

Legends

Figure S1. 3D structure simulation diagram of Prochloraz molecule by ChemBio3D Ultra 12.0.

Figure S2. Bioactivities of the of BMMs and BMMs-PMAA/Fe³⁺ against *Rhizoctonia solani*.

Figure S3. SEM (A, B) and EDS (C,D) mapping characterizations of the rice plant root treated with deionized water and BMMs-PMAA/Fe³⁺ nanoparticles.

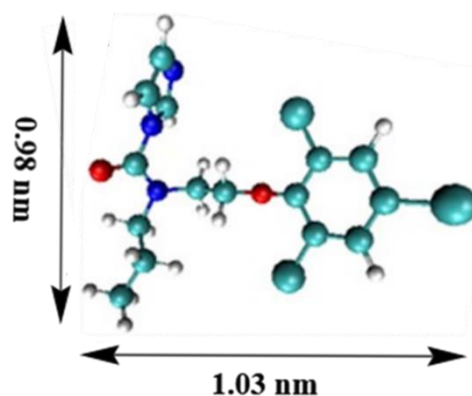


Figure S1. 3D structure simulation diagram of Prochloraz molecule by ChemBio3D Ultra 12.0 (PerkinElmer, Waltham, MA, USA).

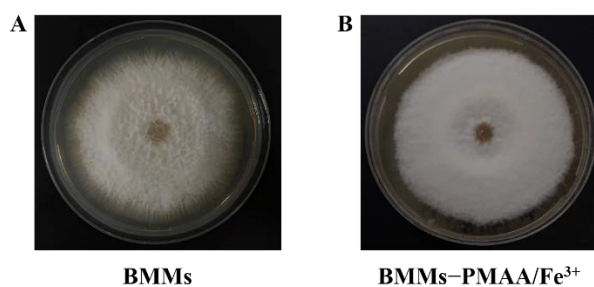


Figure S2. BMMs-Bioactivities of BMMs (A) and BMMs-PMAA/Fe³⁺ (B) against *Rhizoctonia solani*.

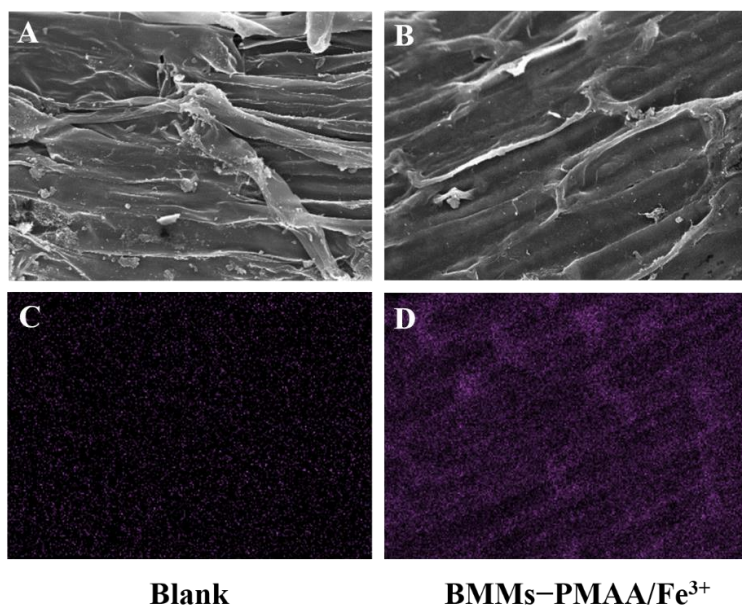


Figure S3. SEM images of the rice plant root treated with deionized water (A) and BMMs-PMAA/Fe³⁺ nanoparticles (B), EDS mapping characterizations of the rice plant root treated with deionized water (C) and BMMs-PMAA/Fe³⁺ nanoparticles (D).