

Two-Step Structural Changes in Orange Carotenoid Protein Photoactivation Revealed by Time-Resolved Fourier Transform Infrared Spectroscopy

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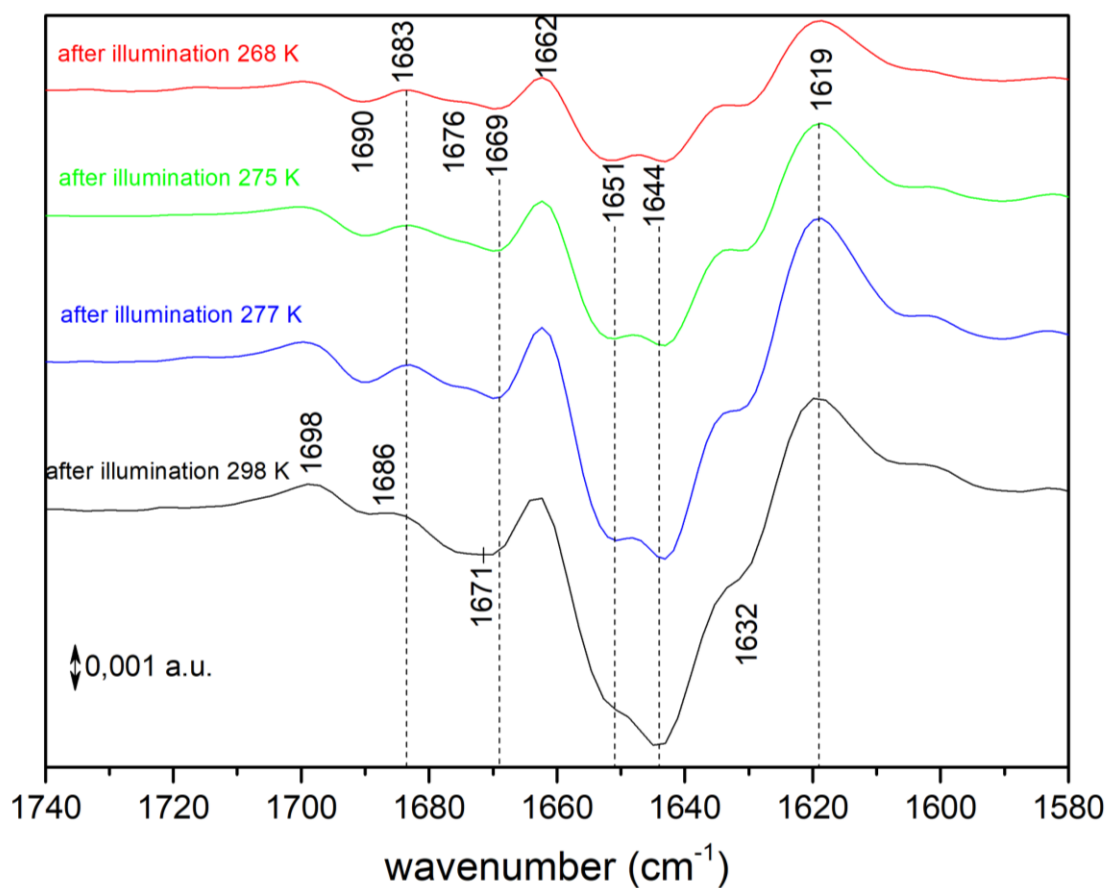


Figure S1. Static FTIR difference spectra recorded after ~10 min of continuous illumination at different temperatures. Clear differences can be observed in the amide I region. The spectrum recorded at 298 K shows clear positive peaks at 1698, 1683, 1662 and 1619 cm^{-1} (the last one being particularly intense) and negative bands at 1690, 1676-1671 (broad), 1651 (intense shoulder) and 1644 cm^{-1} ; a weaker shoulder is also observed at ~1632 cm^{-1} . The spectra were offset for clarity.

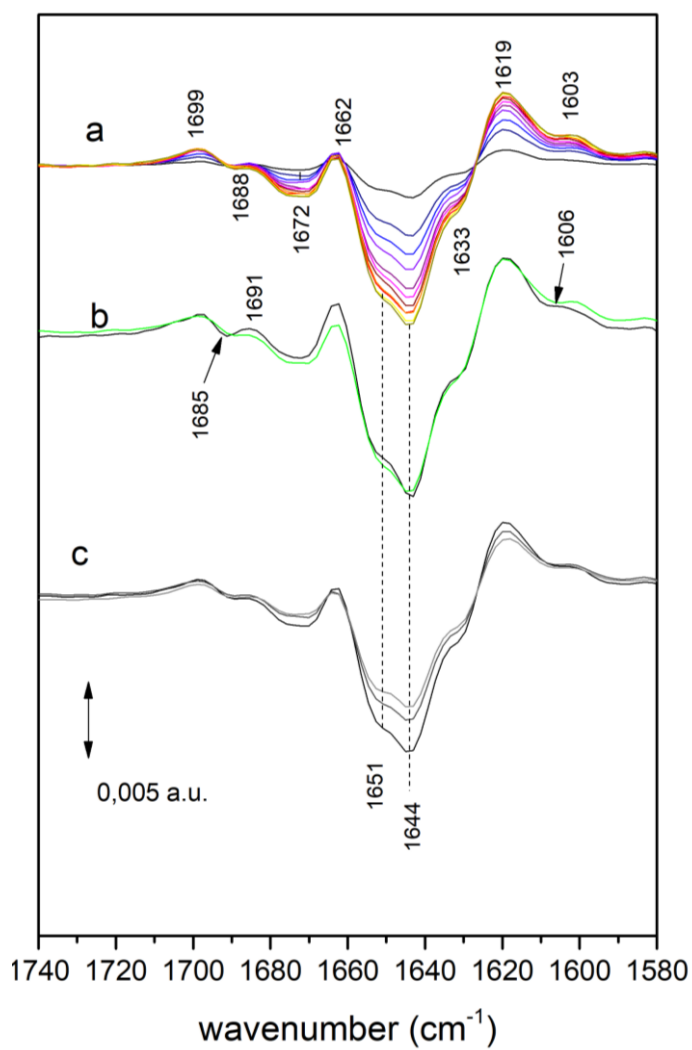


Figure S2. a) Time-resolved FTIR difference spectra under illumination (0 – 350 sec) at 298 K.

b) Comparison between normalized spectra during illumination after 20 s and 5 min of illumination.

c) Time-resolved FTIR difference spectra recorded during the relaxation of the sample: 20 s, 90 s and 300 s after switching off the light. Appropriate spectra recording at longer times was not possible due to baseline drift problems.