Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Time resolved IR spectroscopy reveals mechanistic details of ion transport in the sodium pump *Krokinobacter eikastus* rhodopsin 2

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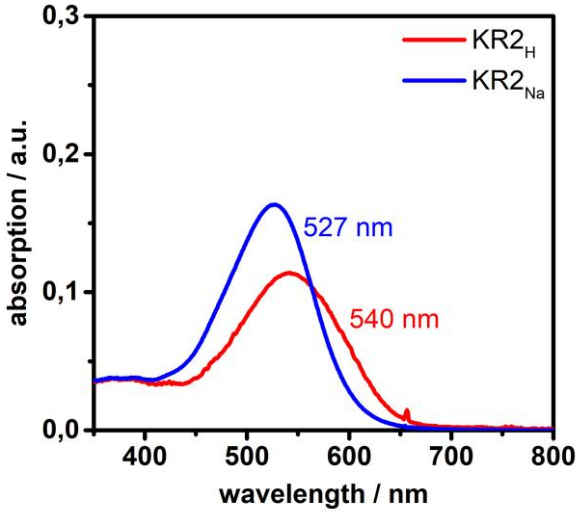
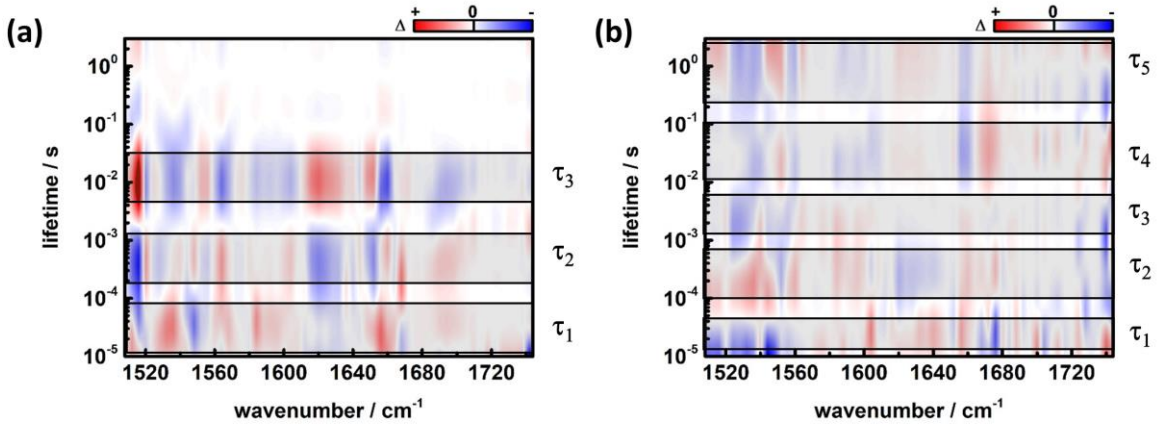
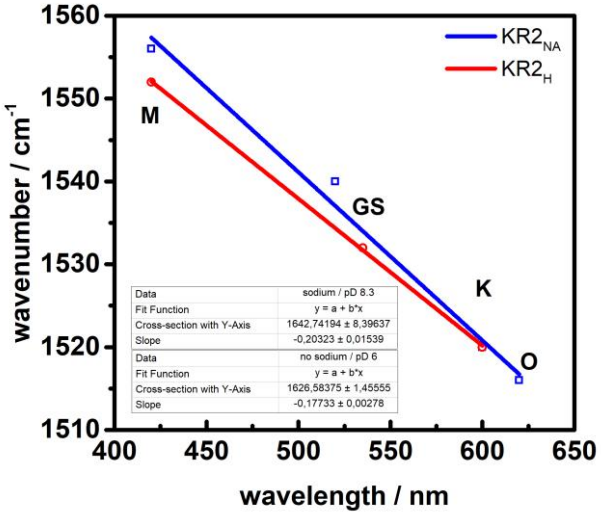
Supporting Information



SI Figure 1. Absorption spectra of **KR2$_{Na}$** (pD 8.3) and **KR2$_{H}$** (pD 6).



SI Figure 2. Lifetime density maps for (a) **KR2$_{Na}$** and (b) **KR2$_{H}$**. The IR dataset of **KR2$_{Na}$** can be described with three lifetime components, whereas the **KR2$_{H}$** needs five lifetime components.



SI Figure 3. Inverse relationship of $\nu_{C=C}$ and λ_{max} shown for **KR2$_{Na}$** and **KR2$_{H}$**.