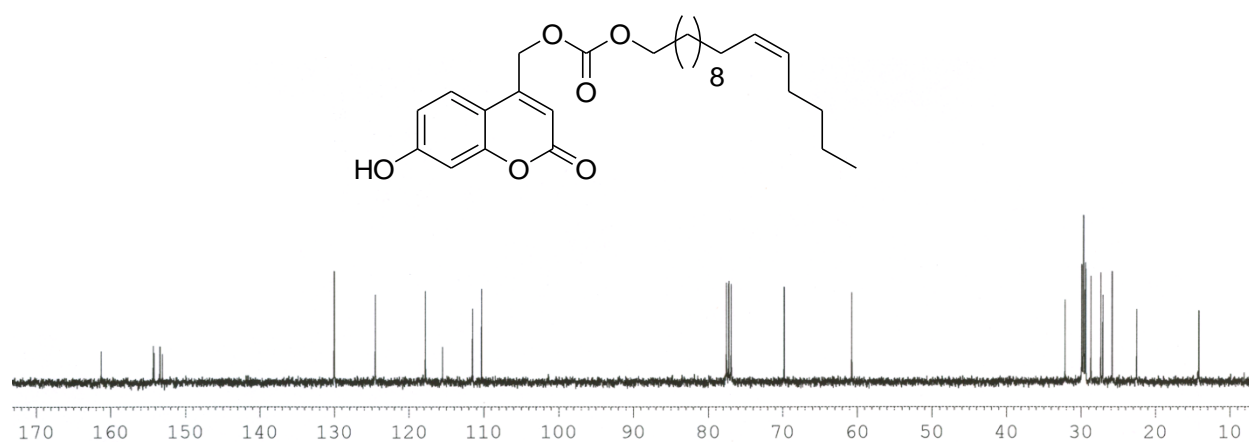
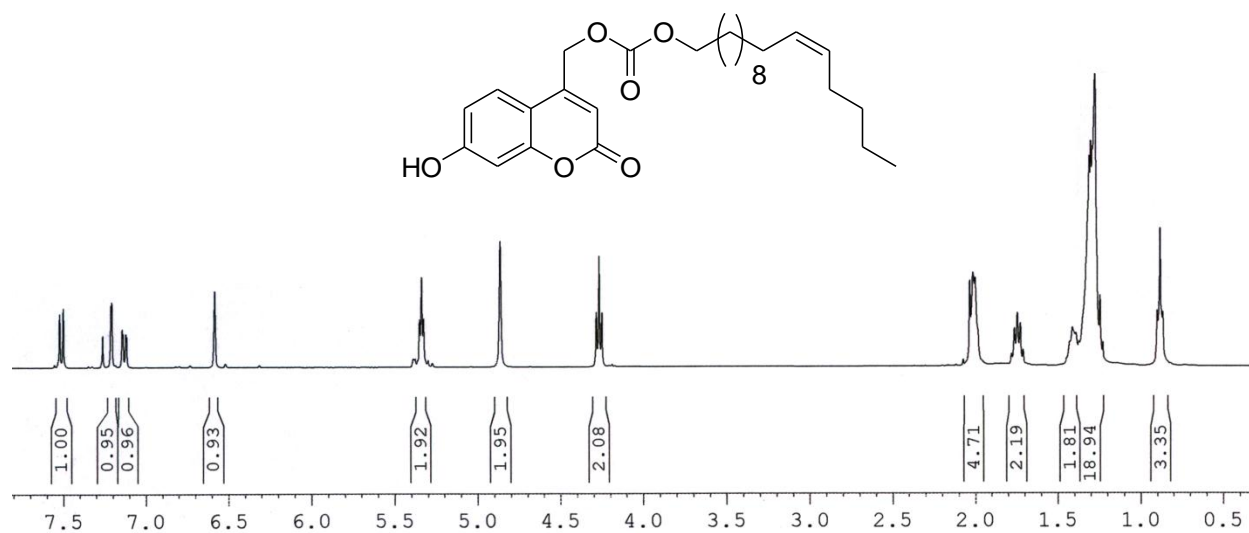
### (Z)-hexadec-11-enyl chloroformate



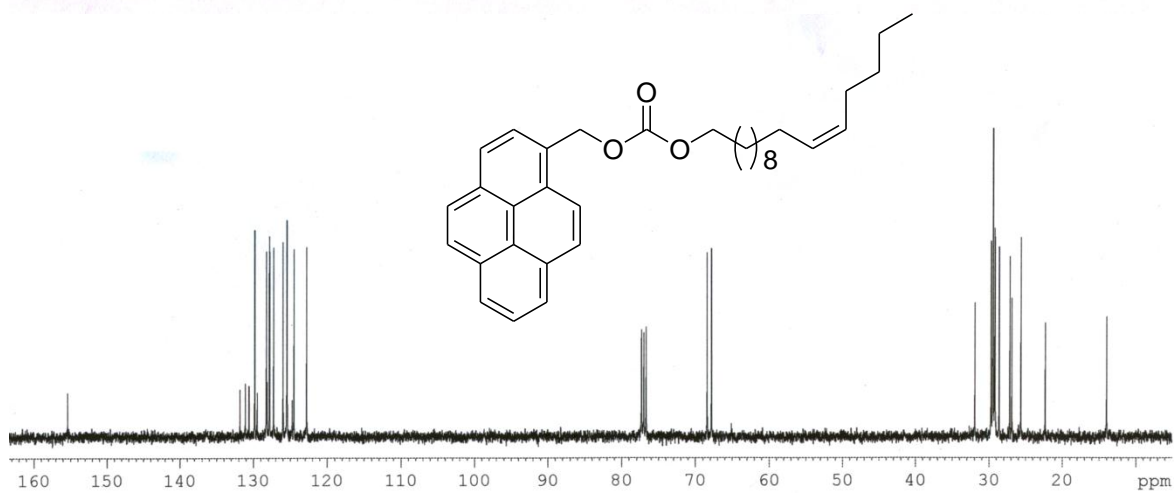
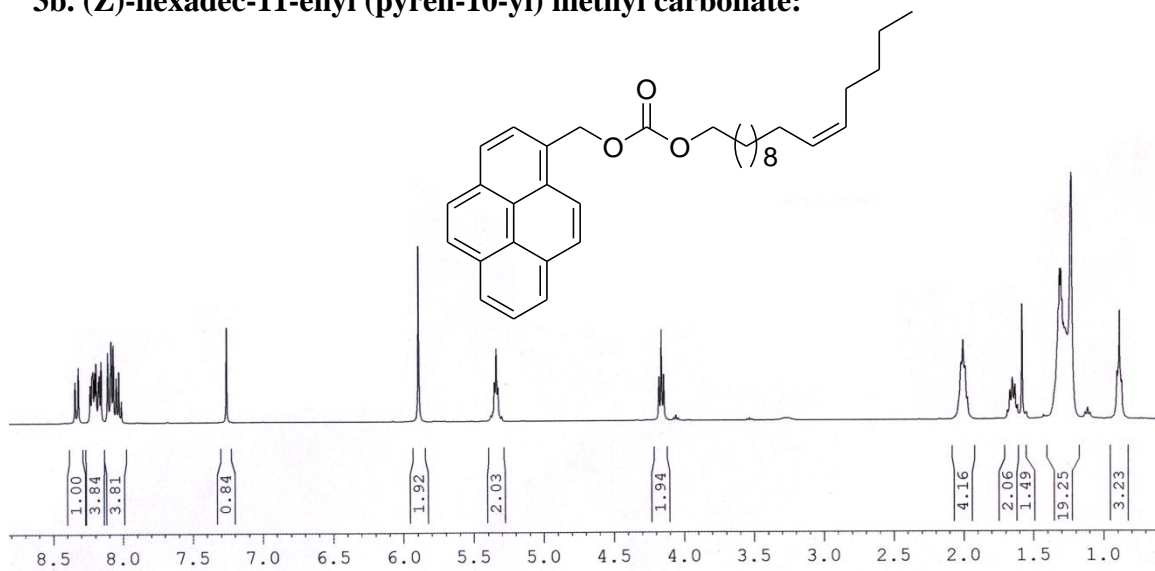
### (Z)-hexadec-11-enyl chloroformate



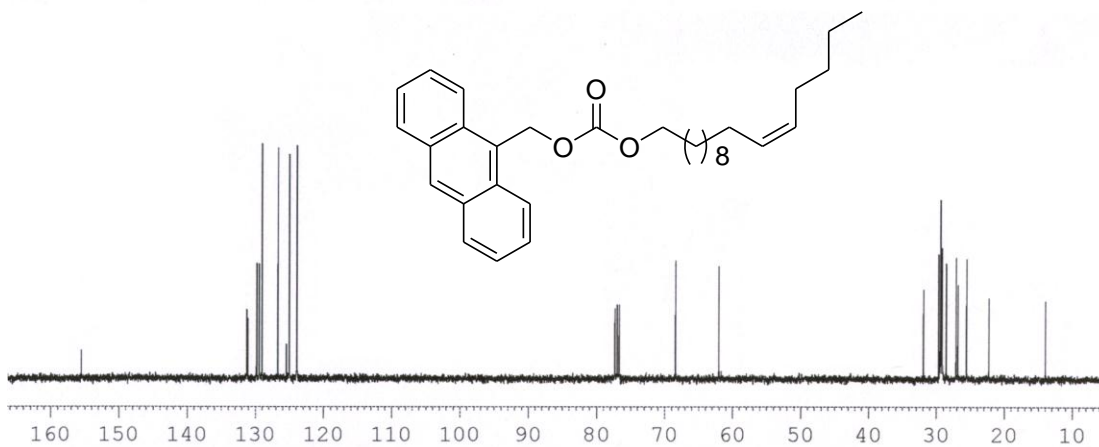
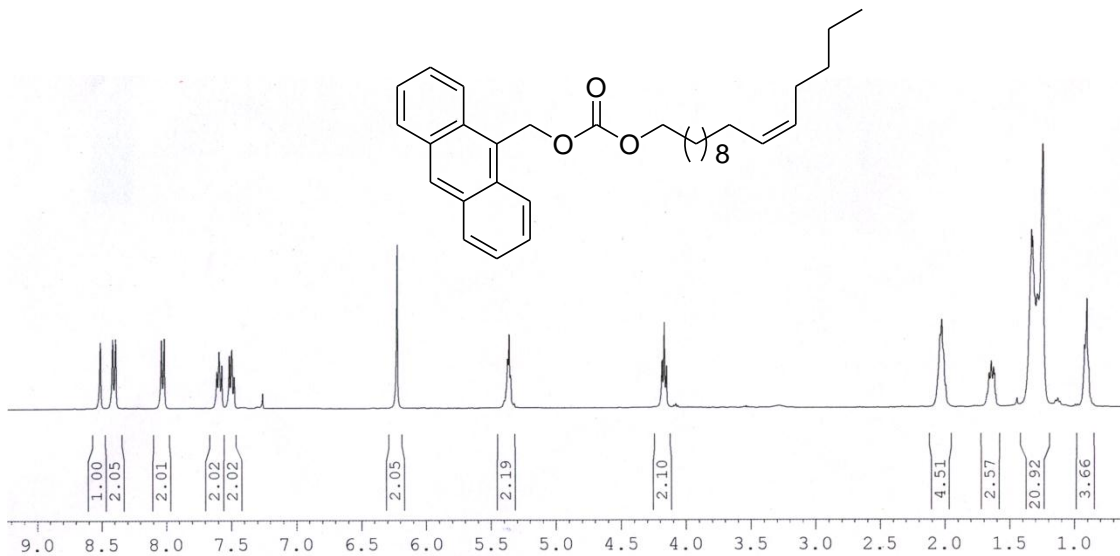
**3a. (Z)-hexadec-11-enyl (7-hydroxy-2-oxo-2H-chromen-4-yl) methyl carbonate:**



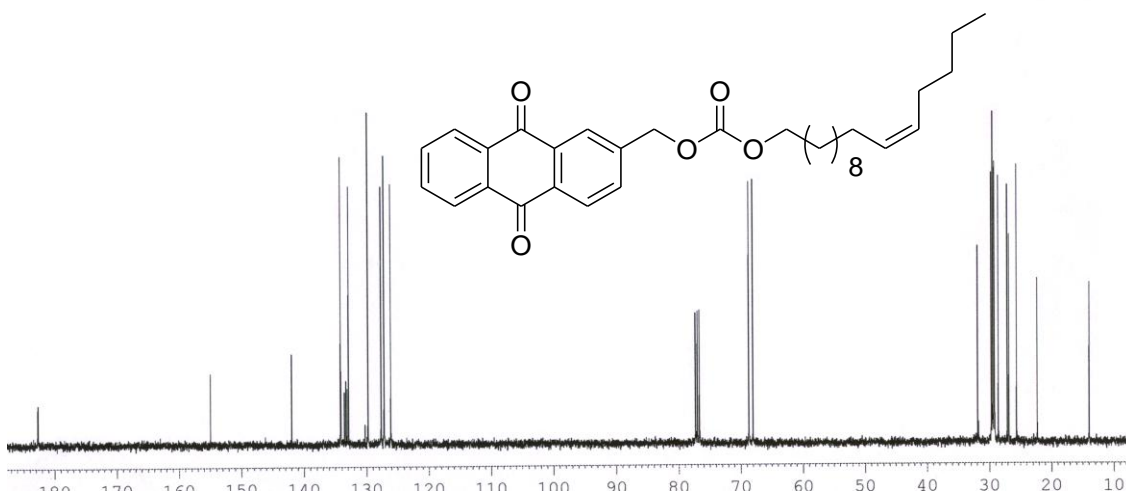
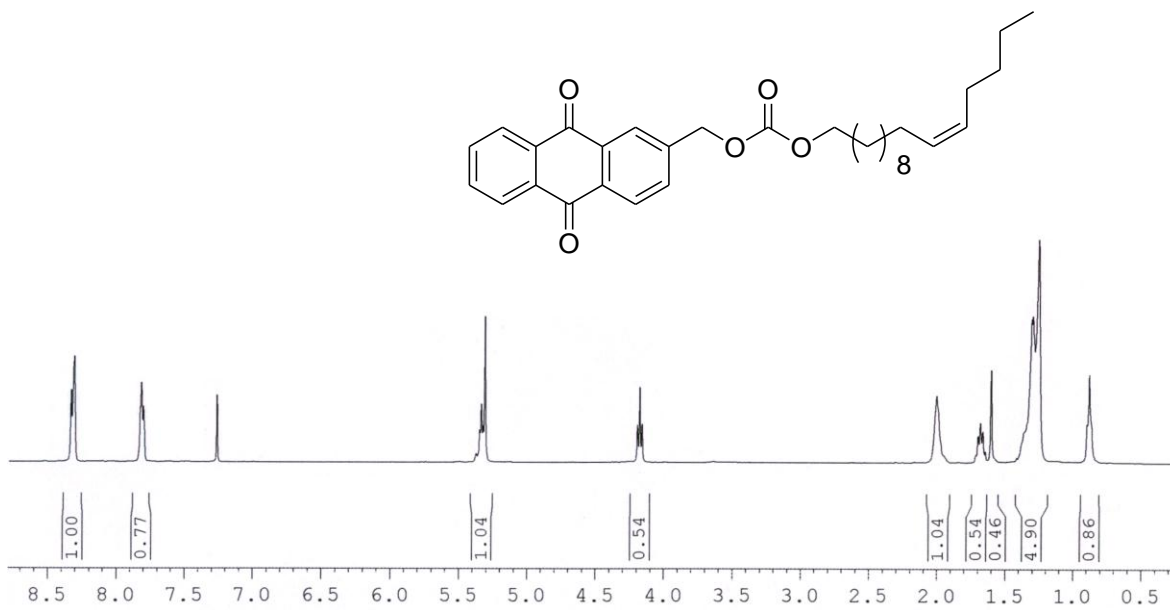
**3b. (Z)-hexadec-11-enyl (pyren-10-yl) methyl carbonate:**

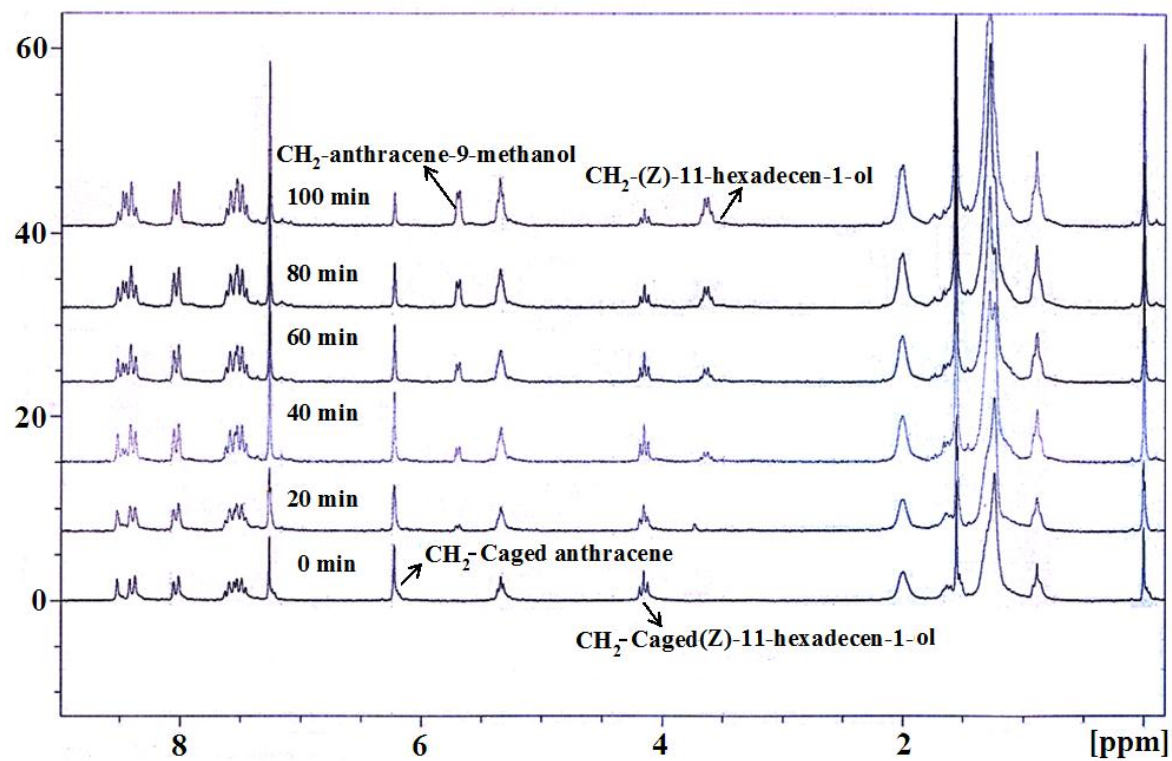


**3c. (anthracen-9-yl) methyl (Z)-hexadec-11-enyl carbonate:**



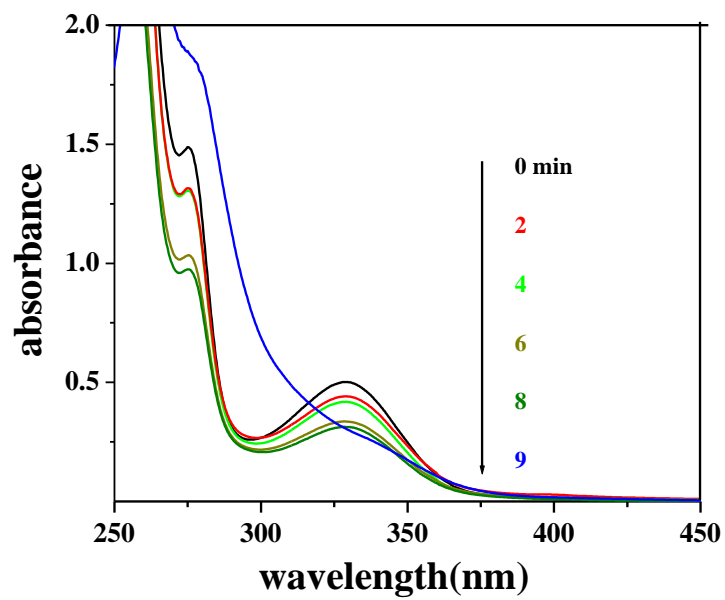
**3d. (Z)-hexadec-11-enyl (9, 10-dioxoanthracen-6-yl) methyl carbonate:**



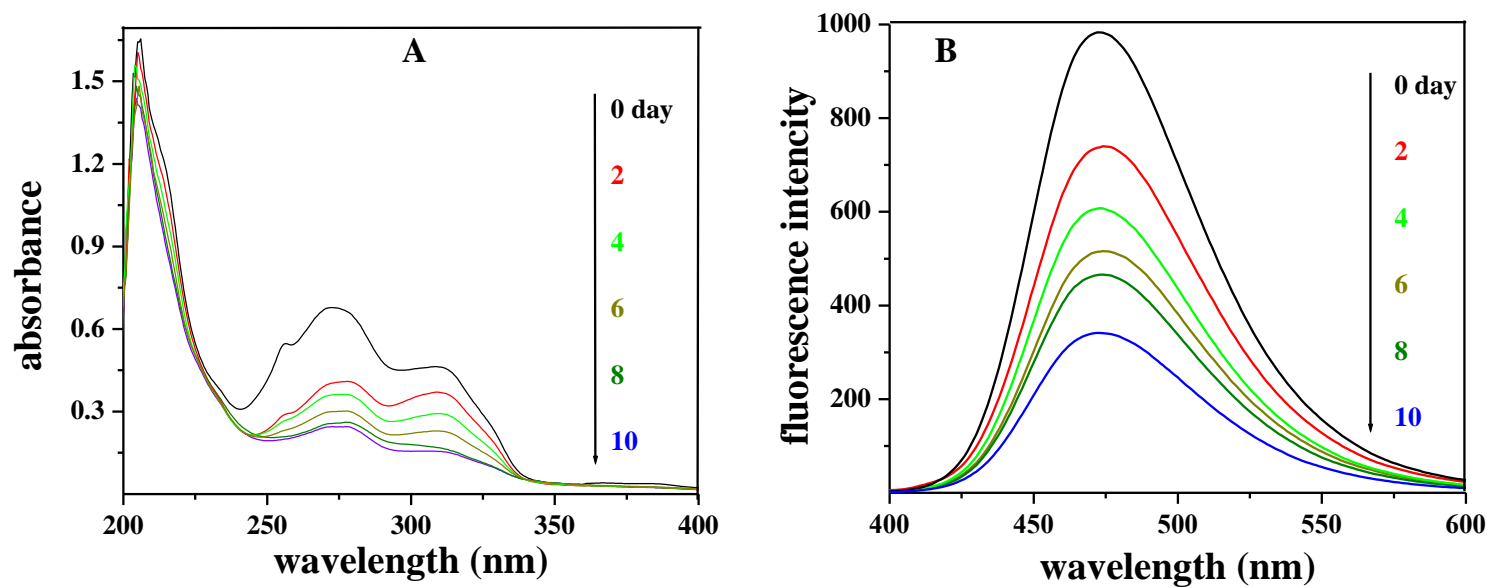


**Figure S1:** <sup>1</sup>H NMR spectra of caged compound **3c** at regular intervals of irradiation

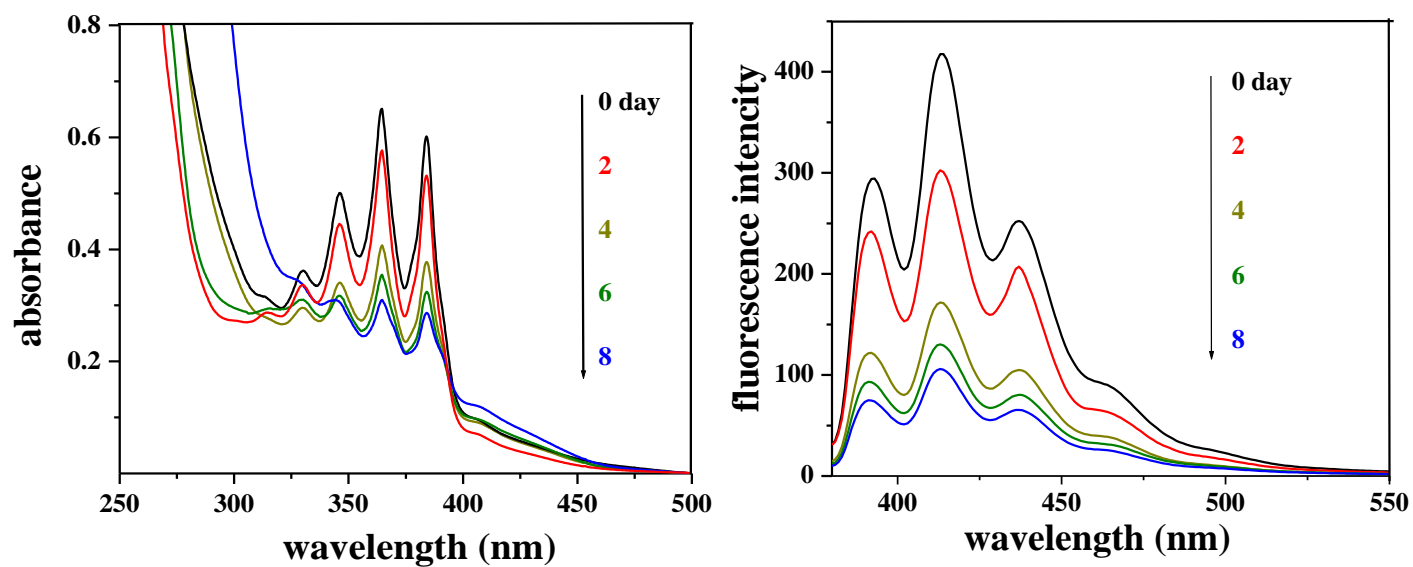




**Fig. S2:** Absorption spectra of caged compound **3d** in aqueous ethanolic solution at regular intervals of irradiation by UV light ( $\geq 350$ nm).



**Fig. S3:** Absorption (A) and emission (B) spectra of caged compound **3a** in aqueous ethanolic solution at regular intervals under direct sunlight irradiation.



**Fig. S4:** Absorption (A) and emission (B) spectra of caged compound **3c** in loam soil at regular intervals under direct sunlight irradiation.