



**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 ( $P < 0.05$ ).