

Supporting Information

Non-ionic photo-acid generators for applications in two-photon lithography

Lorenz Steidl^{a,d}, Shalin J. Jhaveri^{a,b}, Ramakrishnan Ayothi^a, Jing Sha^a, Jesse D. McMullen^c, Sin Yee Cindy Ng^a, Warren R. Zipfel^c, Rudolf Zentel^{d*}, and Christopher K. Ober^{a*}

^aDepartment of Materials Science and Engineering, Cornell University, Ithaca, NY 14853,

^bDepartment of Chemistry and Chemical Biology, Cornell University, Ithaca, NY 14853,

^cDepartment of Applied and Engineering Physics, Cornell University, Ithaca, NY 14853

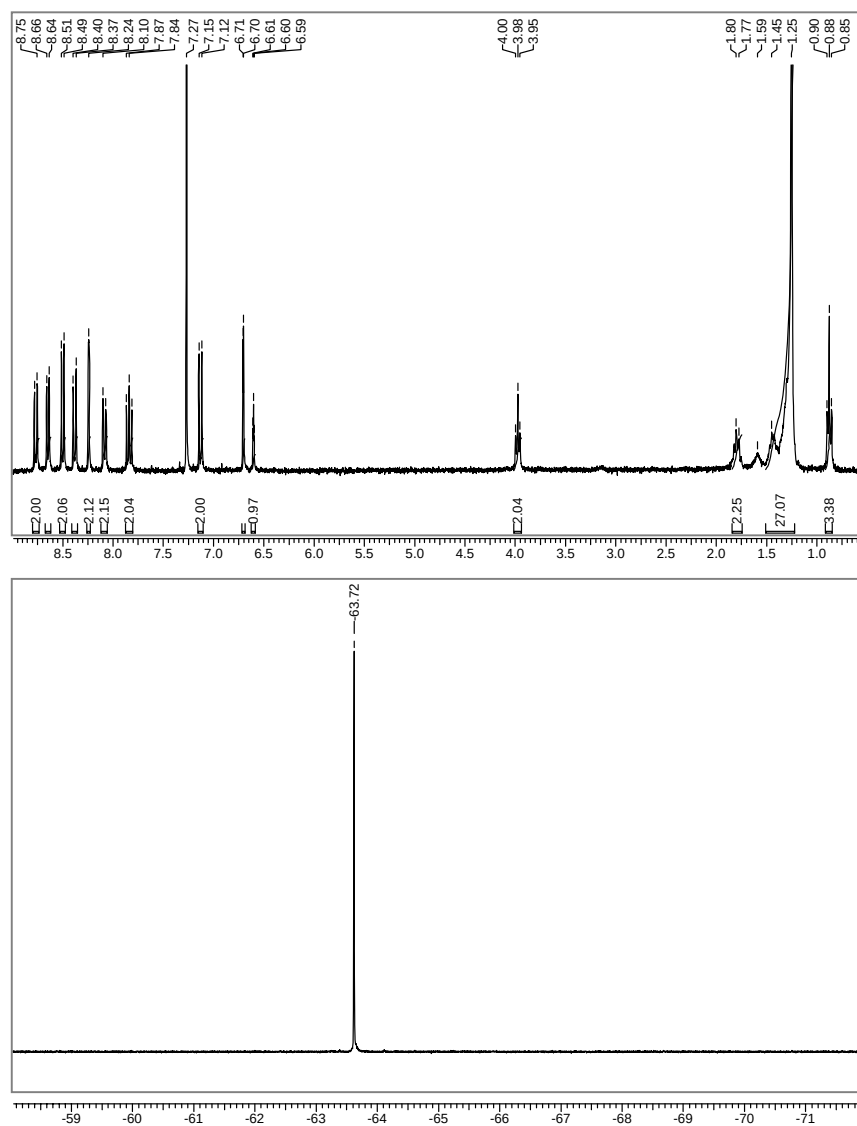
^dInstitute of Organic Chemistry, Department of Chemistry and Pharmacy, University of Mainz, Duesbergweg 10-14, 55128 Mainz, Germany

* Corresponding authors. Tel: (607) 255-8417 (C.K.O.) Fax: (607) 255-2365 (C.K.O.) E-mail: cober@ccmr.cornell.edu (C.K.O.), Tel: (49-6131)-39-20361 (R.Z.) Fax: (49-6131) 39-24778 (R.Z.) E-mail: zentel@uni-mainz.de (R.Z.).

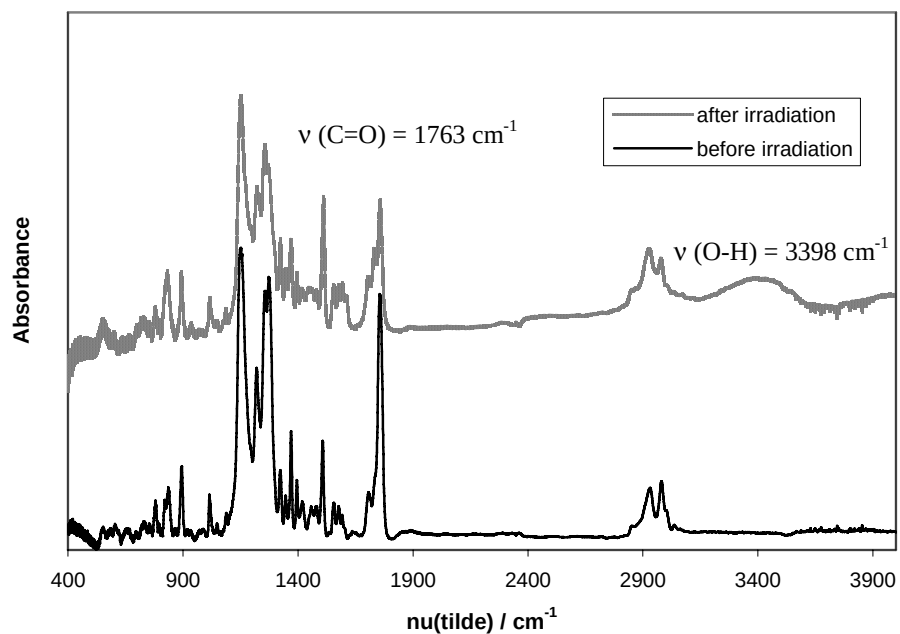
-¹H- and ¹⁹F-NMR spectra of PAGs 1-4

- Determination of photoacid formation in solution.

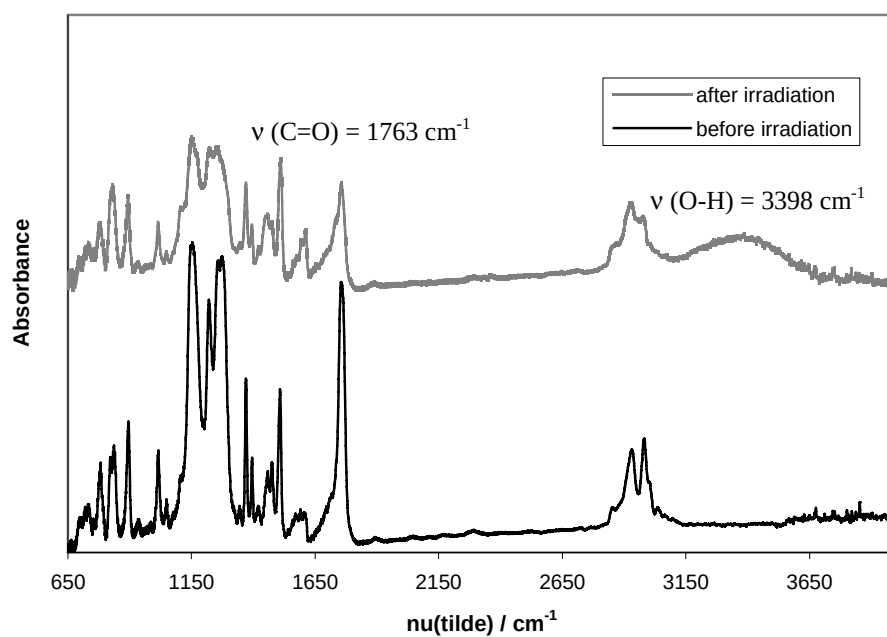
- Determination of photoacid formation in PtBOCS film.



S-Figure 4. ^1H -NMR (A) and ^{19}F -NMR (B) spectra of PAG 4.

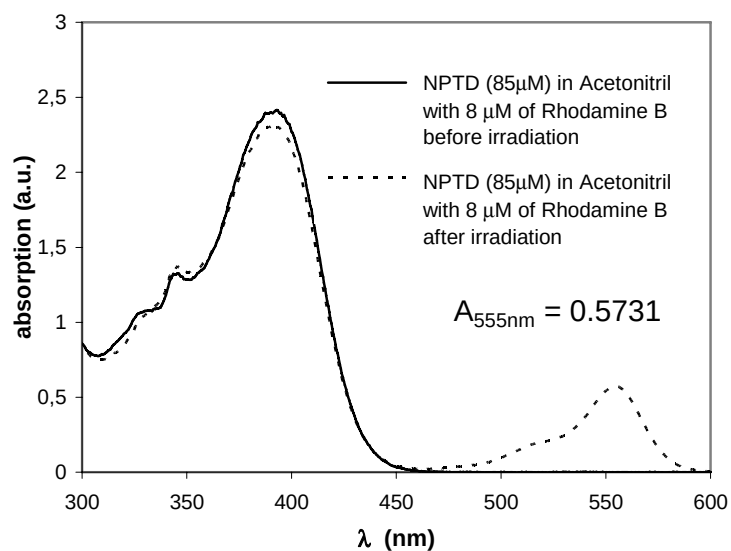


(A)

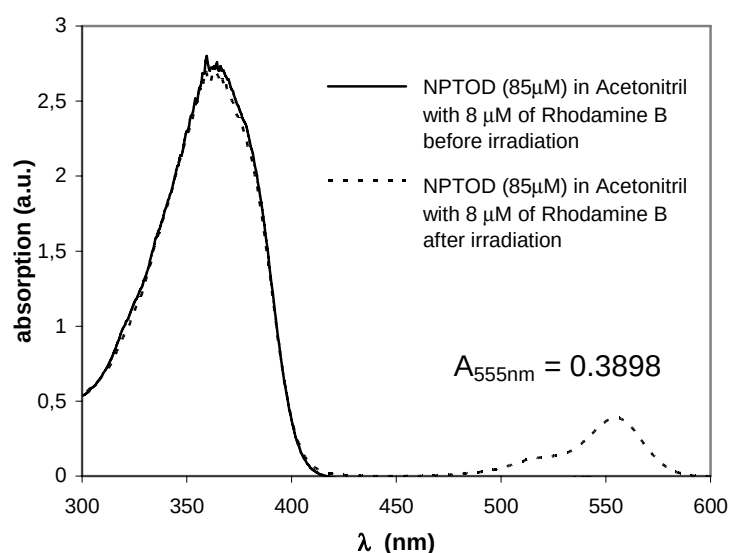


(B)

S-Figure 5. FT-IR spectra of PAGs PAG 1 (A) and PAG 2 (B) in polymer film before and after exposure to UV irradiation [Exposure = UVEXS SCU 110B (250 – 750 nm) for 120 sec; Total Lamp Power = 100 mW/cm^2].



(A)



(B)

S-Figure 6. UV-Vis spectra of PAGs PAG 3 (A) and PAG 4 (B) in solution before and after exposure to UV irradiation [Exposure = Oriel 68910 Arc Lamp (500 W) for 60 sec using a filter (280-400 nm); lamp power measured with Delo UVA-Meter: 25 mW/cm²].