## **Supplementary Materials: Coumarin-Containing Polymers for High Density Non Linear Optical Data Storage**

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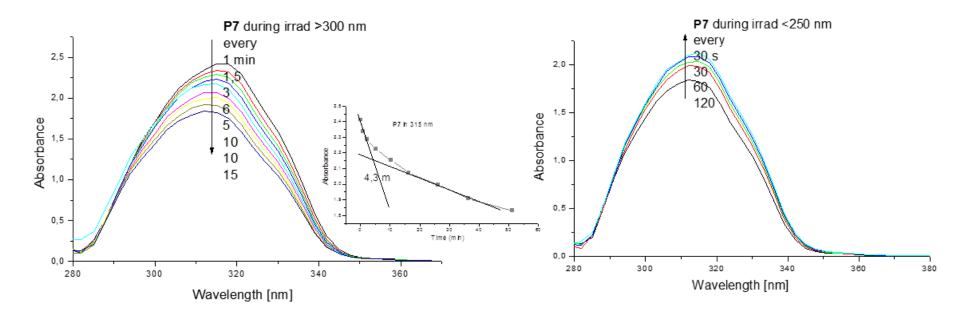
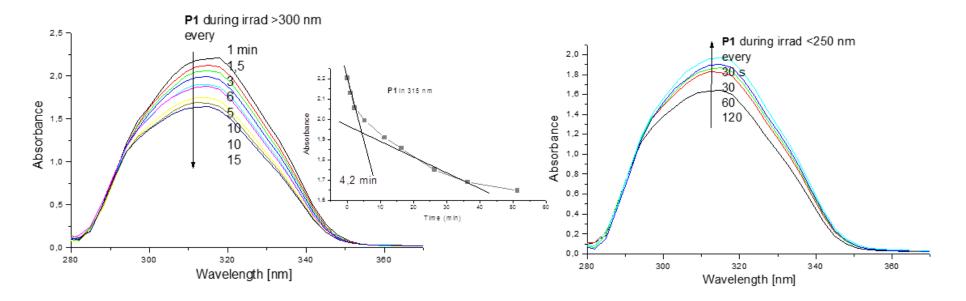
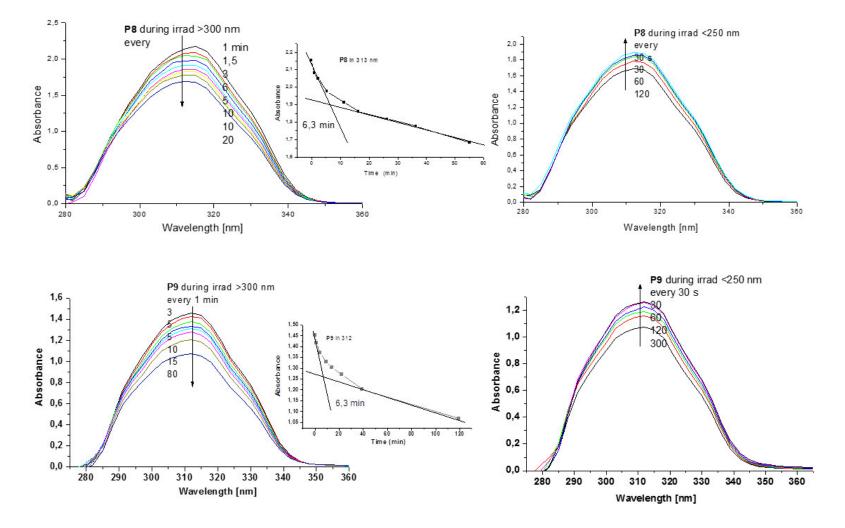


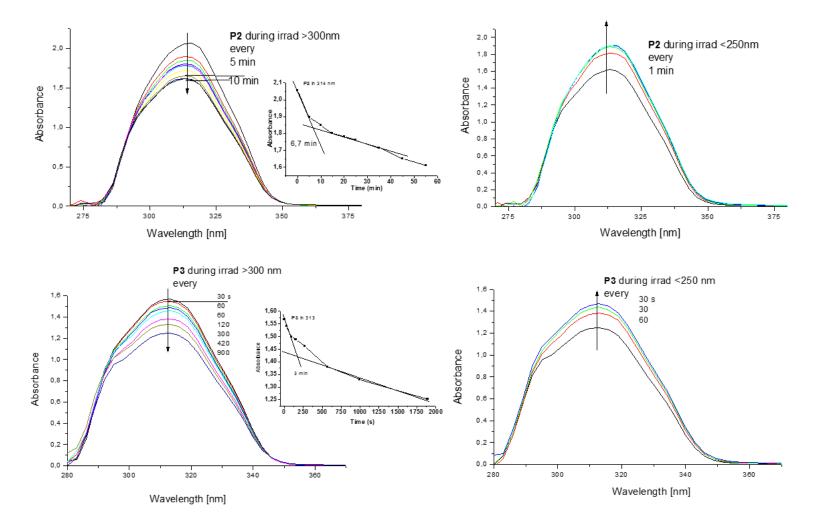
Figure S1. Cont.



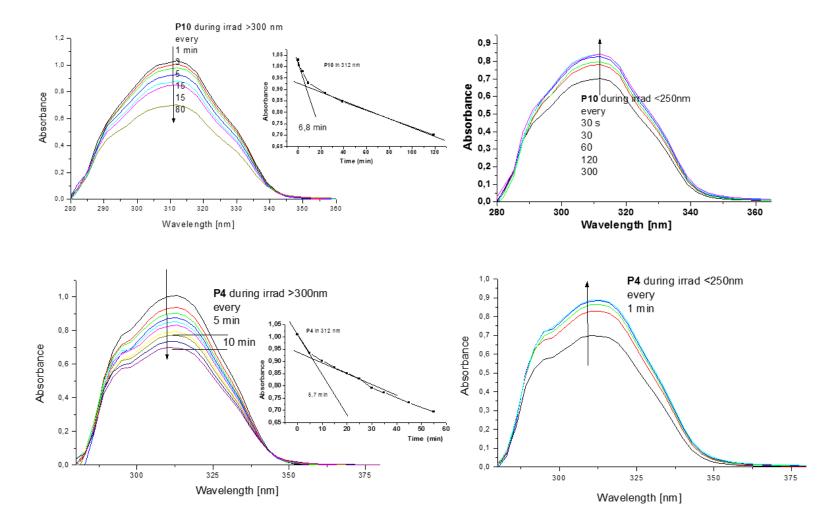
**Figure S1.** Changes in the absorption spectrum of polymer **P7** and **P1** in thin film before (1) and after periods of irradiation at  $\lambda > 300$  nm; Changes in the absorption of film polymers at maximum of absorption during irradiation at  $\lambda > 300$  nm; Changes of the absorption spectrum cross-linked polymer in thin solid film before (1) and after time of UV irradiation at  $\lambda < 254$  nm.



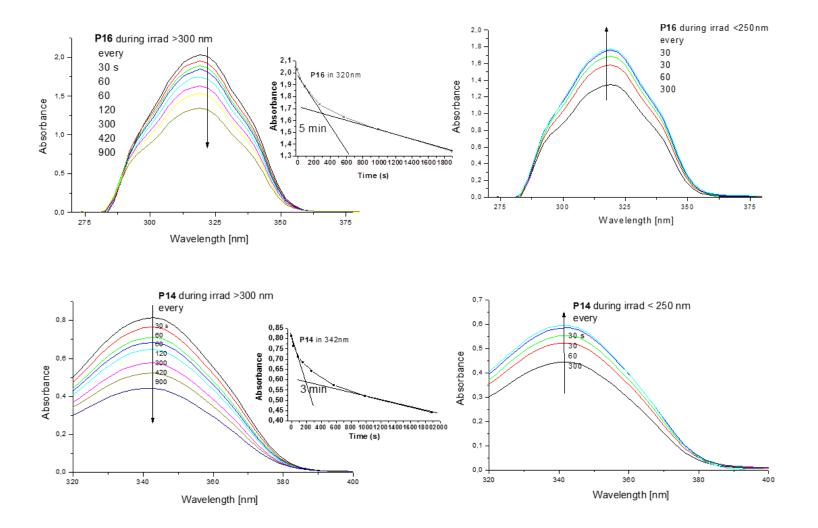
**Figure S2.** Changes in the absorption spectrum of polymer **P8** and **P9** in thin film before (1) and after periods of irradiation at  $\lambda > 300$  nm; Changes in the absorption of film polymers at maximum of absorption during irradiation at  $\lambda > 300$  nm; Changes of the absorption spectrum cross-linked polymer in thin solid film before (1) and after time of UV irradiation at  $\lambda < 254$  nm.



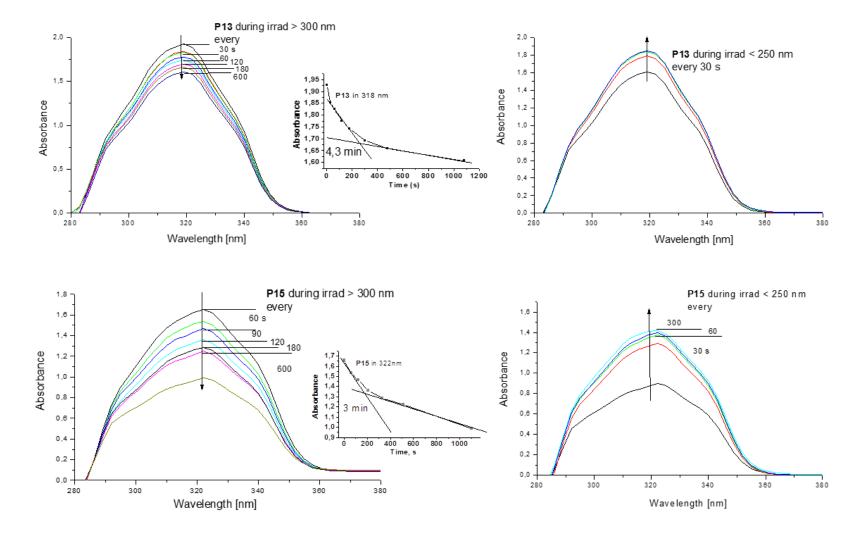
**Figure S3.** Changes in the absorption spectrum of polymer **P2** and **P3** in thin film before (1) and after periods of irradiation at  $\lambda > 300$  nm; Changes in the absorption of film polymers at maximum of absorption during irradiation at  $\lambda > 300$  nm; Changes of the absorption spectrum cross-linked polymer in thin solid film before (1) and after time of UV irradiation at  $\lambda < 254$  nm.



**Figure S4.** Changes in the absorption spectrum of polymer **P10** and **P4** in thin film before (1) and after periods of irradiation at  $\lambda > 300$  nm; Changes in the absorption of film polymers at maximum of absorption during irradiation at  $\lambda > 300$  nm; Changes of the absorption spectrum cross-linked polymer in thin solid film before (1) and after time of UV irradiation at  $\lambda < 254$  nm.



**Figure S5.** Changes in the absorption spectrum of polymer **P16** and **P14** in thin film before (1) and after periods of irradiation at  $\lambda > 300$  nm; Changes in the absorption of film polymers at maximum of absorption during irradiation at  $\lambda > 300$  nm; Changes of the absorption spectrum cross-linked polymer in thin solid film before (1) and after time of UV irradiation at  $\lambda < 254$  nm.



**Figure S6.** Changes in the absorption spectrum of polymer **P13** and **P15** in thin film before (1) and after periods of irradiation at  $\lambda > 300$  nm; Changes in the absorption of film polymers at maximum of absorption during irradiation at  $\lambda > 300$  nm; Changes of the absorption spectrum cross-linked polymer in thin solid film before (1) and after time of UV irradiation at  $\lambda < 254$  nm.