

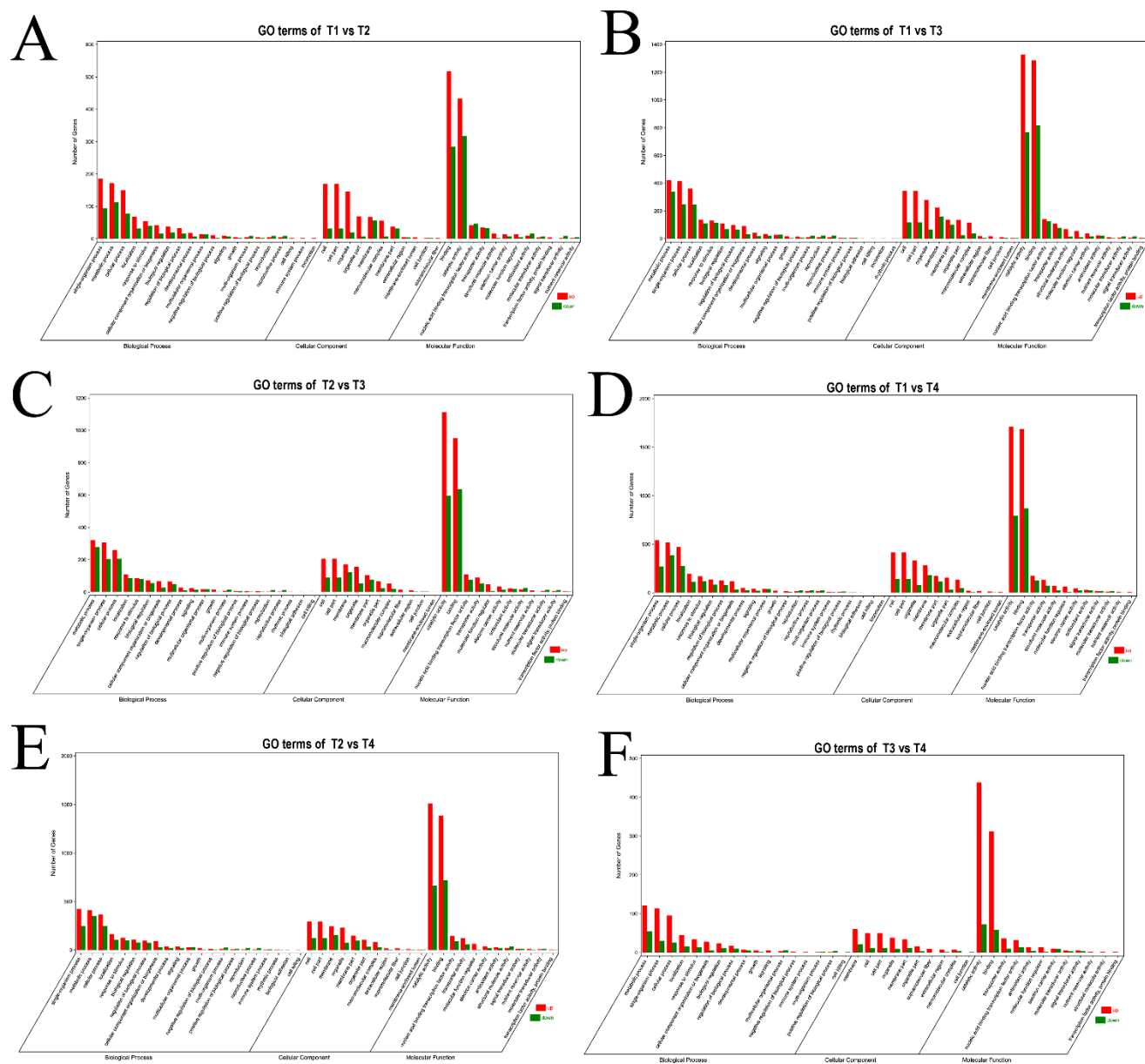


Fig. S1 GO pathway enrichment analysis of DEGs between T1 vs T2 (A), T1 vs T3 (B), T1 vs T4 (C), T2 vs T3 (D), T2 vs T4 (E) and T3 vs T4 (F) of “Ziyan Gongzhu”. (T1: purple red leaf (RHS 67A), T: stage, T2: light purple leaf (RHS 65A), T3: yellow green leaf (RHS 1C), T4: dark green leaf (RHS N137A).

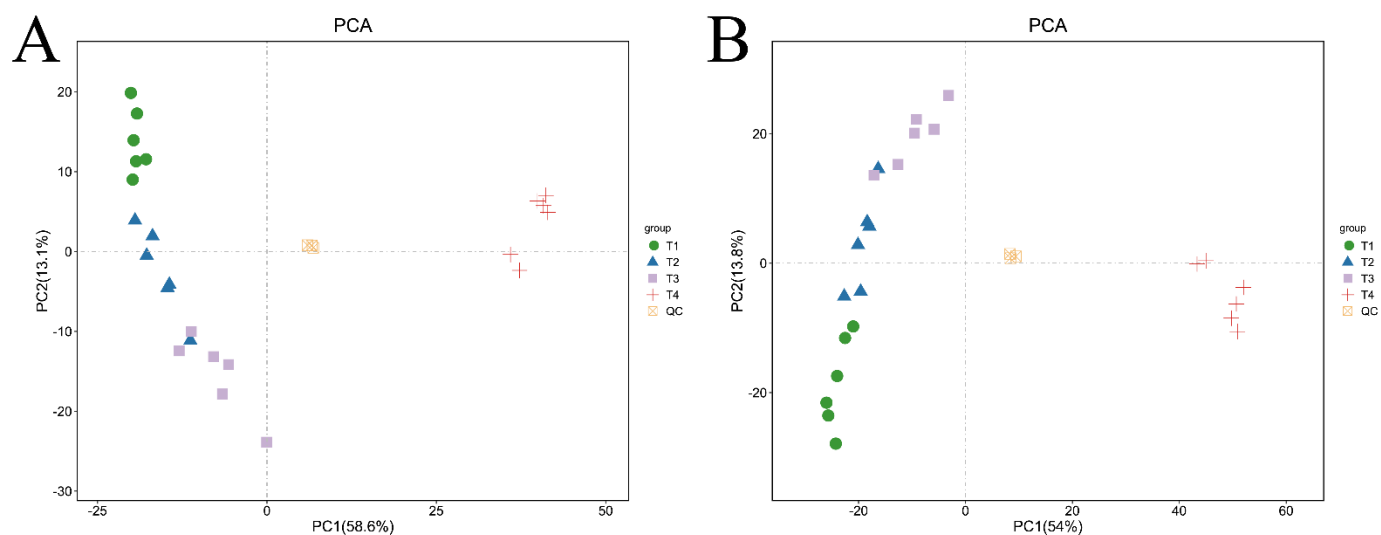


Fig. S2 Principal component analysis of the four "Ziyan Gongzhu" leaves samples in NEG (A) and POS (B). (T1: purple red leaf (RHS 67A), T2: light purple leaf (RHS 65A), T3: yellow green leaf (RHS 1C), T4: dark green leaf (RHS N137A).

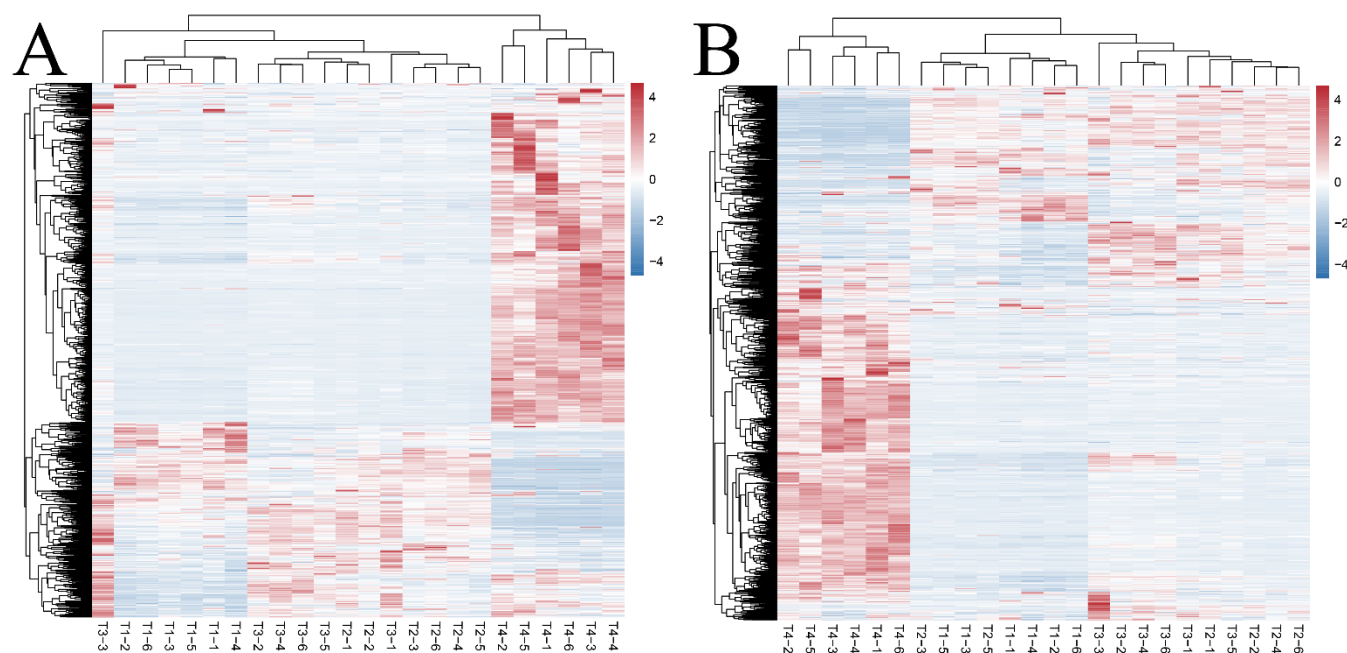
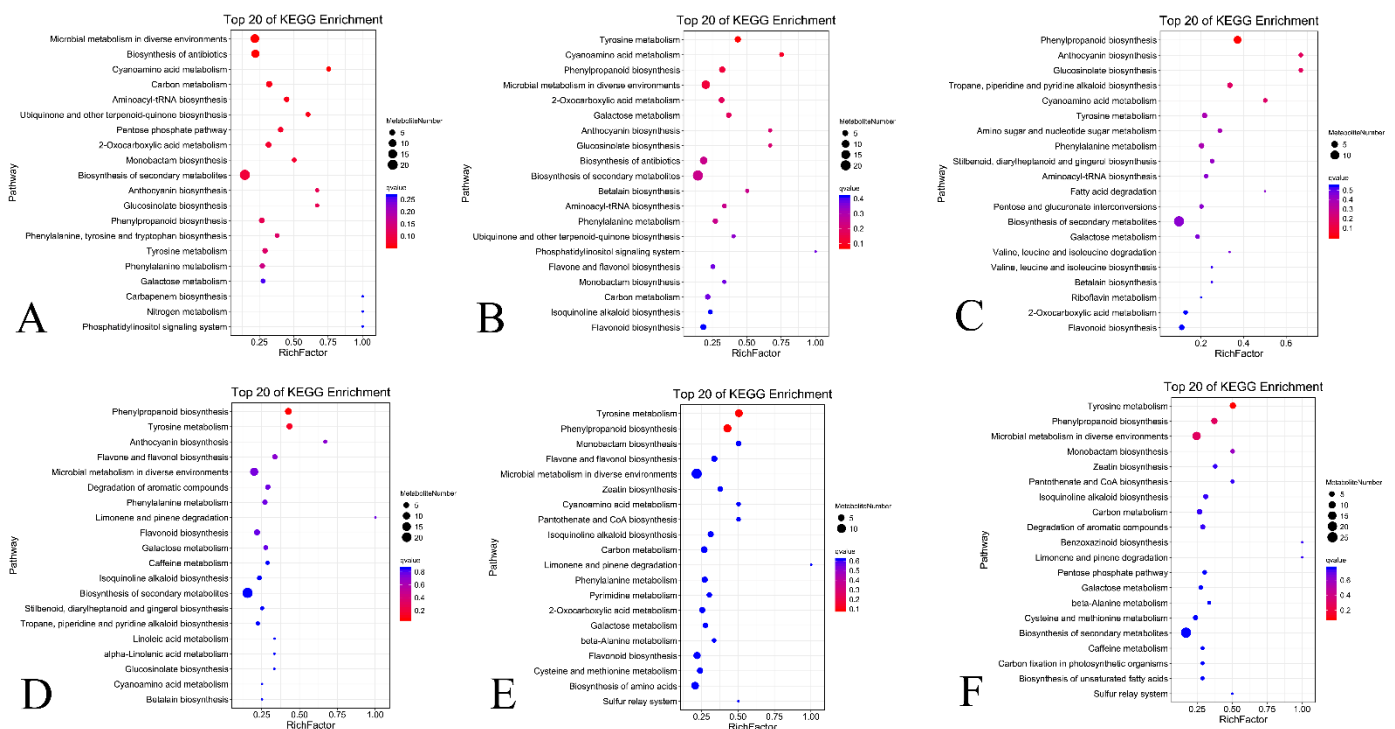
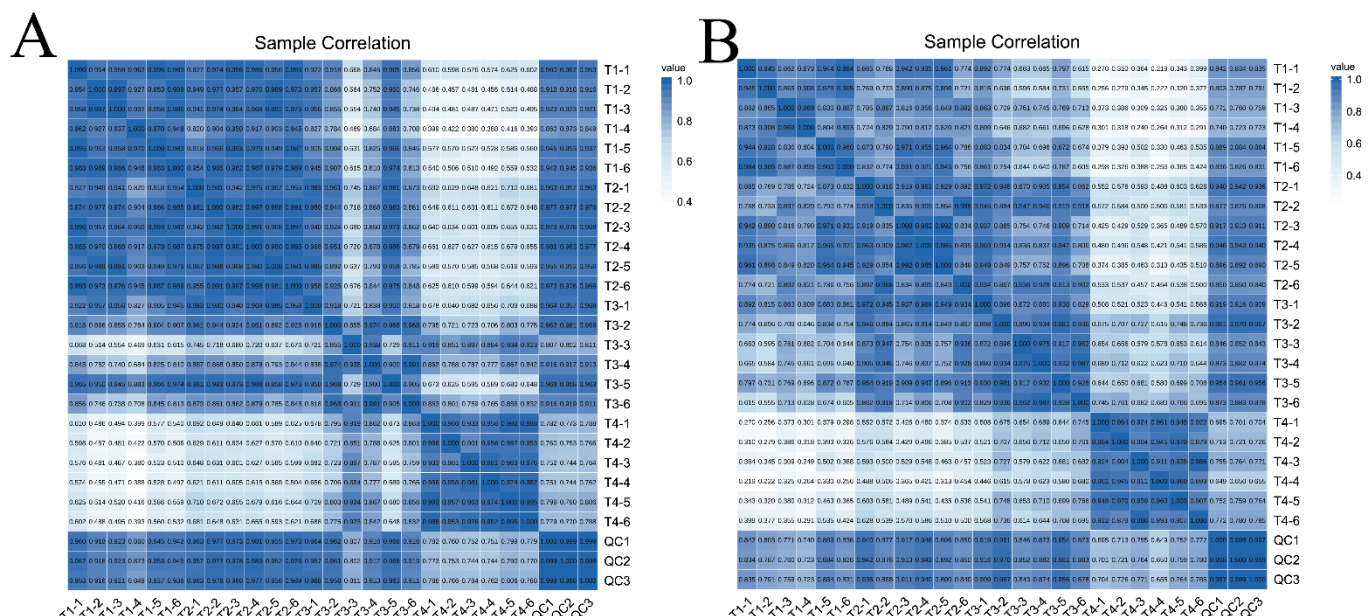


Fig. S3 Hierarchical heatmap clustering analysis of the four "Ziyan Gongzhu" leaves samples using the metabolite concentration data in NEG (A) and POS (B). (T1: purple red leaf (RHS 67A), T2: light purple leaf (RHS 65A), T3: yellow green leaf (RHS 1C), T4: dark green leaf (RHS N137A).



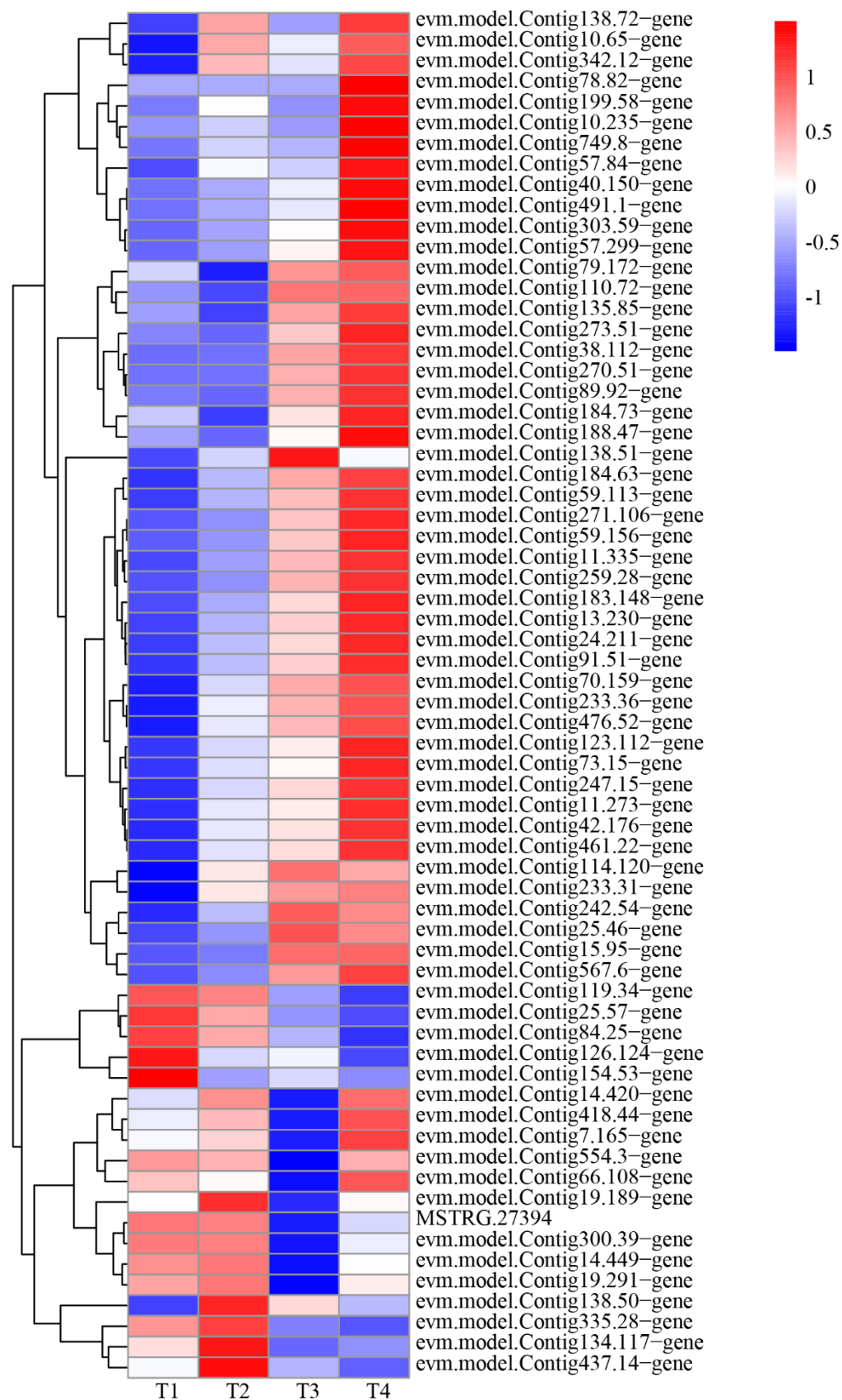


Fig. S6 Heat map of differentially expressed genes (DEGs) related to photosynthesis in leaves of "Ziyan Gongzhu" at the four developmental stages according to hierarchical cluster analysis. Blue indicates the lowest expression; white indicates intermediate expression and red indicates the highest expression. A colour scale bar is shown at the top-right corner of the figure and corresponds to the values of the mean-centred log₂-transformed fragments per kilobase per million reads (FPKM). (T1: purple red leaf (RHS 67A), T: stage, T2: light purple leaf (RHS 65A), T3: yellow green leaf (RHS 1C), T4: dark green leaf (RHS N137A).

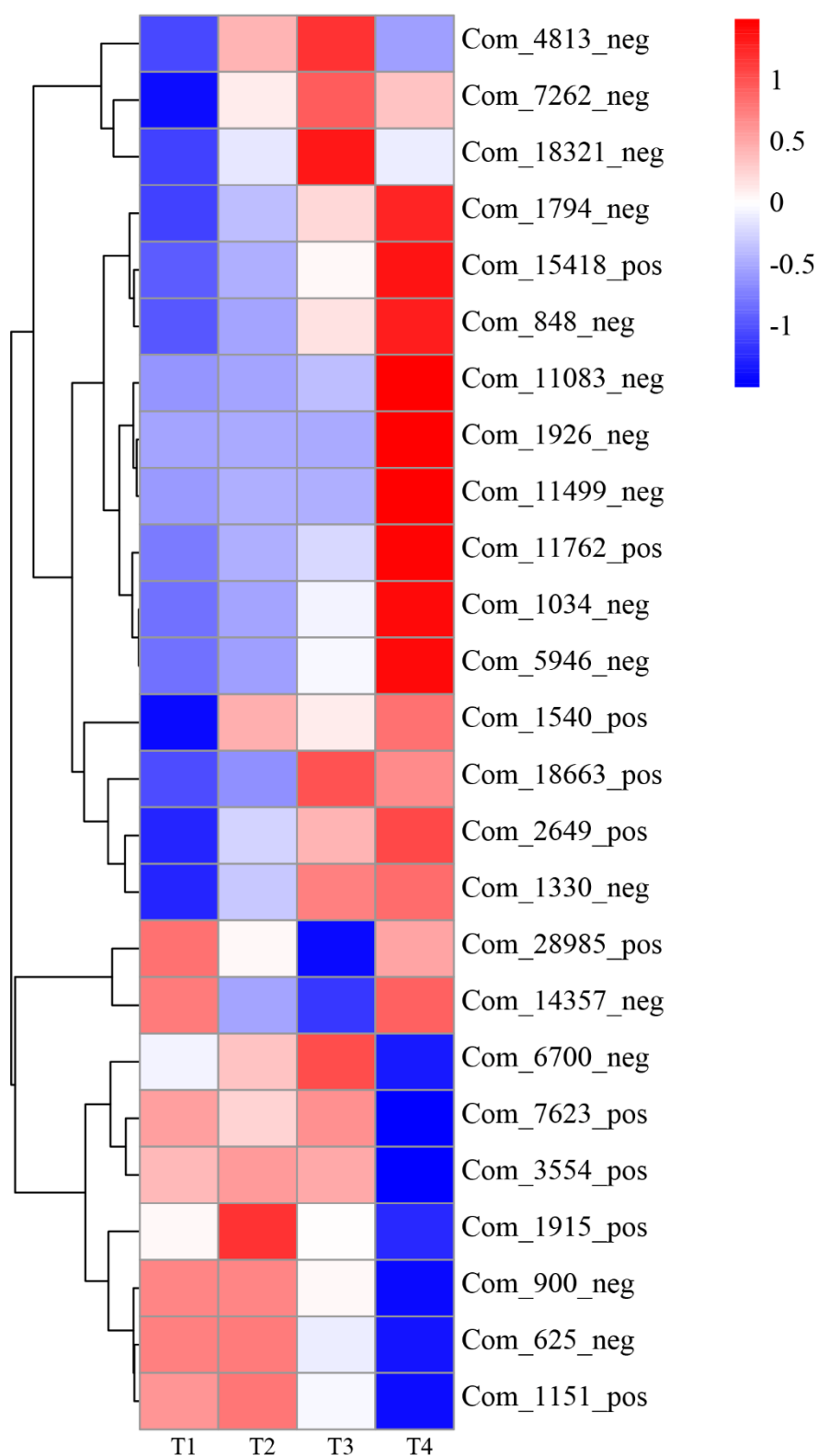


Fig. S7 Heat map of differential abundant metabolites (DAMs) related to carbohydrate in leaves of “Ziyan Gongzhu” at the four developmental stages according to hierarchical cluster analysis. Blue indicates the lowest abundant; white indicates intermediate abundant and red indicates the highest abundant. (T1: purple red leaf (RHS 67A), T: stage, T2: light purple leaf (RHS 65A), T3: yellow green leaf (RHS 1C), T4: dark green leaf (RHS N137A).