

Supporting information

for

Aggregation and photodimerisation behaviour of cinnamoyloxy side chains
of hyper-branched polymers determined by higher-order derivative spectra

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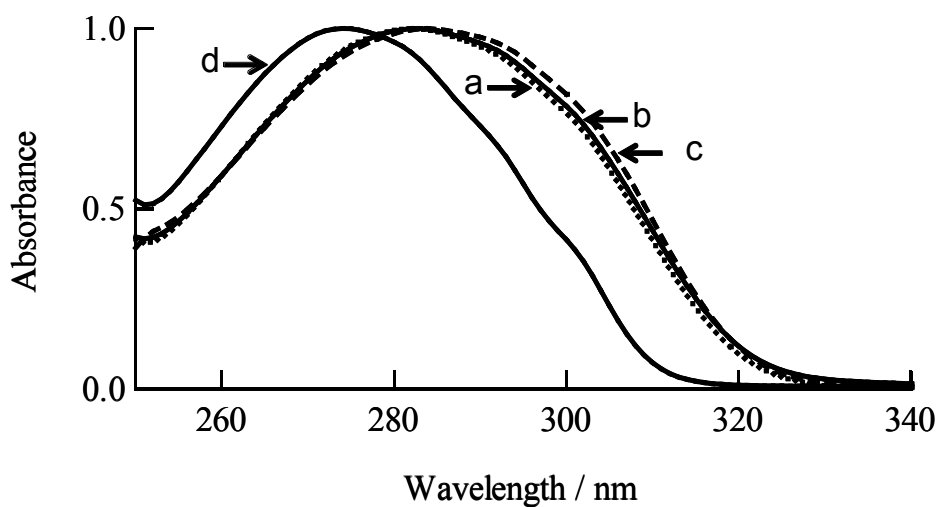


Fig. S1 Absorption spectra of DCi30 (a; dotted line), DCi20 (b; solid line), DCi40 (c; broken line) and DCi40-CI (d; solid line) in ethyl acetate.

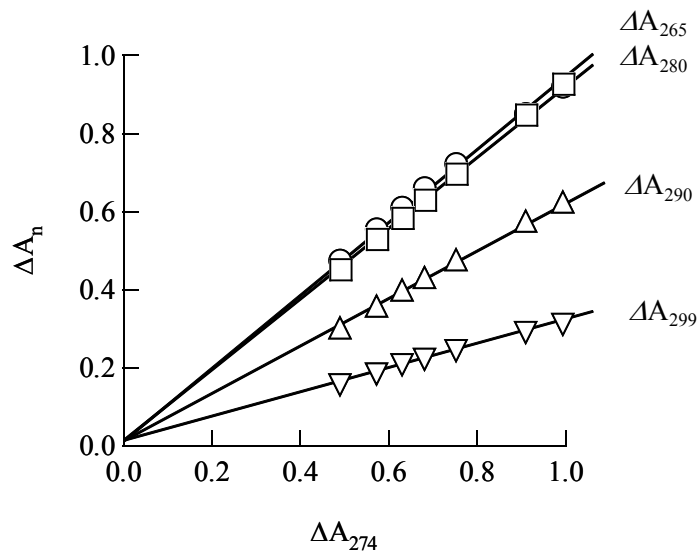


Fig. S2 ED-diagrams for spectral changes of a dilute solution of EtCi in ethyl acetate upon exposure to 313 nm light.

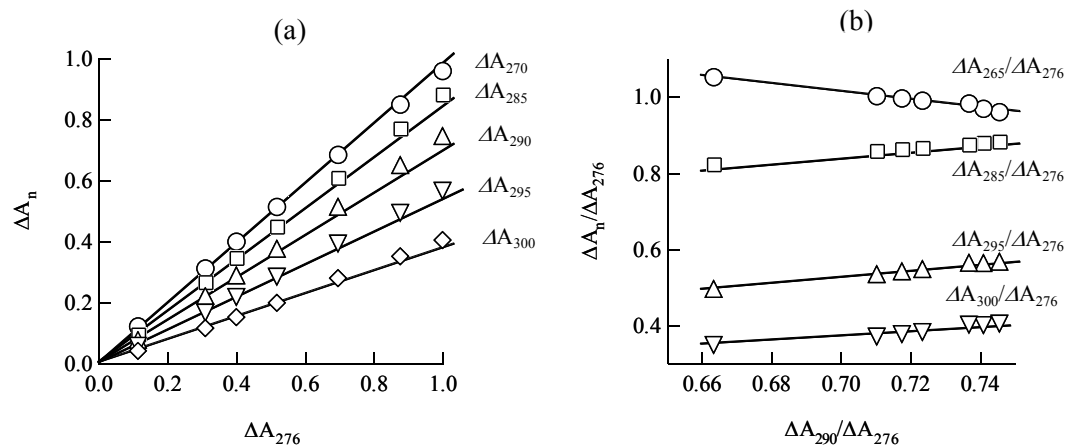


Fig. S3 (a) ED- and (b) EDQ-diagrams for spectral changes of a dilute solution of Bz2Ci in ethyl acetate upon exposure to 313 nm light.

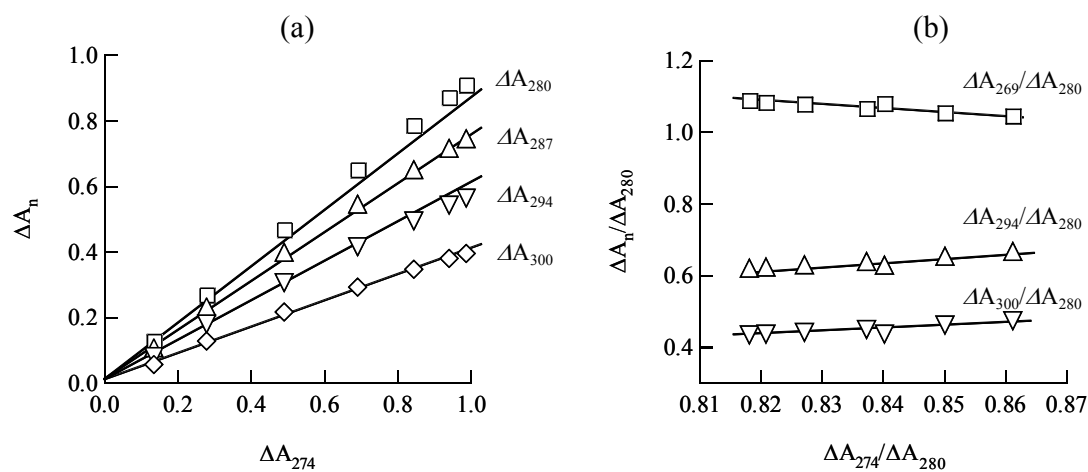
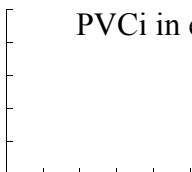


Fig. S4 (a) ED- and (b) EDQ-diagrams for spectral changes of a dilute solution of PVCi in ethyl acetate upon exposure to 313 nm light.



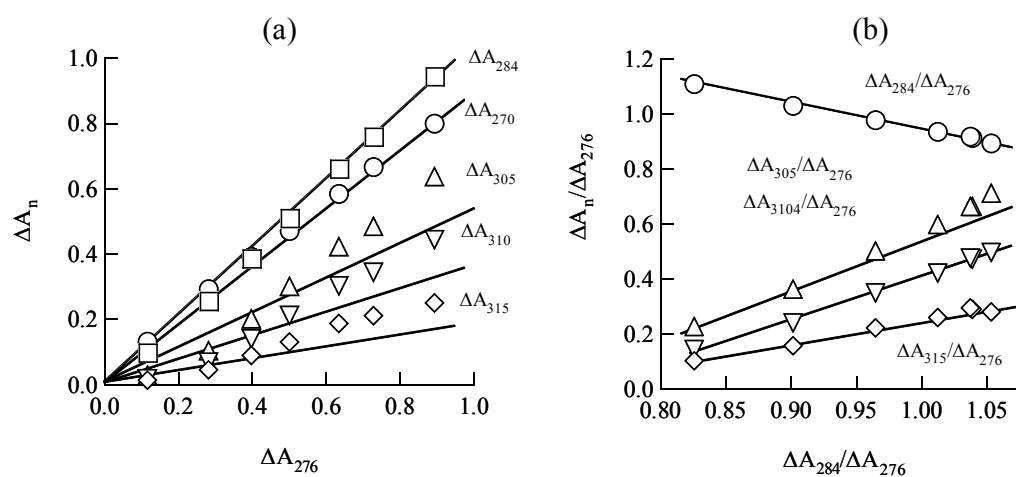


Fig. S5 (a) ED- and (b) EDQ-diagrams for spectral changes of a dilute solution of DCi40 in ethyl acetate upon exposure to 313 nm light.

Table S1 The sub-peak positions of the cinnamates in derivative spectra of fourth-order.

Material	State ^{a)}	λ_{max} / nm	Sub-peak position / nm					
			1	2	3	4	5	6
EtCi	solution	272	266	273	283	293	302.5	–
Bz2Ci	solution	276	266	272.5	283	293	304	–
PVCi	solution	271	264	273	284	294	304.5	–
DCi20	solution	282	261	274	284	294	305	(317) ^{b)}
DCi30	solution	282	261	274	284	294	305	(317) ^{b)}
DCi40	solution	284	264	274	284.5	294	304.5	(~ 318) ^{b)}
DCi40-CI	solution	274	–	273	283	294	304.5	–
PVCi	film	274	267	276	286	295	307	–
DCi40	film	284	266	275	287	297	309	322

a) Solution in ethyl acetate.

b) Data from 8th derivative spectra