Supporting Information

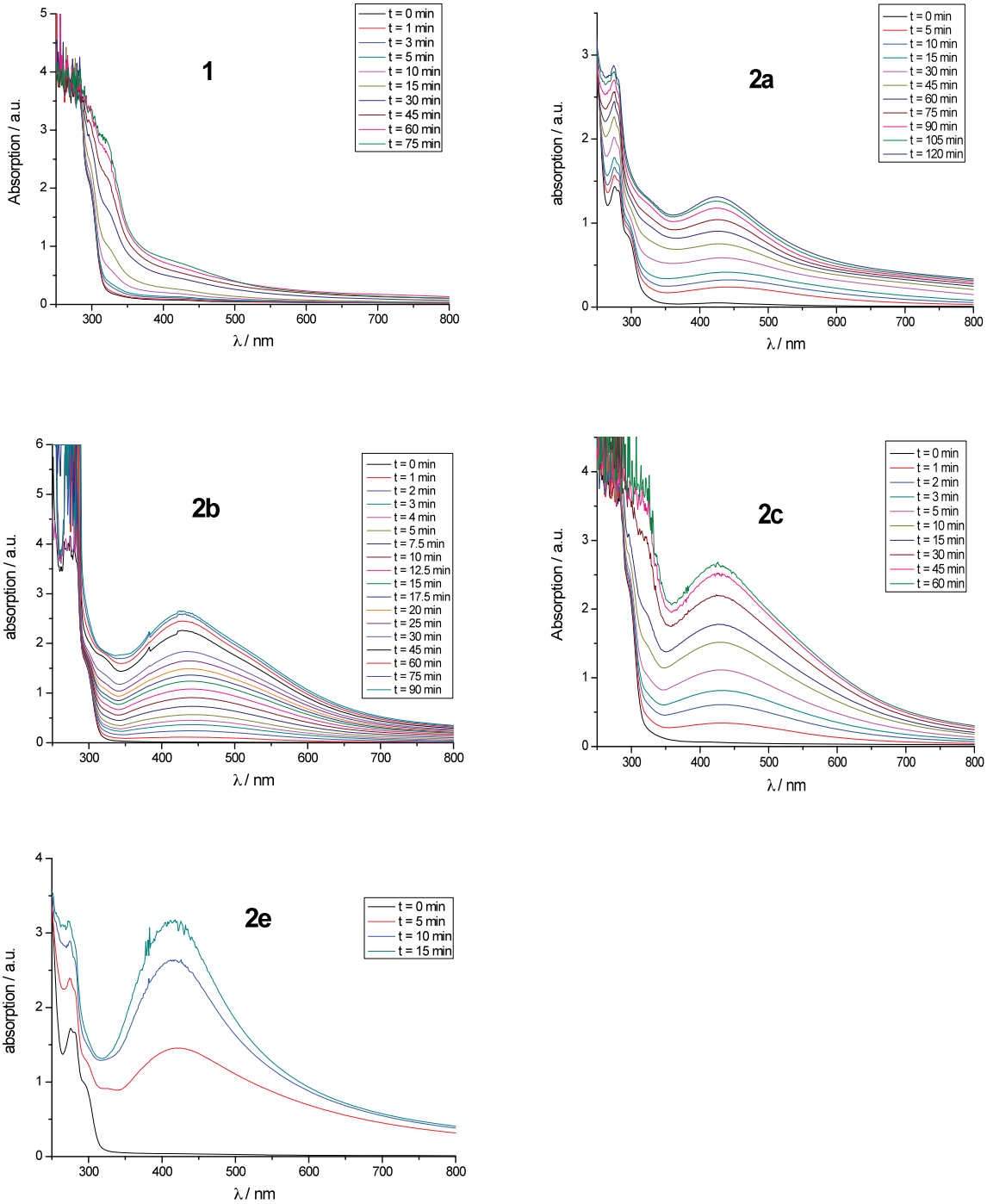

Figure S1. AgNP formation of Ag^{+}/peptides as described in Schemes 1 and 2

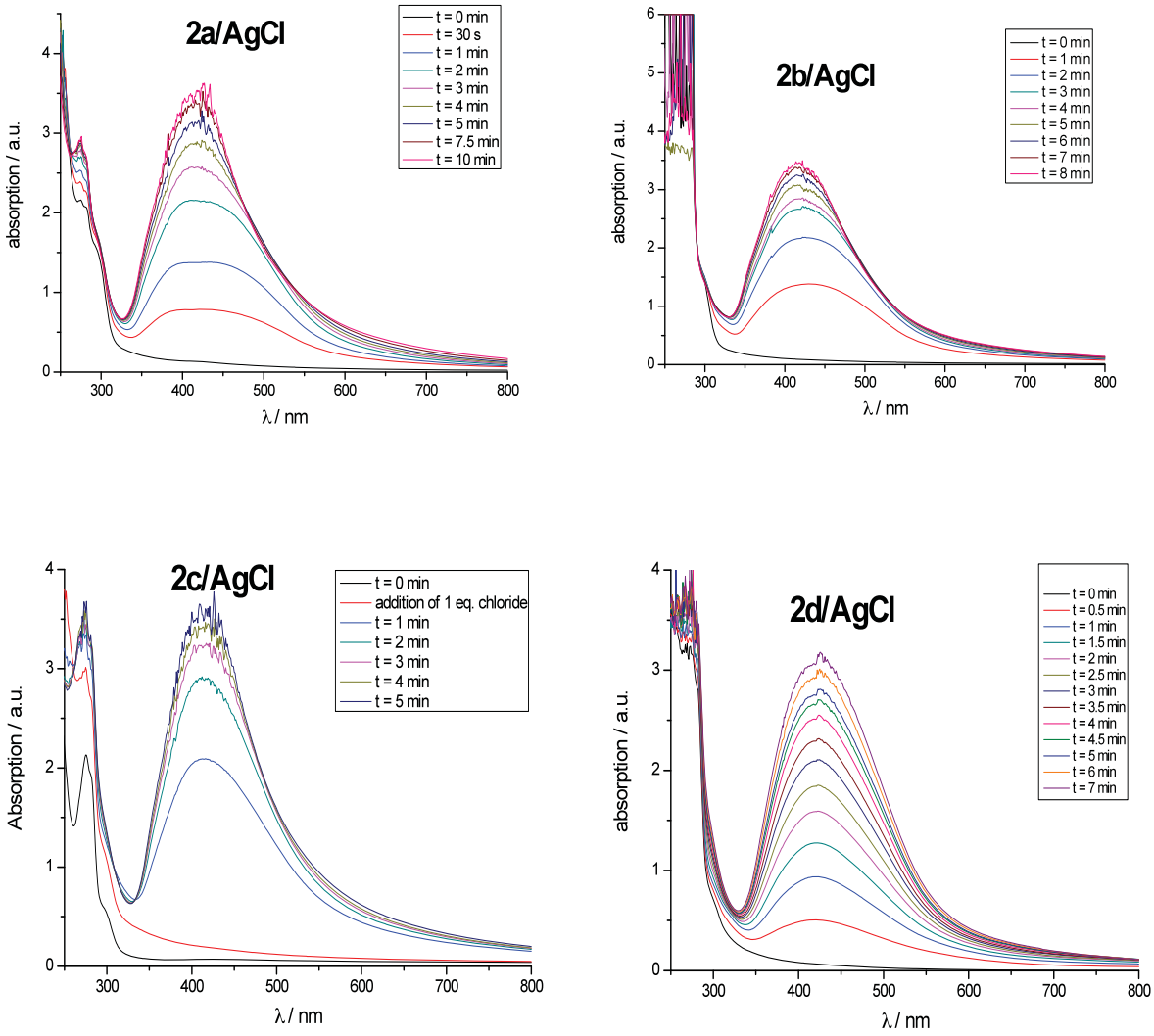

Figure S2. AgNPs formation from AgCl/peptides as described in Figure 4.

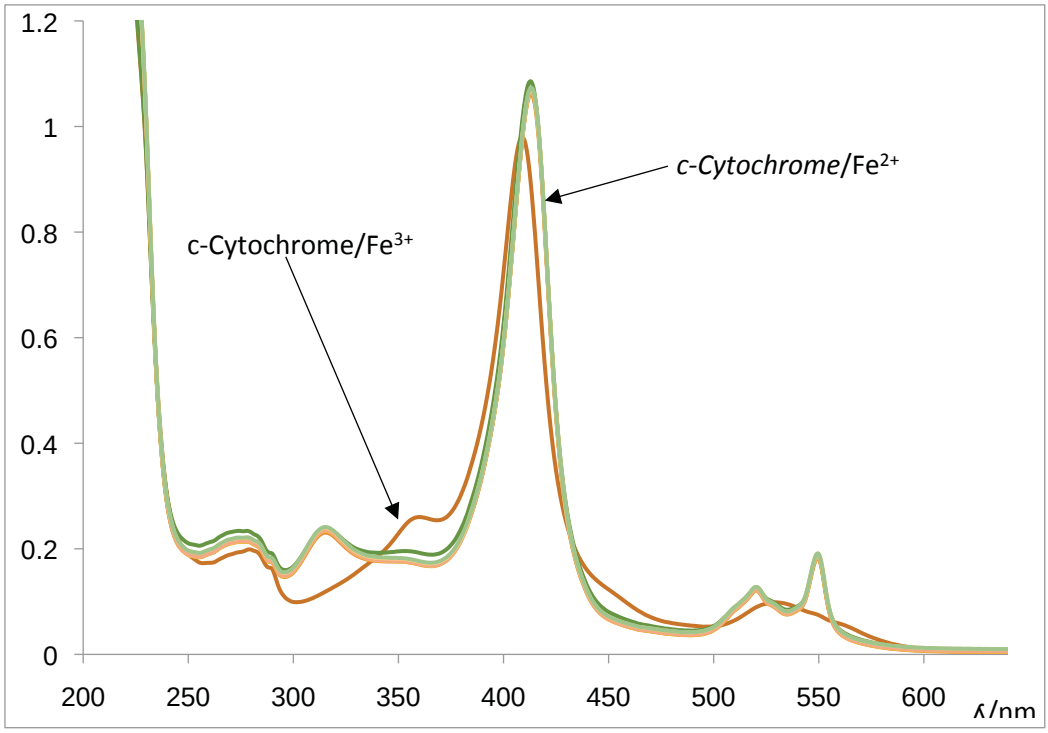

Figure S3. Addition of 10 eq. $AgNO_3$ to c-cytochrome/Fe^{2+} for 2 hours. As comparison the UV/Vis of c-cytochrome/Fe^{3+} is also shown.

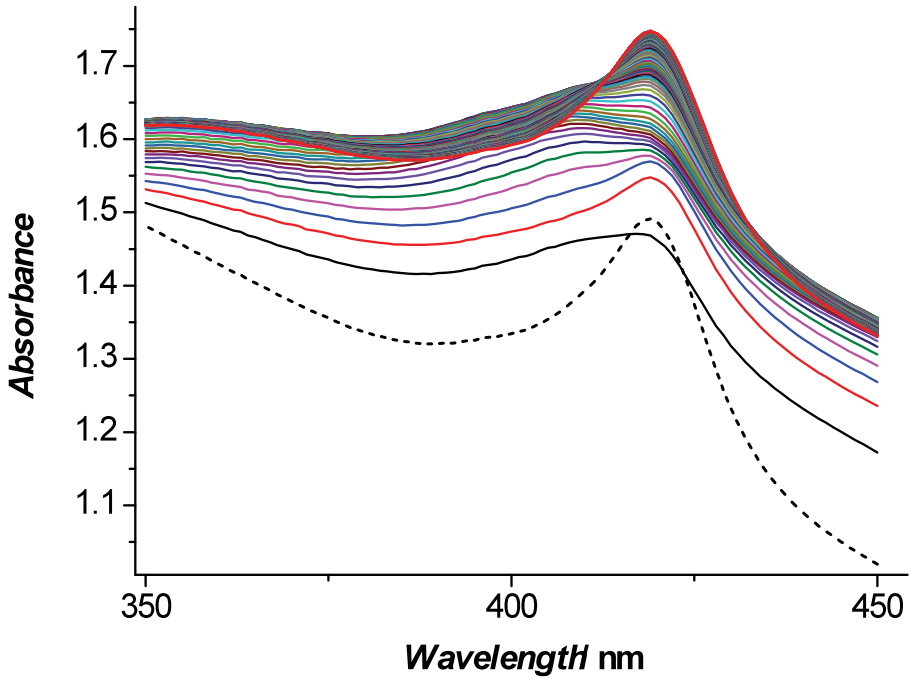

Figure S4. All traces for the time dependence of the experiments with sulfurreducens in Figure 5. The dashed line corresponds to Gs without $AgNO_3$. The thick red line is the last spectrum. Note: Time between spectras: 15 seconds (except dashed-black).

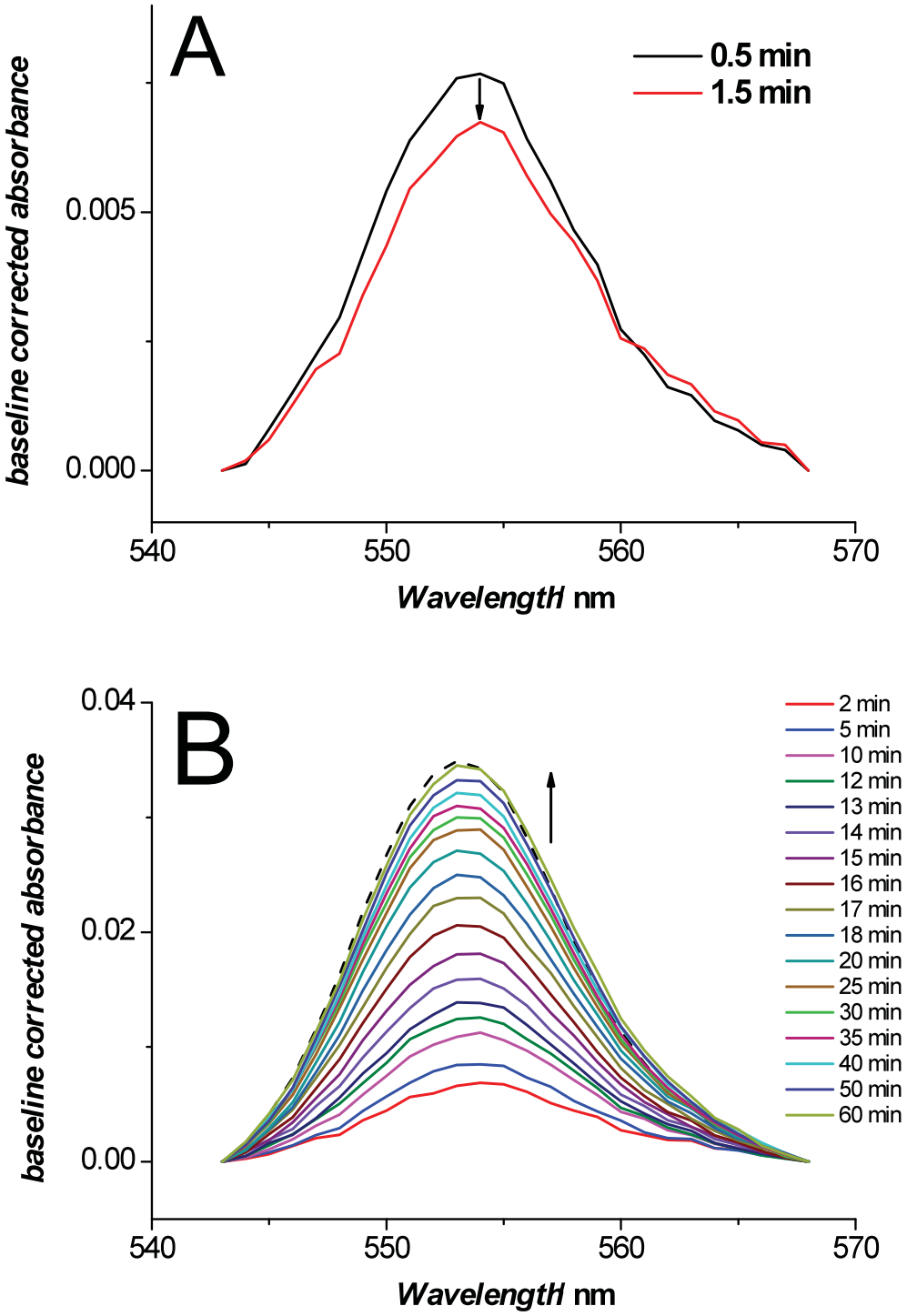

Figure S5. Effect of the silver nitrate addition on the oxidation state of the hemes in Gs as demonstrated by the baseline-corrected absorption of the Q band as function of time (used in Figure 5B). A) Spectra showing the initial decrease of the Fe^{2+} absorption between 0.5 and 1 minute.Only these two lines are shown at low absorption. B) Spectra showing the increase of the Fe^{2+} absorption at the indicated times. The dashed line corresponds to Gs without $AgNO_3$.