Supplementary Materials

Aggregation, Sedimentation, and Dissolution of Copper Oxide Nanoparticles: Influence of Low-Molecular-Weight Organic Acids from Root Exudates

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20 **Number of pages:** 6

21 **Number of Figures:** 4

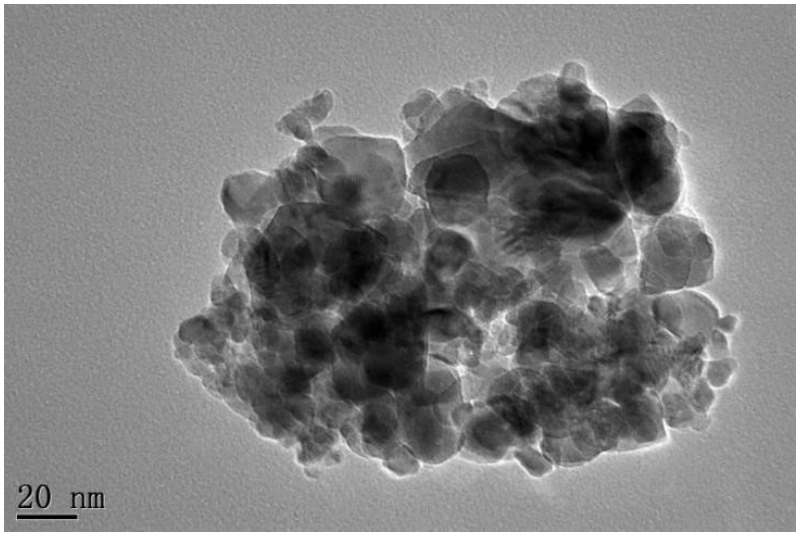

Figure S1. TEM image of CuO NPs

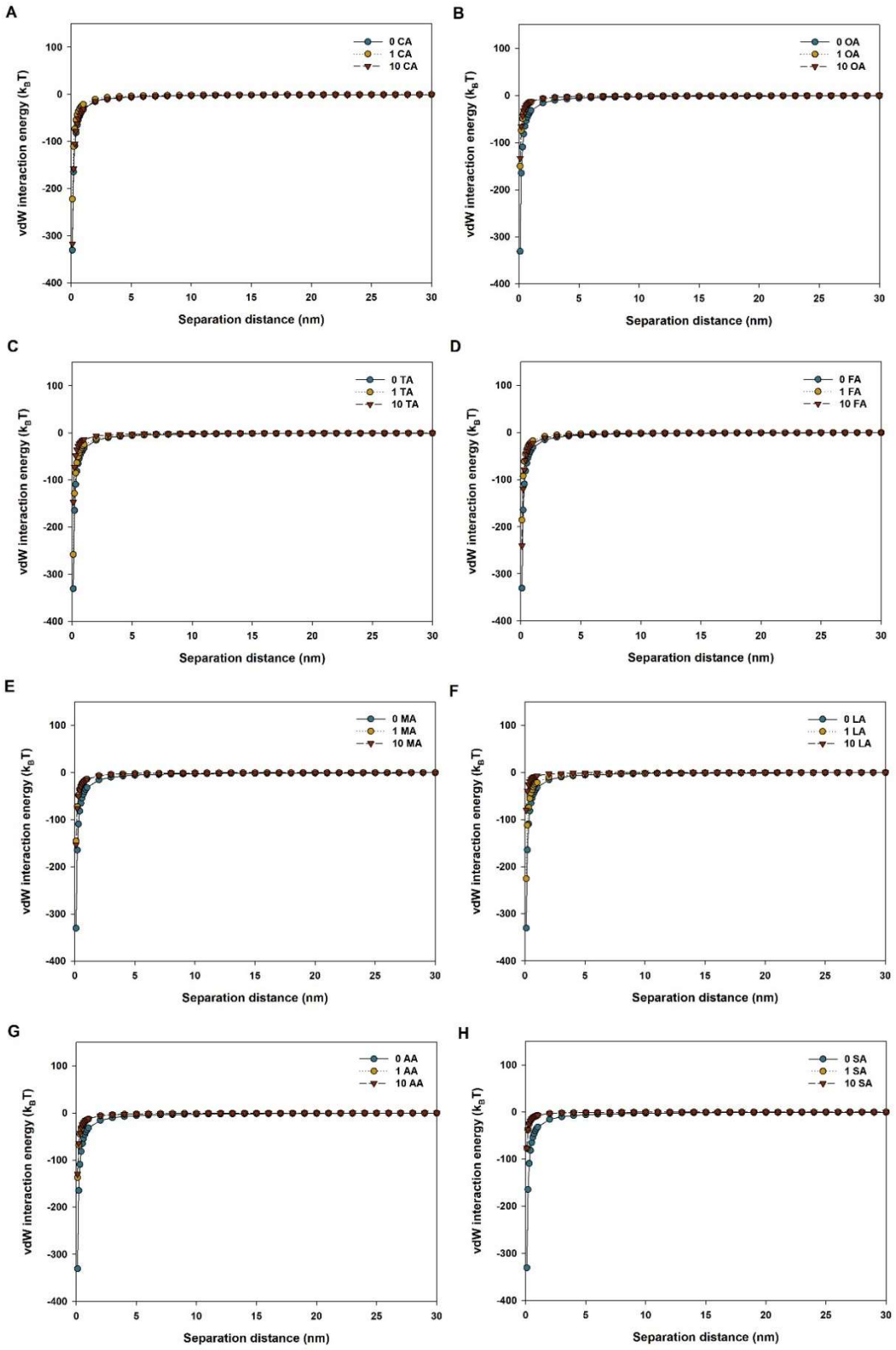

Figure S2. Calculated vdW interaction energy between two CuO NPs under varying LMWOAs. (**A**) CA: Citric acid; (**B**) OA: Oxalic acid; (**C**) TA: Tartaric acid; (**D**) FA: Formic acid; (**E**) MA: Malic acid; (**F**) LA: Lactic acid; (**G**) AA: Acetic acid; (**H**) SA: Succinic acid.

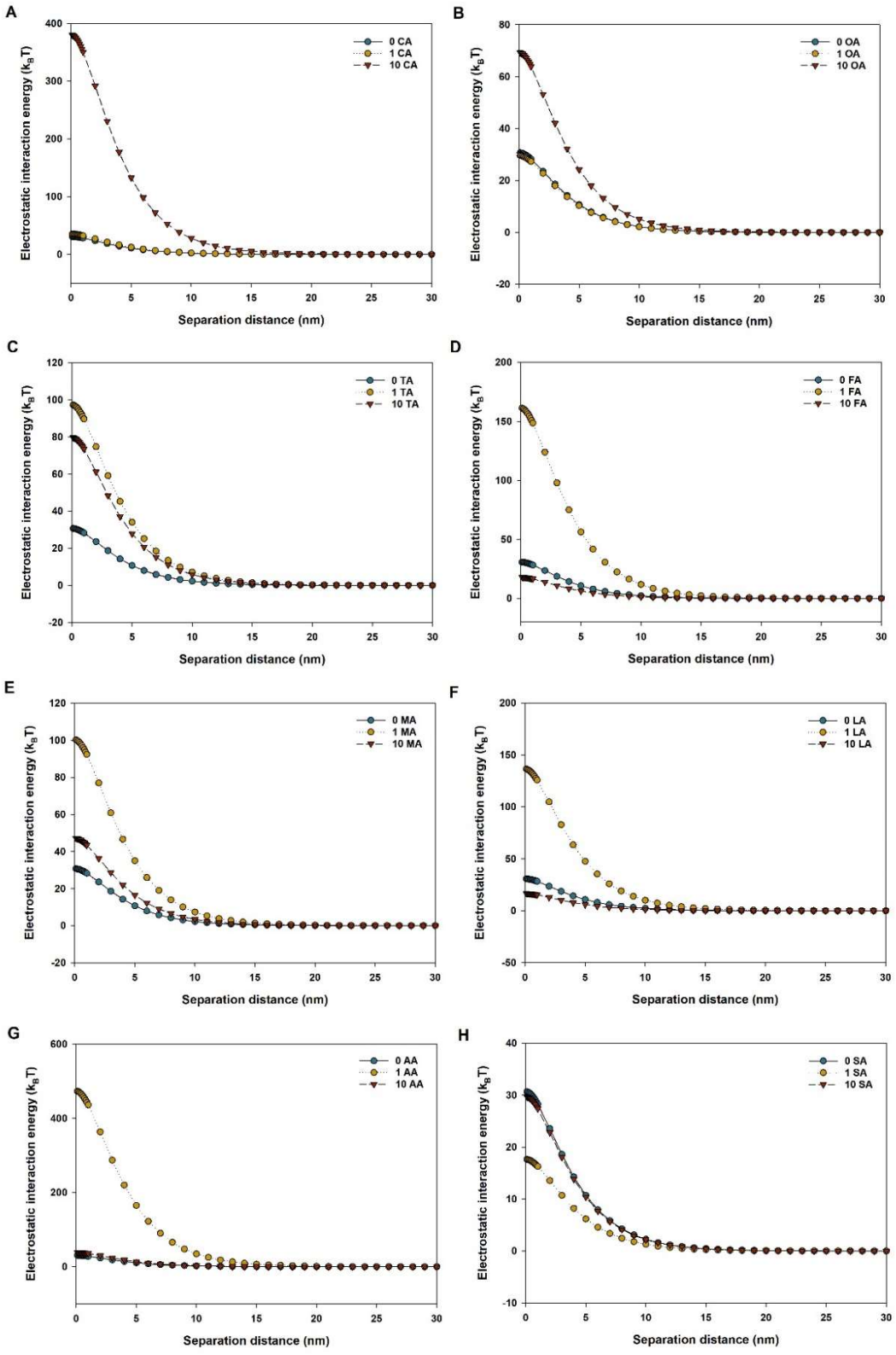

Figure S3. Calculated electrostatic interaction energy between two CuO NPs under varying LMWOAs. (**A**) CA: Citric acid; (**B**) OA: Oxalic acid; (**C**) TA: Tartaric acid; (**D**) FA: Formic acid; (**E**) MA: Malic acid; (**F**) LA: Lactic acid; (**G**) AA: Acetic acid; (**H**) SA: Succinic acid.

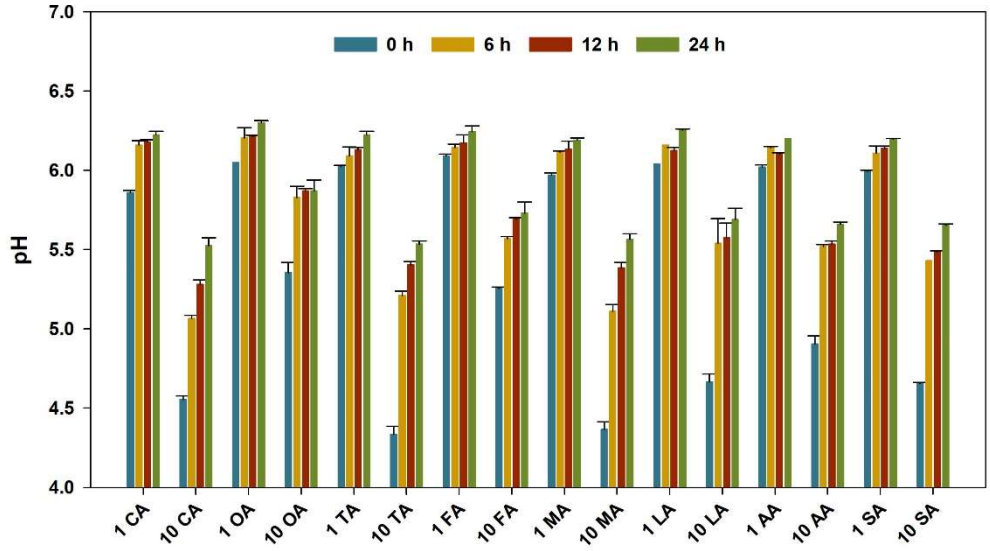

Figure S4. The dynamic pH of CuO NP suspension with varying LMWOAs. CA: Citric acid; OA: Oxalic acid; TA: Tartaric acid; FA: Formic acid; MA: Malic acid; LA: Lactic acid; AA: Acetic acid; SA: Succinic acid.