

Biochar contributes to resistance against root rot disease by stimulating soil polyphenol oxidase

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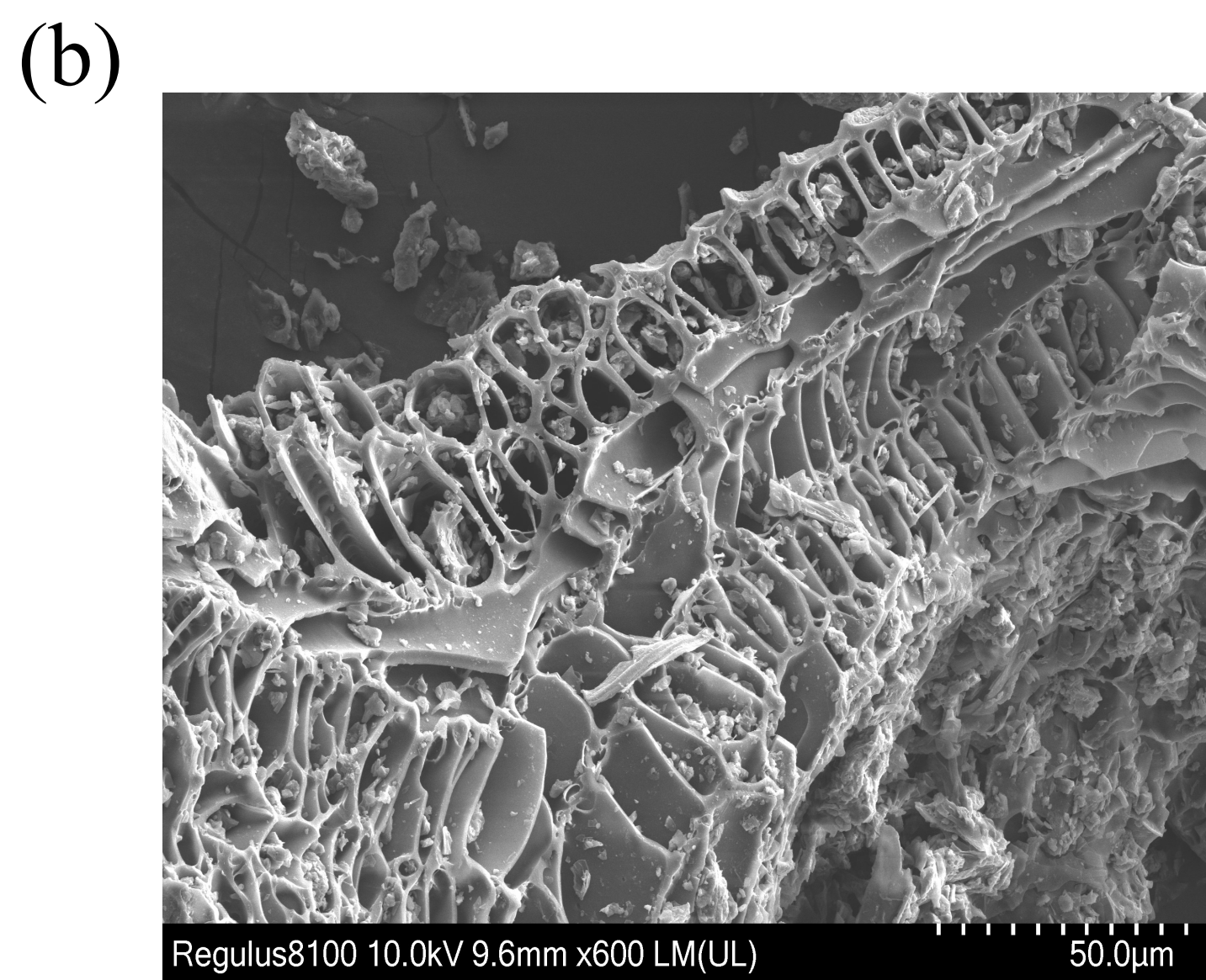
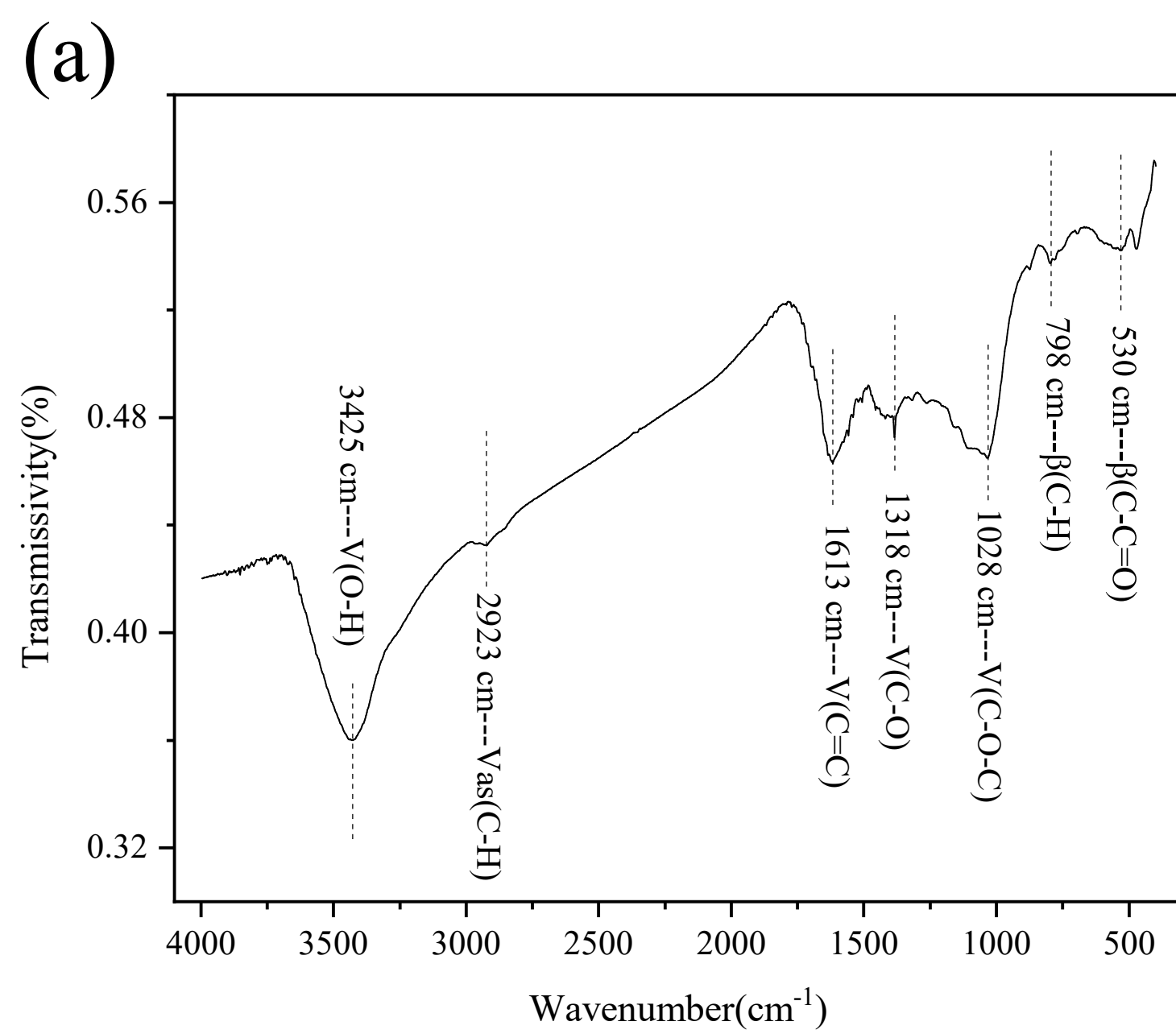


Fig. S1 (a) FTIR spectra peaks of peanut shell biochar. (b) SEM image of peanut shell biochar.

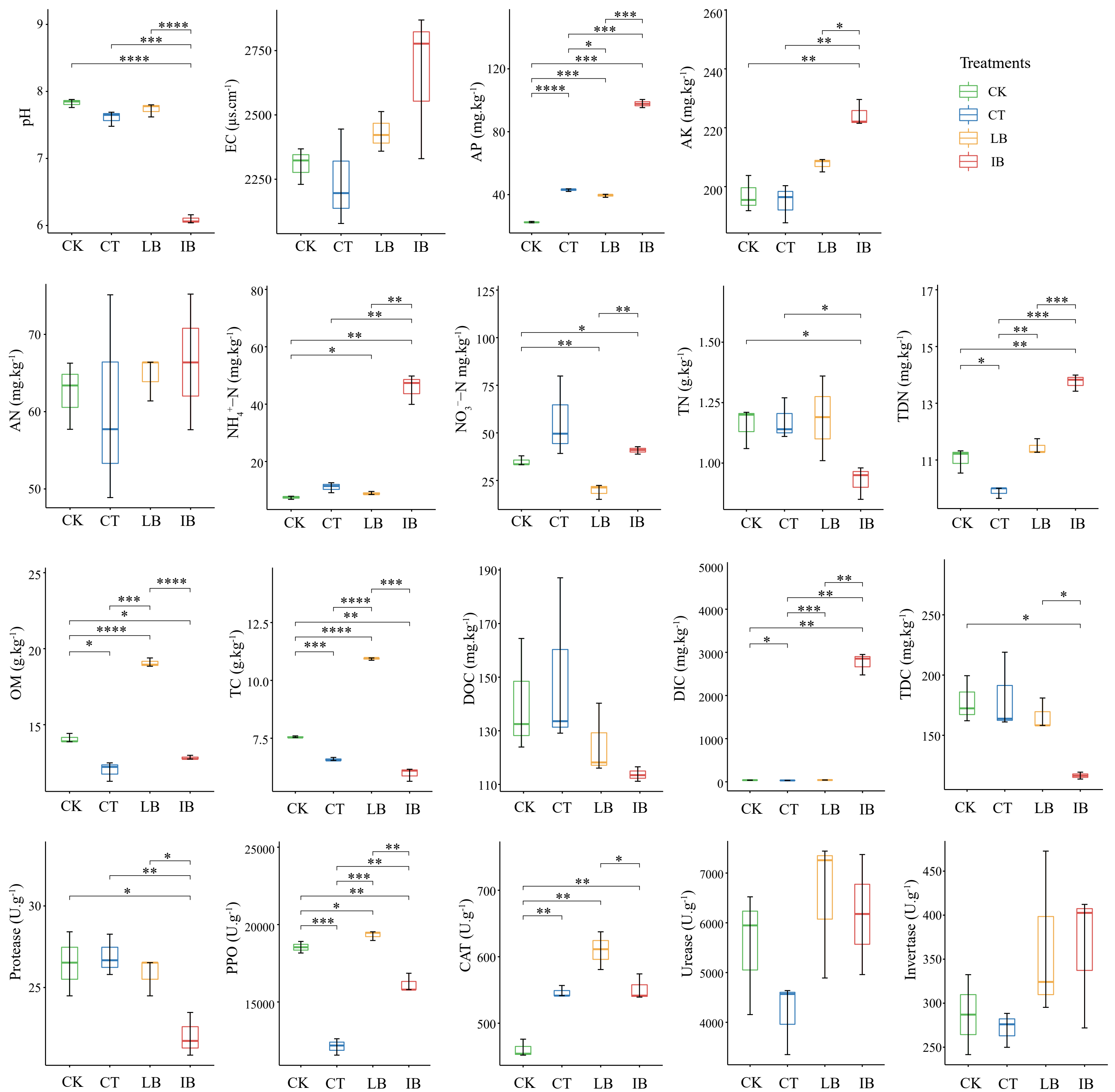


Fig. S2 The contents of soil properties among the four treatments (One-way ANOVA significant difference was used for two pairwise compositions. EC: conductivity, AP: available phosphorus, AK: available potassium, AN: available nitrogen, TN: total nitrogen, TDN: solubilization of soil total nitrogen, OM: organic matter, TC: total carbon, DOC: solubilization of organic carbon, DIC: solubilization of inorganic carbon, TDC: solubilization of soil total carbon, PPO: polyphenol oxidase, CAT: catalase. * $p \leq 0.05$, ** $p \leq 0.01$, and *** $p \leq 0.001$).

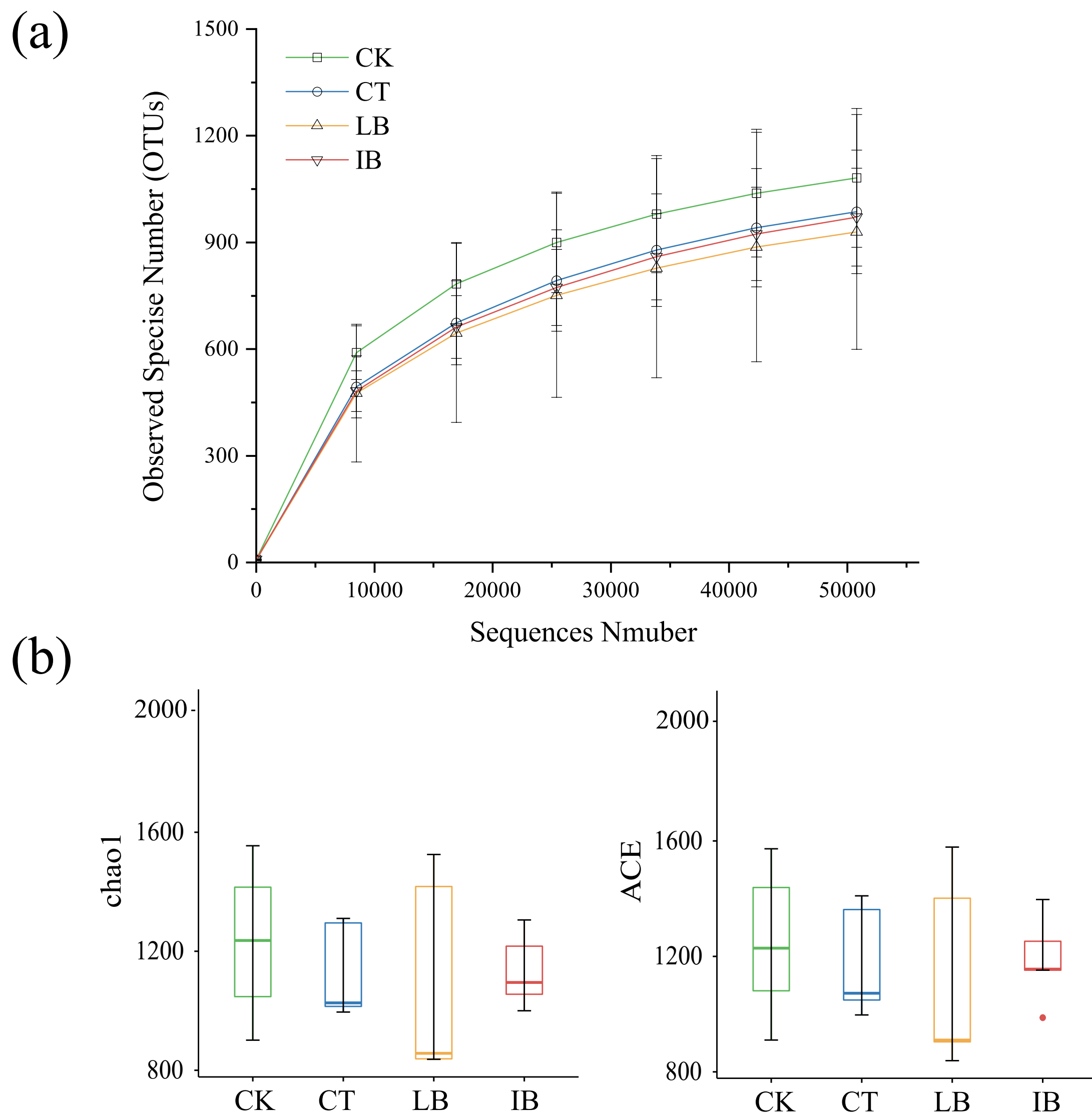


Fig. S3 (a) Rarefaction curve of soil fungal communities among the four treatments. (b) Changes in alpha diversity of fungi across the four treatments.

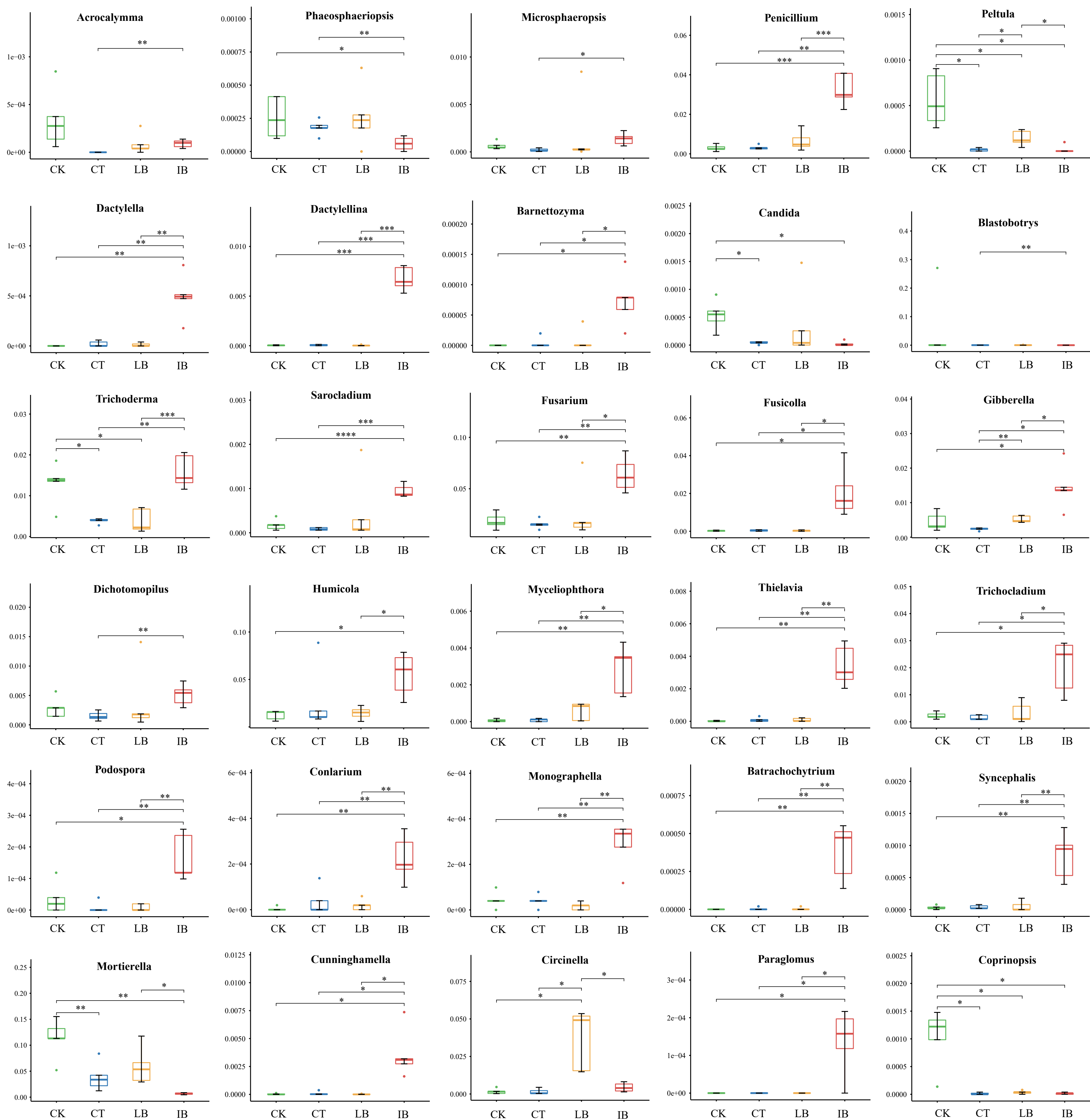


Fig. S4 Relative abundances of fungi at genus level among the four treatments (Student's t-test, * $p \leq 0.05$, ** $p \leq 0.01$, and *** $p \leq 0.001$).

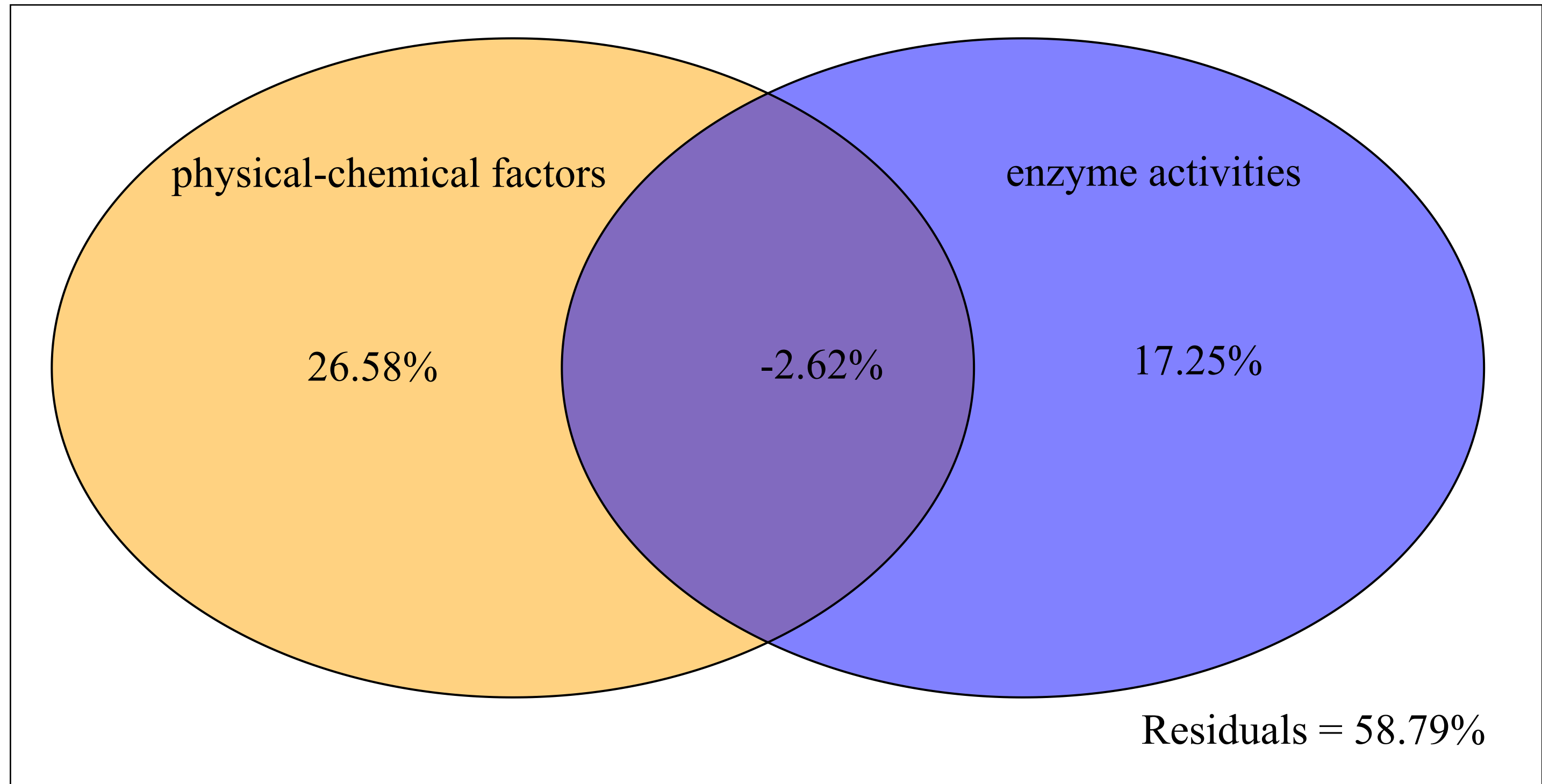


Fig. S5 Variance partitioning analysis (VPA) of fungi at class level explained by soil factors. (Physical-chemical properties included AN: available nitrogen, IN: inorganic nitrogen, TN: total nitrogen, EC: conductivity, DOC: solubilization of organic carbon, and soil enzyme included PPO: polyphenol oxidase, CAT: catalase, urease, and invertase.)