

Supplementary Materials

Reduced Graphene Oxide Nanosheet-Decorated Copper Oxide Nanoparticles: A Potent Antifungal Nanocomposite against *Fusarium* Root Rot and Wilt Diseases of Tomato and Pepper Plants

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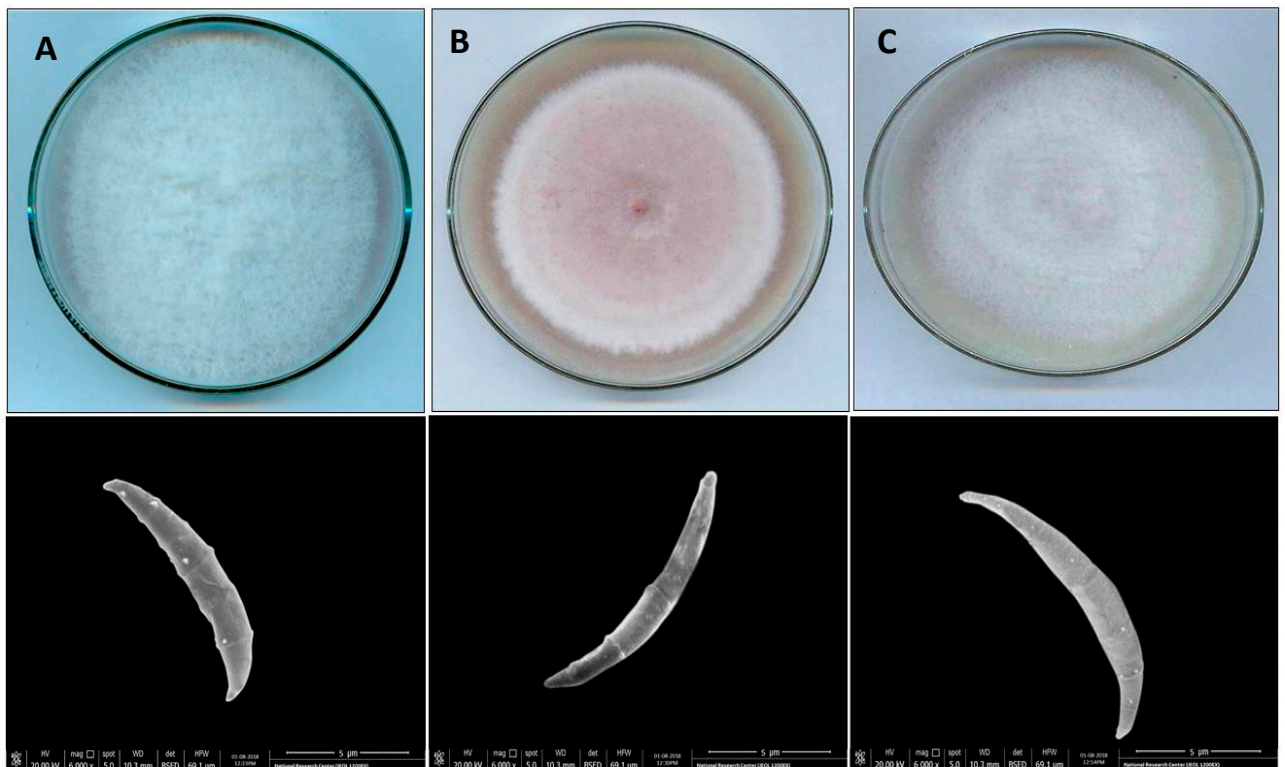


Figure S1. The three *Fusarium oxysporum* isolates (A) FORL, (B) FOC1 and (C) FOC2. Mycelial fungal growth on PDA plates (upper row) and SEM images of macroconidia (lower row).

Figure S2. Partial sequences of 5.8S ribosomal RNA, complete sequences of internal transcribed spacer 2, and partial sequences of large subunit ribosomal RNA gene for the three FORL, FOC1 and FOC2 *Fusarium oxysporum* isolates.

FORL

>MK937617.1 *Fusarium oxysporum* f. sp. *radicis-lycopersici* voucher F1 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and internal transcribed spacer 2, complete sequence; and large subunit ribosomal RNA gene, partial sequence
TGCGGAGGGATCATTACCGAGTTTACAACCTCCCAAACCCCTGTGAACATAACCACTTGTTGCC
TCGCGGGATCAGCCCCTCCCGGTAAAACGGGACGGCCCGCCAGAGGACCCCTAAACTCTGT
TTCTATATGTAACCTTCTGAGTAAAACCATAAAATAAATCAAACTTTCAACAACGGATCTCTT
GGTTCTGGCATCGATGAAGAACGCAGCAAAATGCGATAAGTAATGTGAATTGCAGAATTCAG
TGAATCATCGAATCTTTGAACGCACATTGCGCCCGCCAGTATTCTGGCGGGCATGCCTGTTC
GAGCGTCATTTCAACCCTCAAGCACAGCTTGGTGTGGGACTCGCGTTAATTTCGCGTTCCCC
AAATTGATTGGCGGTACGTCGAGCTTCCATAGCGTAGTAGTAAAACCCCTCGTTACTGGTAA
TCGTCGCGGCCACGCCGTTAAACCCCAACTTCTGAATGTTGACCTCGGATCAGGTAGGAATA
CCCGCTGAACTTAA

FOC1

>MK937618.1 *Fusarium oxysporum* voucher F2 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and internal transcribed spacer 2, complete sequence; and large subunit ribosomal RNA gene, partial sequence
TGCGGAGGGATCATTACCGAGTTTACAACCTCCCAAACCCCTGTGAACATAACCACTTGTTGCC
TCGCGGGATCAGCCCCTCCCGGTAAAACGGGACGGCCCGCCAGAGGACCCCTAAACTCTGT
TTCTATATGTAACCTTCTGAGTAAAACCATAAAATAAATCAAACTTTCAACAACGGATCTCTT
GGTTCTGGCATCGATGAAGAACGCAGCAAAATGCGATAAGTAATGTGAATTGCAGAATTCAG
TGAATCATCGAATCTTTGAACGCACATTGCGCCCGCCAGTATTCTGGCGGGCATGCCTGTTC
GAGCGTCATTTCAACCCTCAAGCACAGCTTGGTGTGGGACTCGCGTTAATTTCGCGTTCCCTC
AAATTGATTGGCGGTACGTCGAGCTTCCATAGCGTAGTAGTAAAACCCCTCGTTACTGGTAA
TCGTCGCGGCCACGCCGTTAAACCCCAACTTCTGAATGTTGACCTCGGATCAGGTAGGAATA
CCCGCTGAACTTAA

FOC2

>MK937619.1 *Fusarium oxysporum* voucher F3 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and internal transcribed spacer 2, complete sequence; and large subunit ribosomal RNA gene, partial sequence
TGCGGAGGGATCATTACCGAGTTTACAACCTCCCAAACCCCTGTGAACATAACCACTTGTTGCC
TCGCGGGATCAGCCCCTCCCGGTAAAACGGGACGGCCCGCCAGAGGACCCCTAAACTCTGT
TTCTATATGTAACCTTCTGAGTAAAACCATAAAATAAATCAAACTTTCAACAACGGATCTCTT
GGTTCTGGCATCGATGAAGAACGCAGCAAAATGCGATAAGTAATGTGAATTGCAGAATTCAG
TGAATCATCGAATCTTTGAACGCACATTGCGCCCGCCAGTATTCTGGCGGGCATGCCTGTTC
GAGCGTCATTTCAACCCTCAAGCACAGCTTGGTGTGGGACTCGCGTTAATTTCGCGTTCCCC
AAATTGATTGGCGGTACGTCGAGCTTCCATAGCGTAGTAGTAAAACCCCTCGTTACTGGTAA
TCGTCGCGGCCACGCCGTTAAACCCCAACTTCTGAATGTTGACCTCGGATCAGGTAGGAATA
CCCGCTGAACTTAA

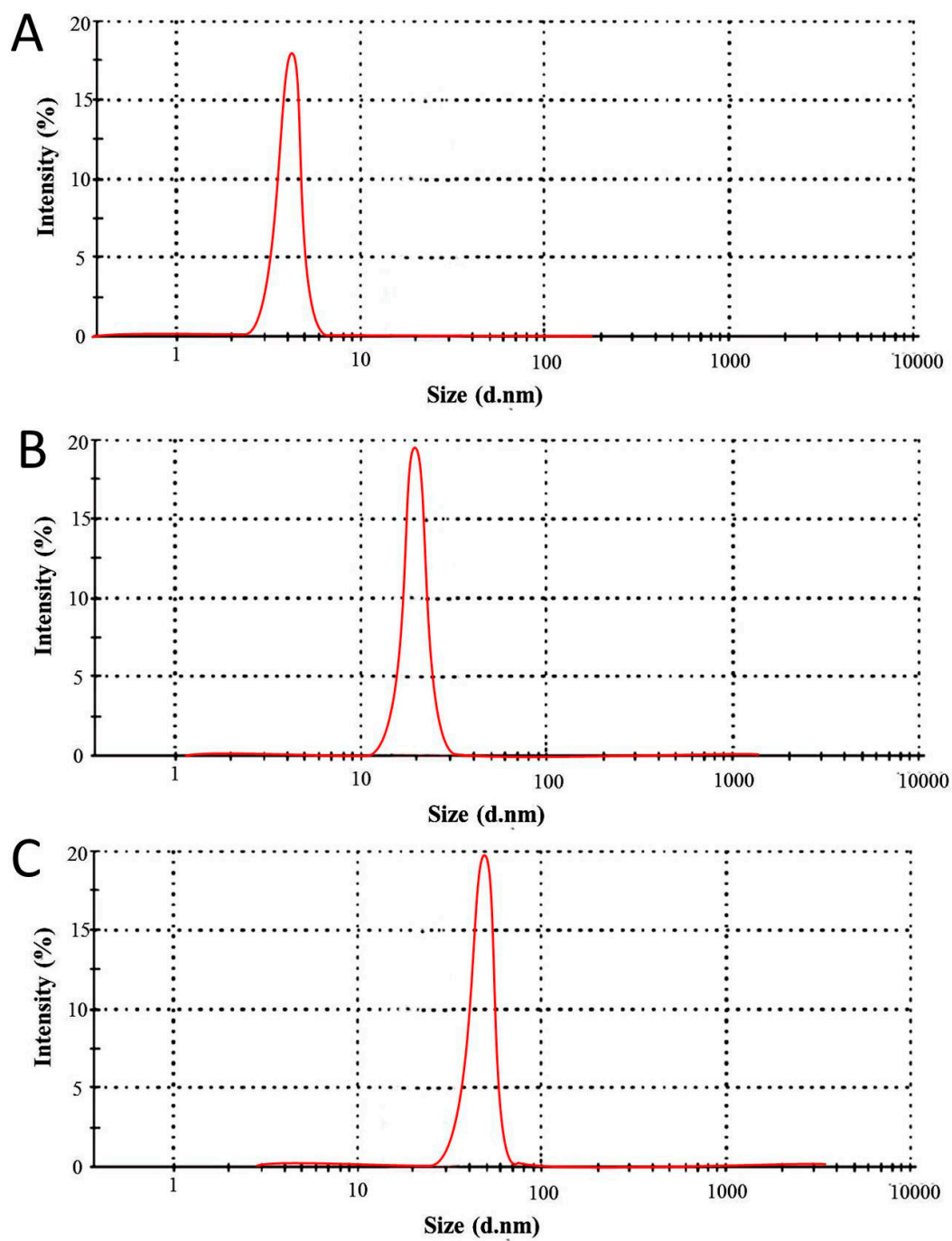


Figure S3. Dynamic light scattering (DLS) analysis of the CuO NPs, (A) 5 nm, (B) 20 nm, and (C) 50 nm.