



Figure S1. Chlorophyll (Chl) *a* and Chl $c_1 + c_2$ concentration in WT, *zep2* and *zep3* mutant lines. WT, *zep2* and *zep3* cultures were acclimated to low light (LL; $35 \mu\text{mol photons m}^{-2} \text{s}^{-1}$), exposed to 2 h of high light (HL; $450\text{-}500 \mu\text{mol photons m}^{-2} \text{s}^{-1}$) before being returned to LL for 0.5h (rLL). The resulting (a) Chl *a* and (b) Chl $c_1 + c_2$ cell concentrations are presented as fmol/cell. An additional experiment was performed with only WT and *zep3* lines where the rLL period was prolonged to 1 h, 2 h and 6 h. Corresponding pigment concentrations are presented in (c) Chl *a* and (d) Chl $c_1 + c_2$. All results are presented as means of three biological replicates \pm SD. Asterisks describe significant differences between *zep* mutants and WT as indicated by two-way ANOVA with Dunnett's multiple comparison tests ($P < 0.05$).