Supplementary Figure 1: **Framework for sensitivity analysis of retrieved atmospheric properties to opacity model.** The four building blocks of the transmission spectra are shown in green, analysis techniques are marked in blue, and the orange parallelogram highlights the remote sensing technique at the center of this perturbation/sensitivity analysis. The arrows are shown to indicate the direction of the information flow. We perform self- and cross-retrieval for two planetary cases (a super-Earth around M-dwarf and a Jupiter-sized planet around K-dwarf, see Supplementary Table 2) with nine distinct sets of cross-sections (see Supplementary Table 1) to access their impacts.