

Fig. S. 1 Interactive effects of MT and SNP on the contents GSH, AsA, GSH/GSSG, and AsA/DHA in cucumber seedlings under cold stress. **(A)** GSH content, **(B)** AsA content, **(C)** GSH/GSSG, **(D)** AsA/DHA. Three-leaf stage seedling were foliar sprayed with 100 μM MT, 75 μM SNP, 100 μM cPTIO+100 μM MT, 50 μM p-CPA+75 μM SNP, or deionized water (control), respectively for 24 h, and then were exposure to 5 °C for 48 h. Data are the mean \pm SD ($n = 3$). Different letters indicate differ significantly between samples according to Duncan's new multiple range test ($P < 0.05$).

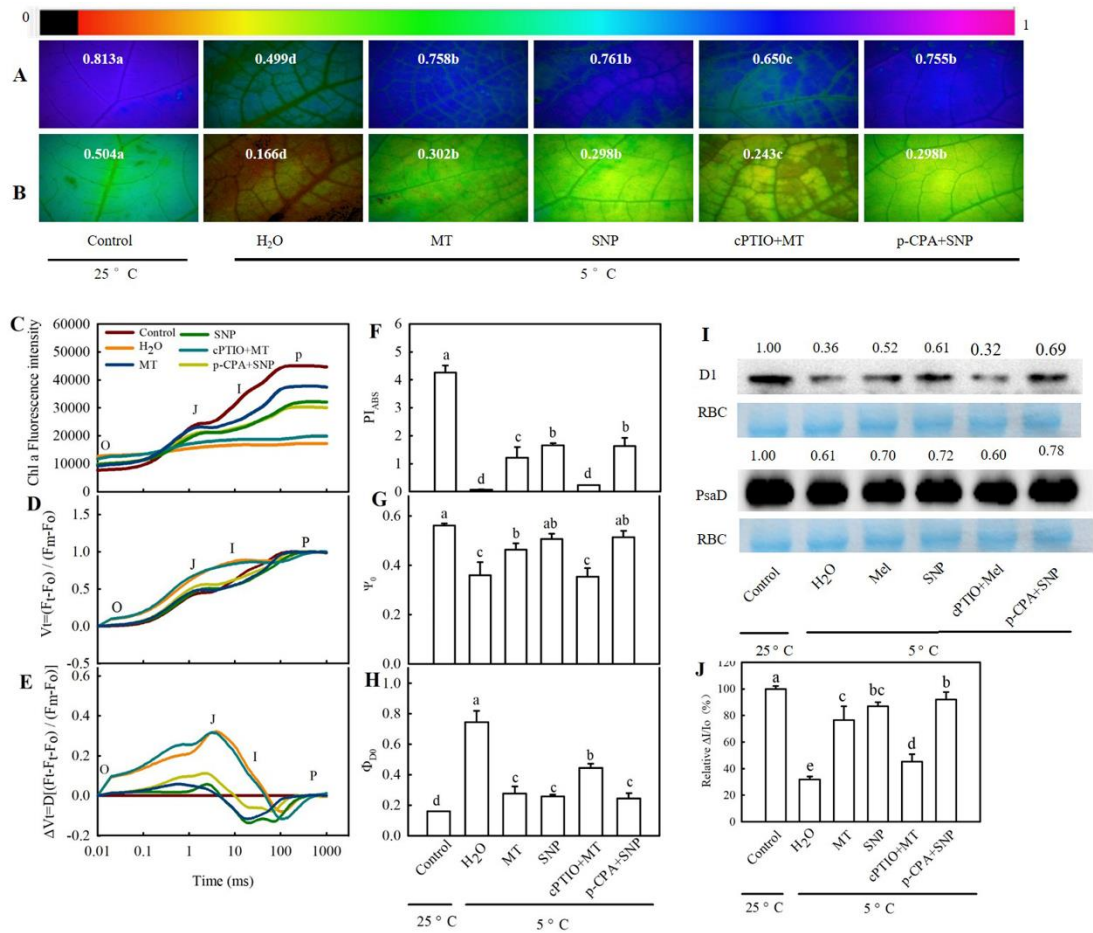


Fig. S. 2 Interactive effects of MT and SNP on photoprotection in cucumber seedlings under cold stress. Three-leaf stage seedling were foliar sprayed with 100 μ M MT, 75 μ M SNP, 100 μ M cPTIO+100 μ M MT, 50 μ M p-CPA+75 μ M SNP, or deionized water (control), respectively for 24 h, and then were exposure to 5 °C for 24 h. **(A)** F_v/F_m ; **(B)** Φ_{PSII} . The false color code depicted at the top of the image ranging from 0 (black) to 1.0 (purple) represents the degree of photoinhibition at PSII. **(C)** OJIP curve; **(D)** V_i ; **(E)** ΔV_i ; **(F)** PI_{ABS} ; **(G)** ψ_0 ; **(H)** Φ_{D0} ; **(I)** D1 and PsbD proteins. Value above each line are the relative accumulation of the protein; **(J)** $\Delta I/I_0$. Data are the mean \pm SD ($n = 3$). Different letters indicate differ significantly between samples according to Duncan's new multiple range test ($P < 0.05$).