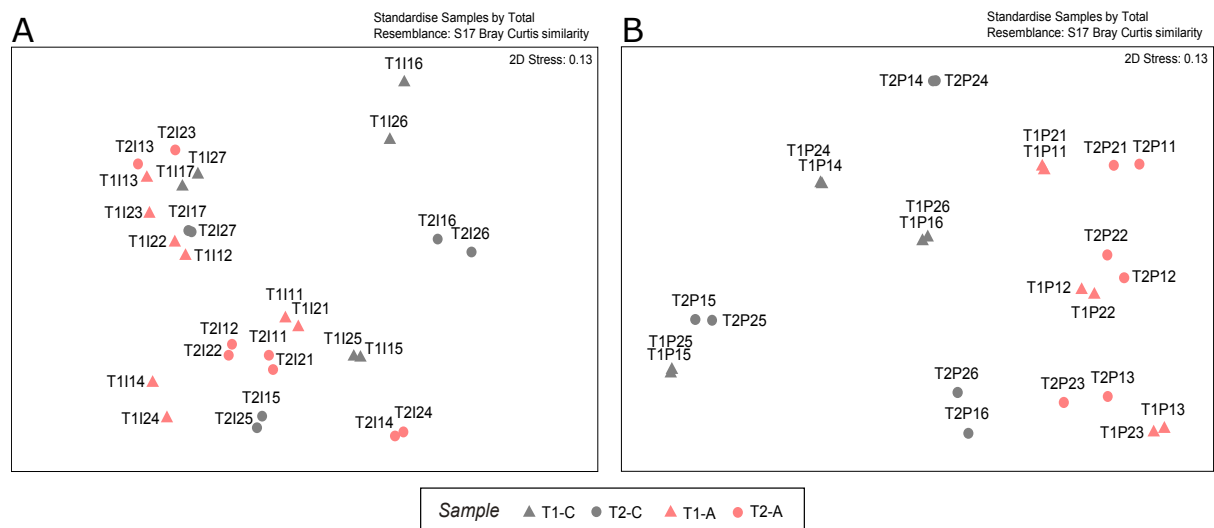
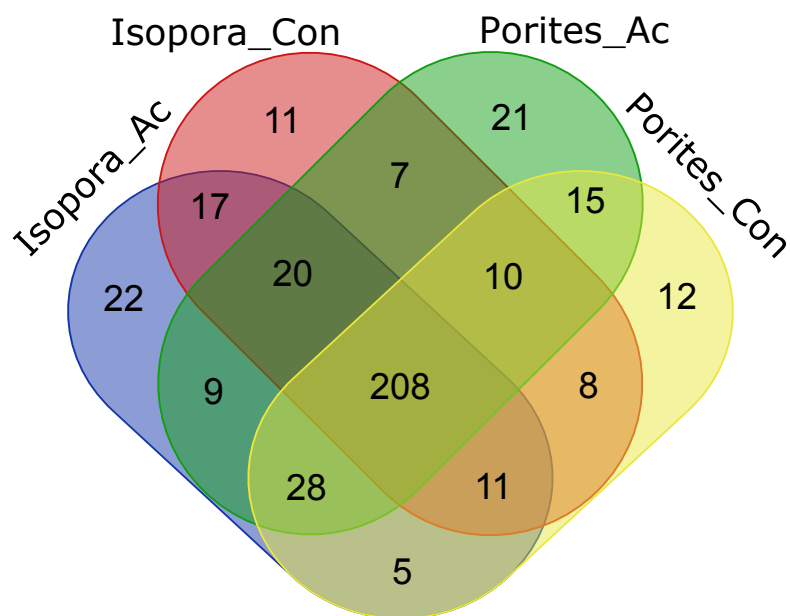
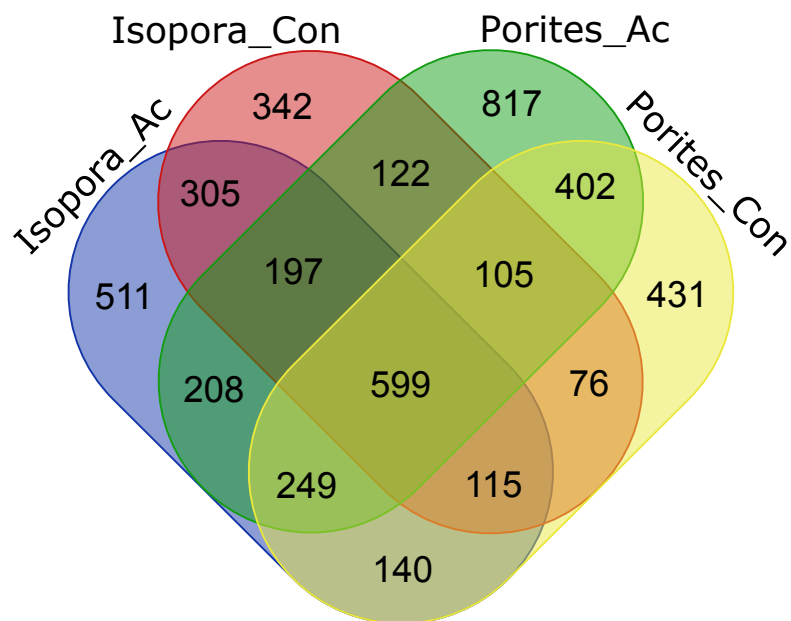
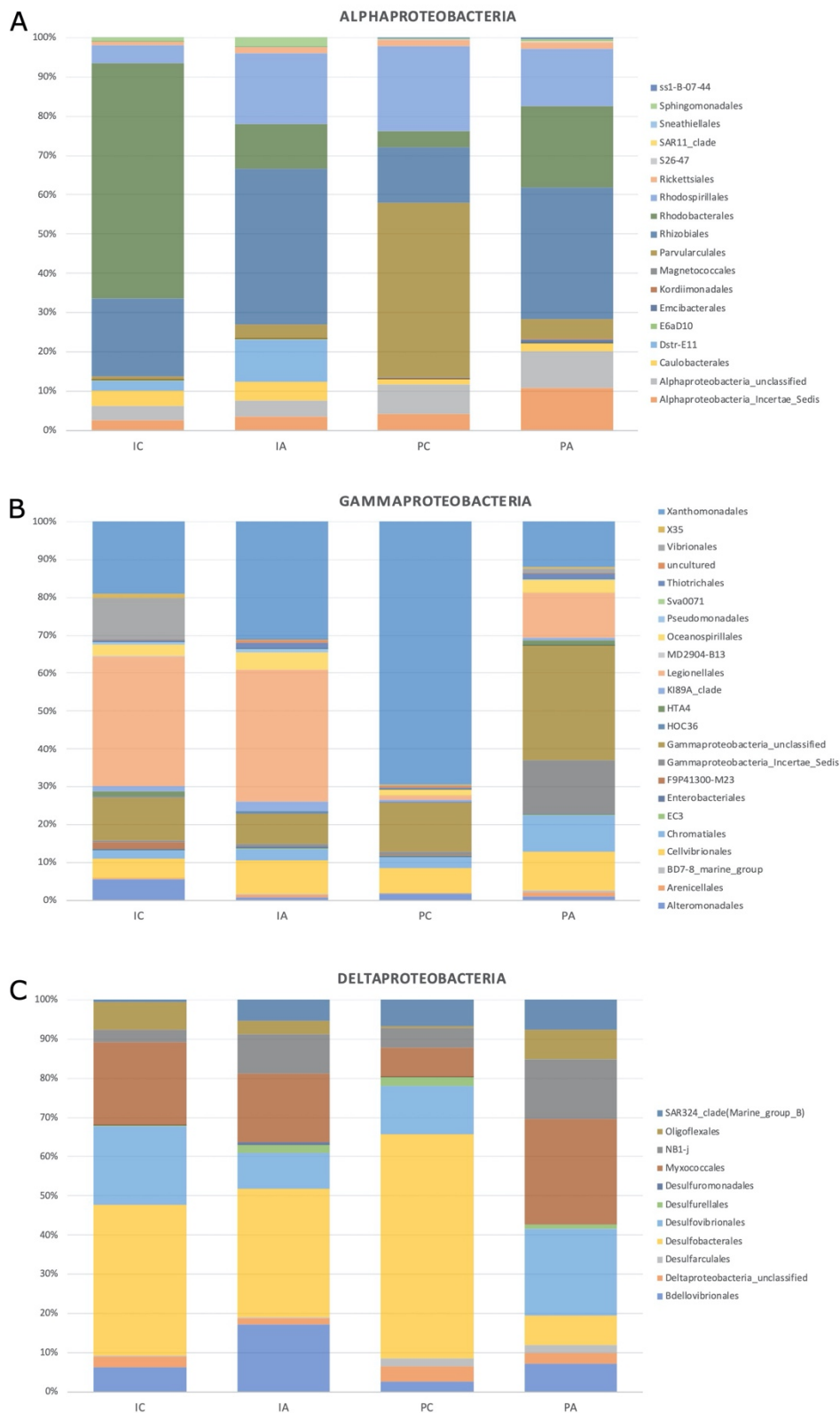




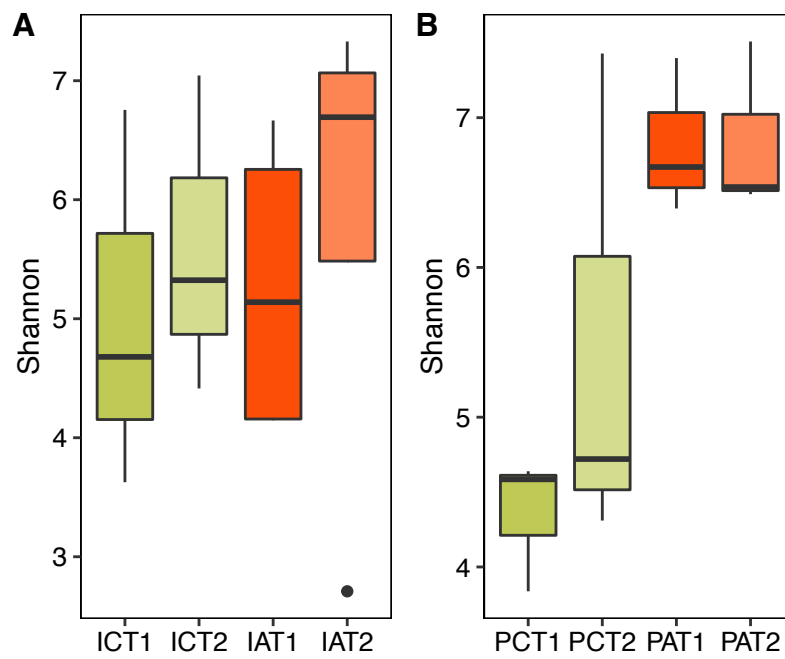
Supplementary Figure 1. Non-metric multidimensional scaling (nMDS) analysis of the changing endolithic bacterial community in the (A) *Isopora palifera* and (B) *Porites lobata* colonies. The gray indicates coral colonies under 400 ppm $p\text{CO}_2$ (control) and the pink indicates colonies under 1000 ppm $p\text{CO}_2$. The triangle and circles represent the first and second sampling times, respectively. All the sample replicates are plotted.



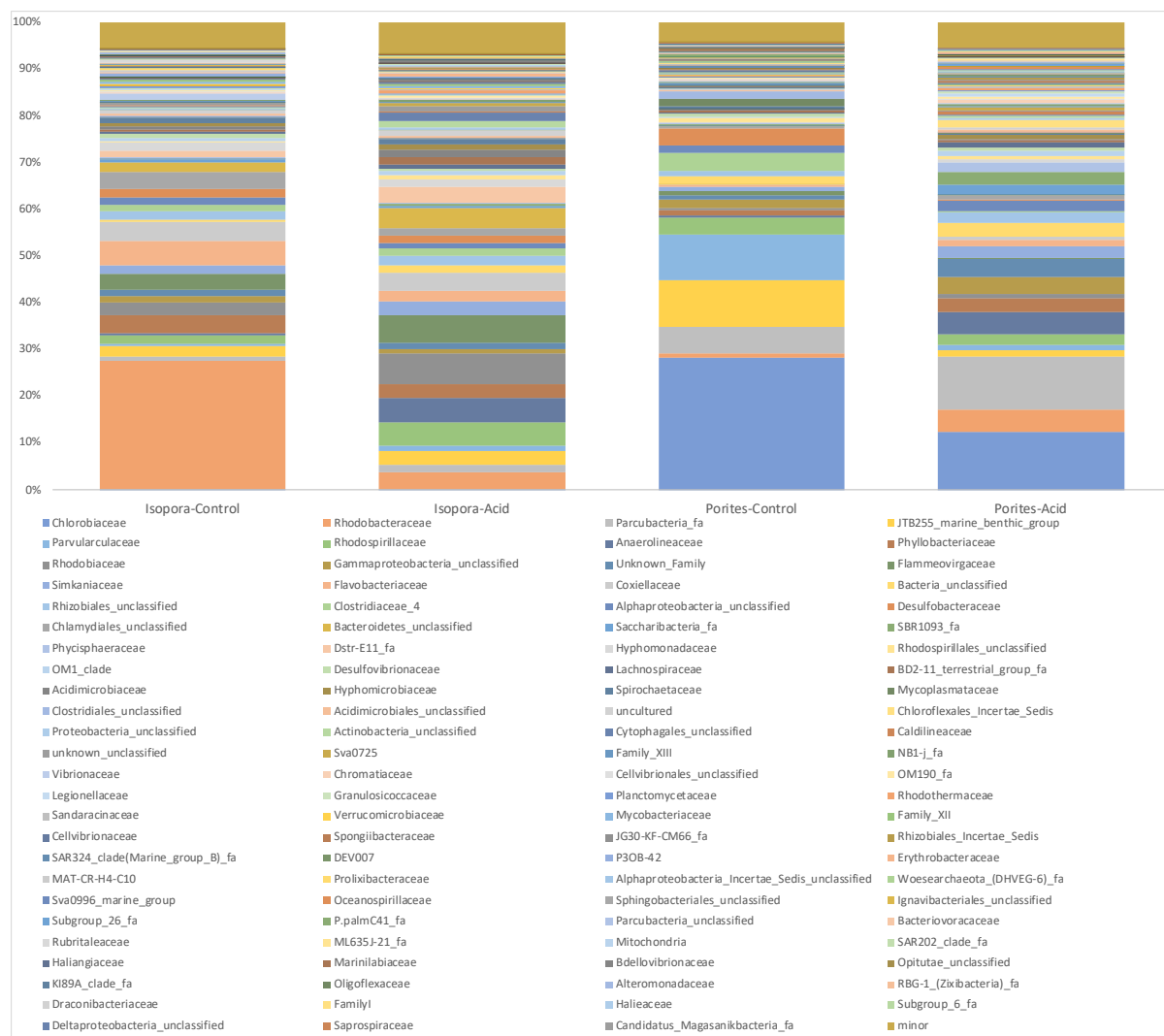
Supplementary Figure 2. The Venn diagram of OTU (up) and family (down) for each treatment group.



Supplementary Figure 3. Order level of the relatively abundant of (A) Alphaproteobacteria, (B) Gammaproteobacteria, and (C) Deltaproteobacteria in each treatment. IC = *I. palifera* control treatment; IA = *I. palifera* acidification treatment; PC = *P. lobata* control treatment; PA = *P. lobata* acidification treatment.



Supplementary Figure 4. Shannon diversity boxplot of the endolithic bacterial communities in the (A) *Isopora palifera* and (B) *Porites lobata* colonies under two $p\text{CO}_2$ treatments and two sampling points. Green indicates the control treatment and orange indicates the acidification treatment.



Supplementary Figure 5. The relatively abundant in family level for all treatments.