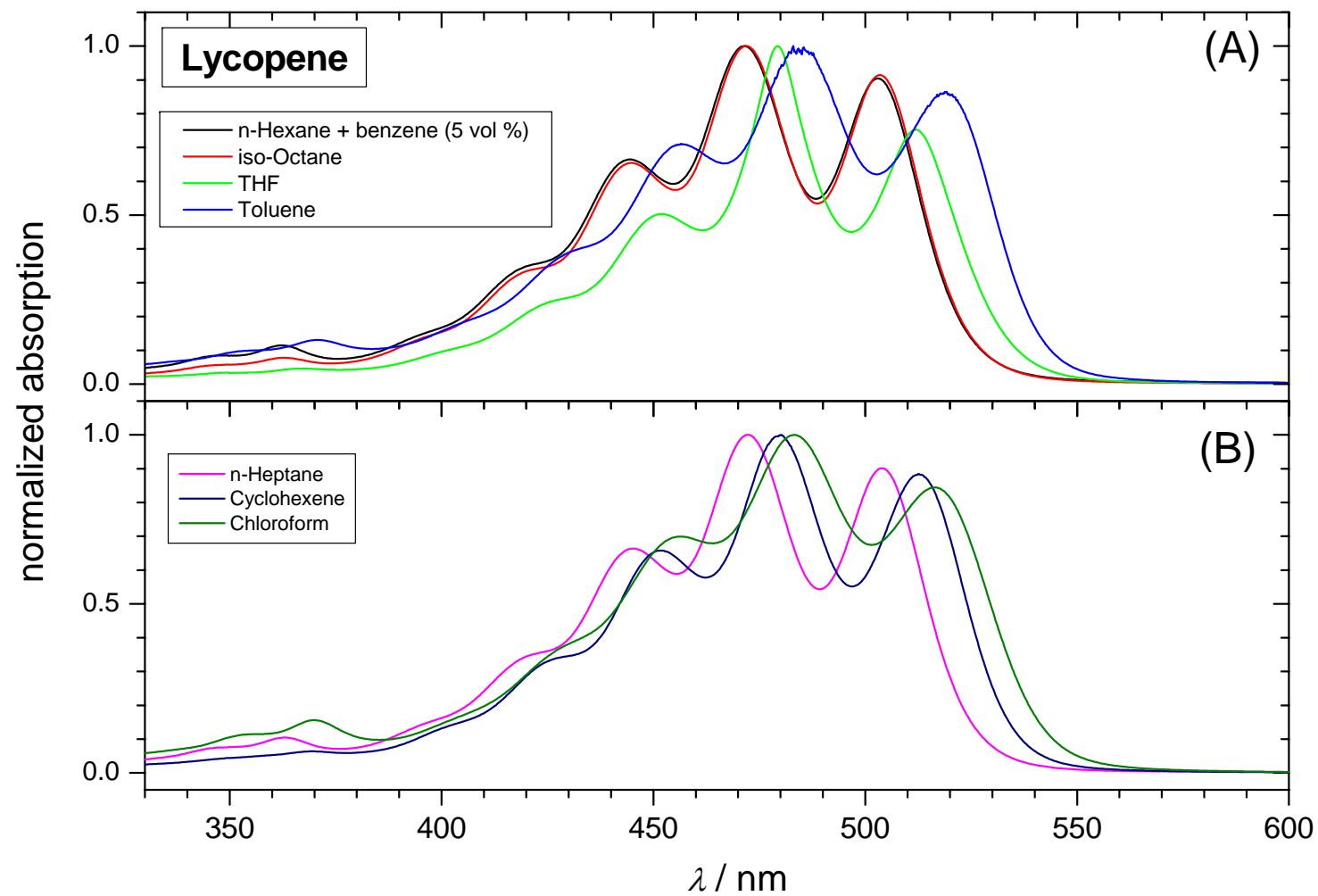
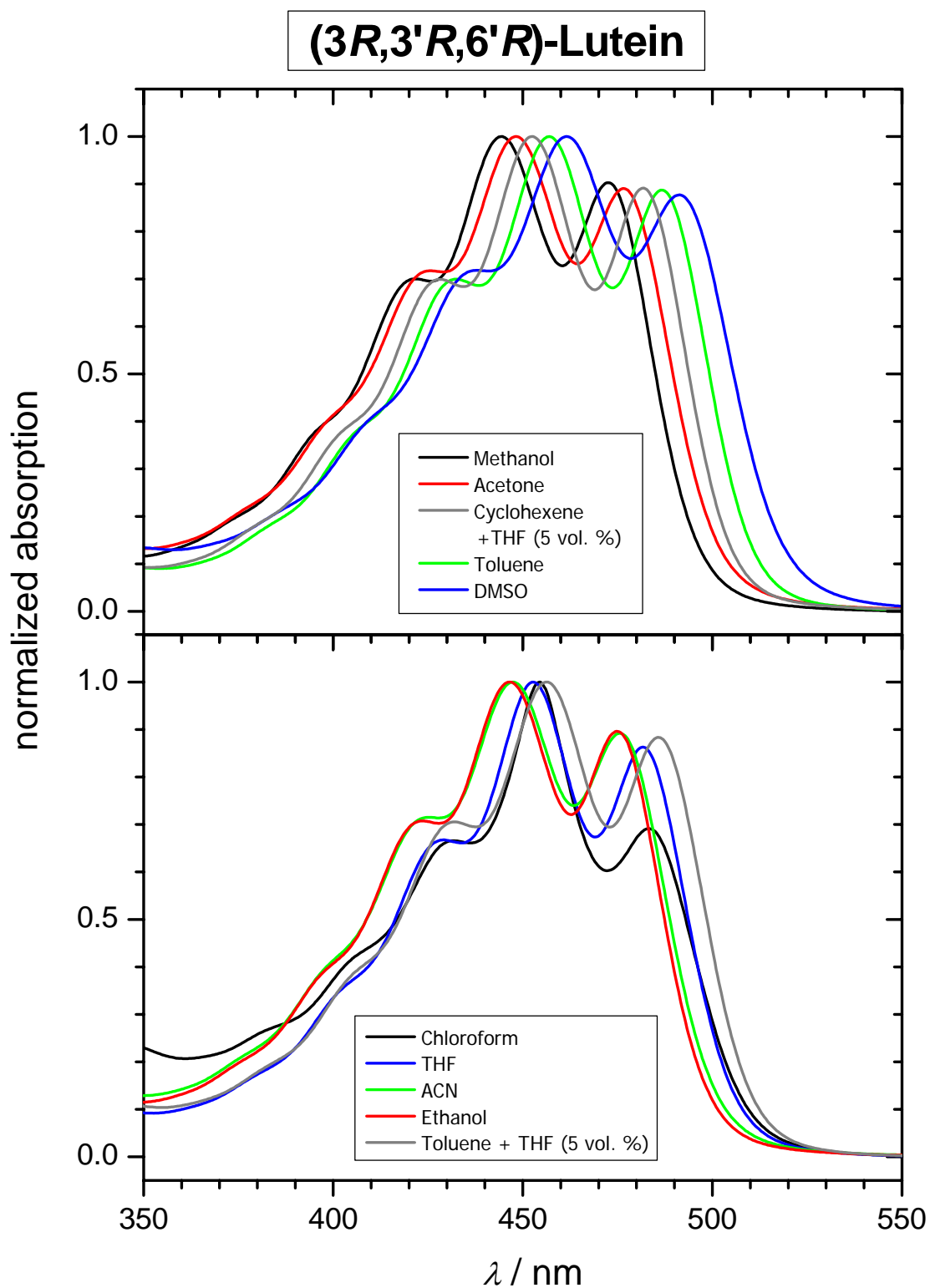


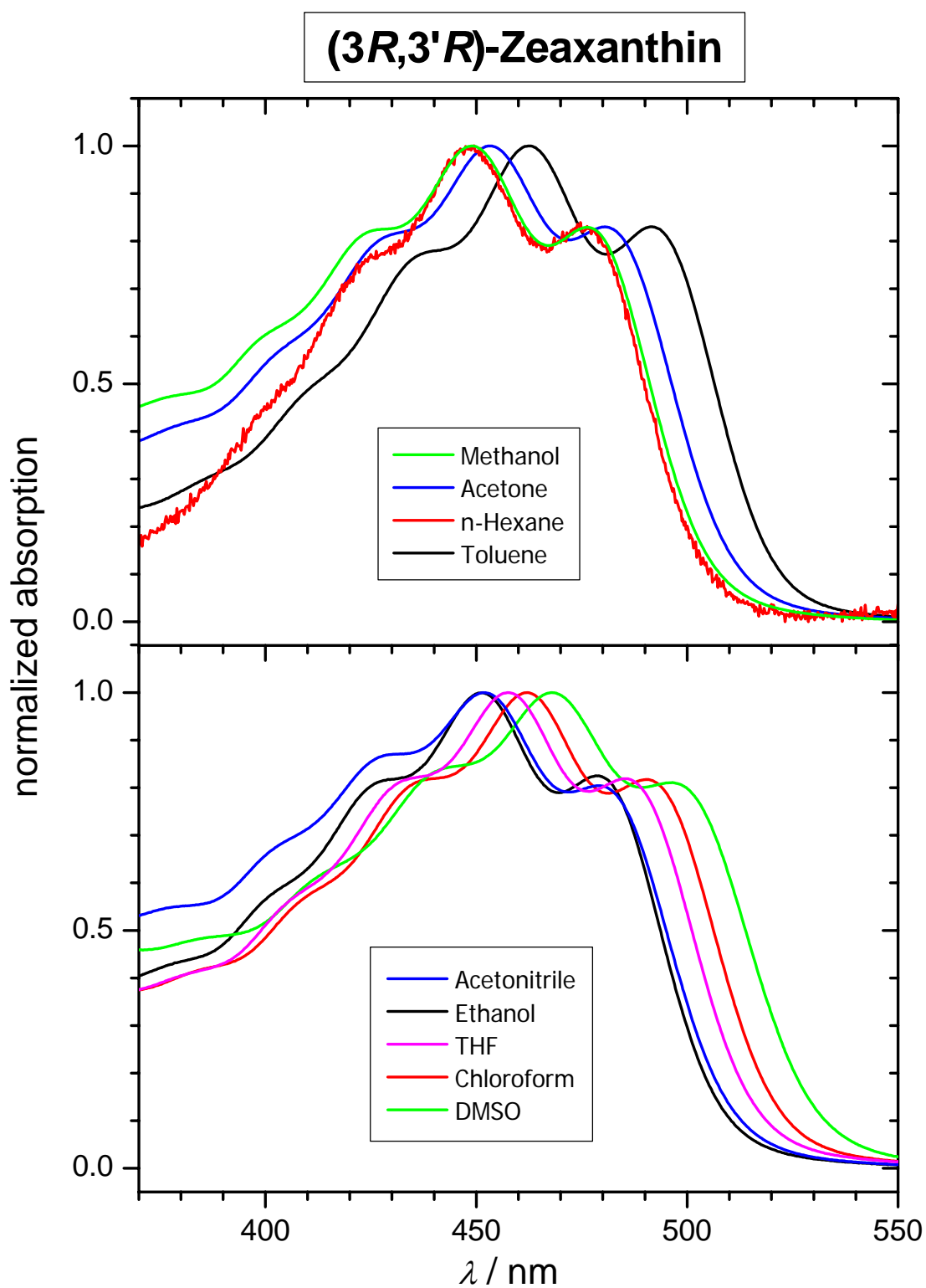
**Fig. S1** Normalized absorption spectrum of  $\beta$ -carotene in acetone at room temperature.



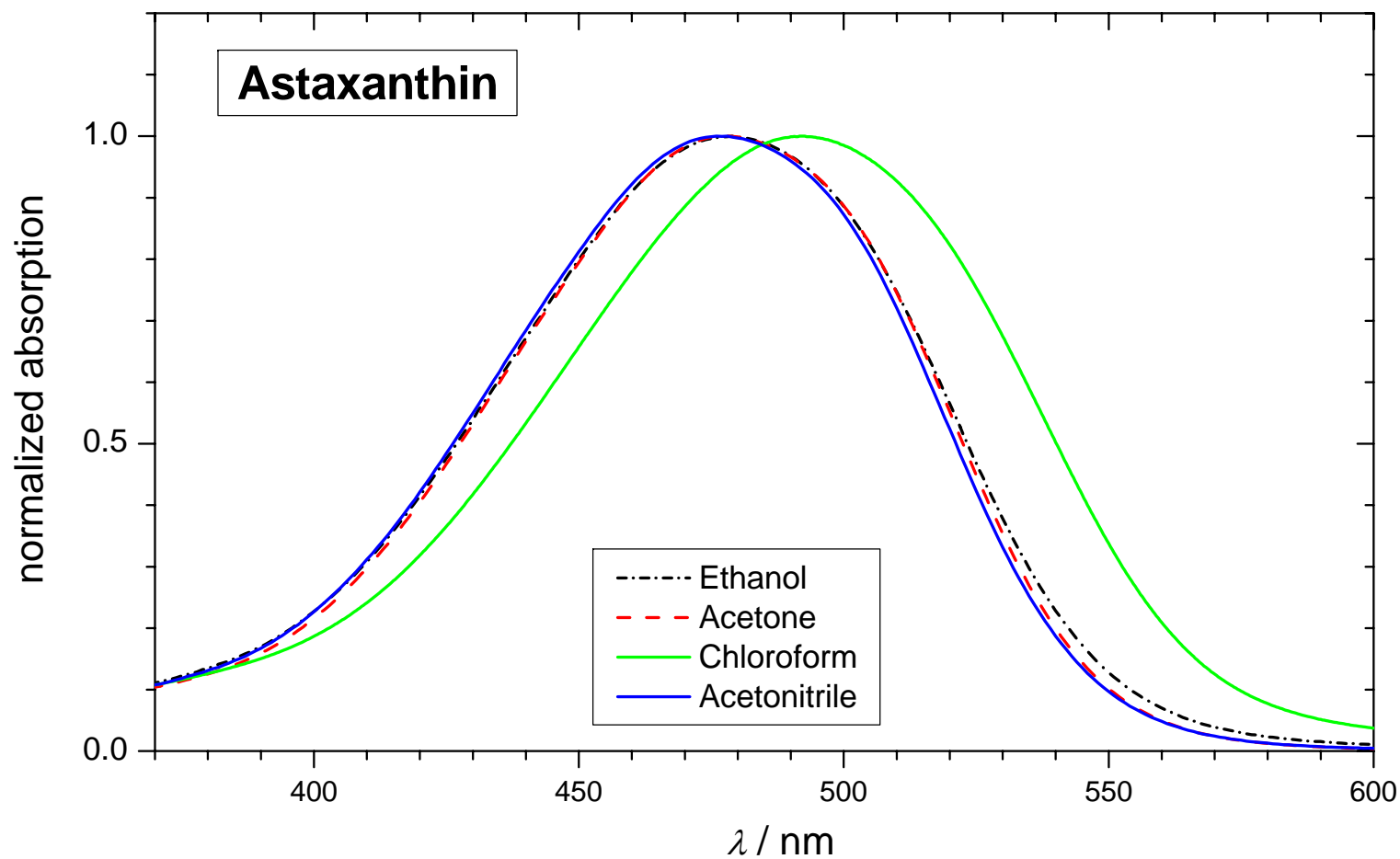
**Fig. S2** Normalized absorption spectra of lycopene in various organic solvents at room temperature.



**Fig. S3** Normalized absorption spectra of (3*R*,3'*R*,6'*R*)-lutein in various organic solvents at room temperature.



**Fig. S4** Normalized absorption spectra of (3R,3'R)-zeaxanthin in various organic solvents at room temperature.



**Fig. S5** Normalized absorption spectra of axtaxanthin in various organic solvents at room temperature (see also Fig. 8(C) for other solvents in the text).