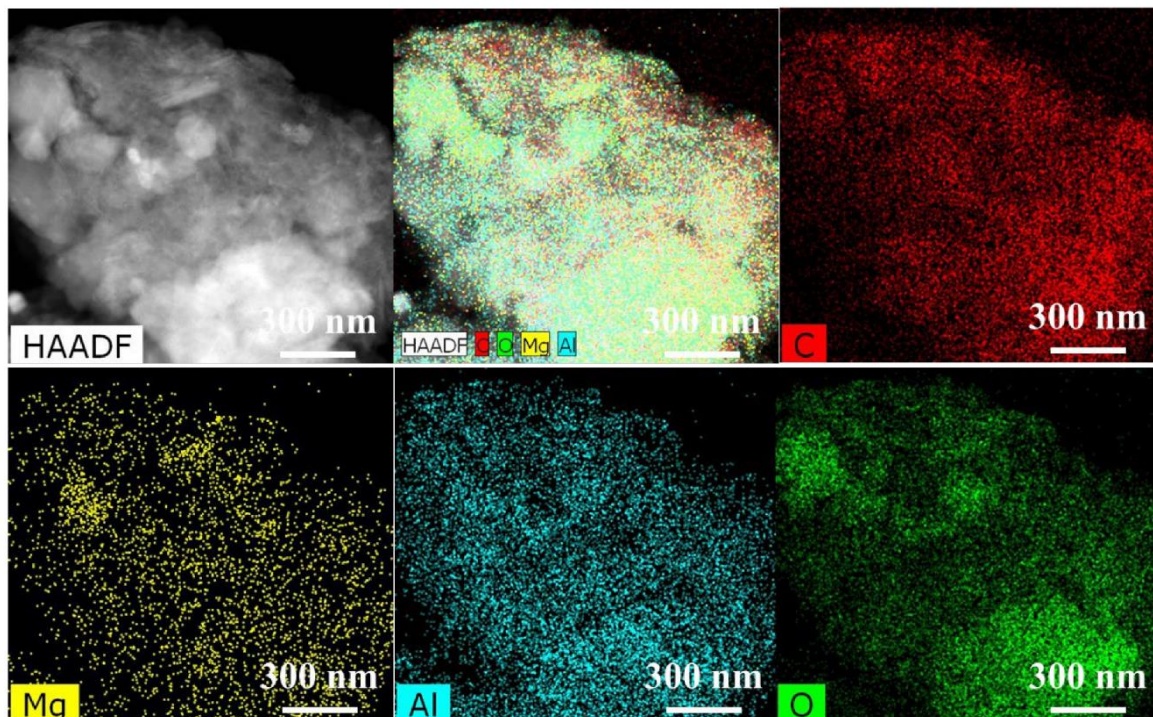
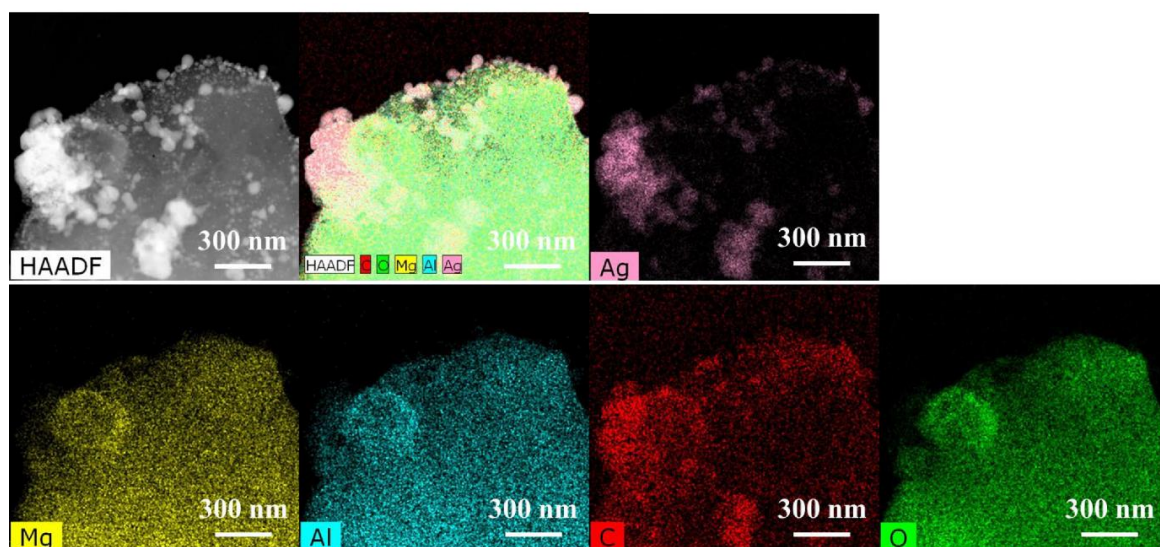


# Supplementary Materials: Controlled Growth of Silver Oxide Nanoparticles on the Surface of Citrate Anion Intercalated Layered Double Hydroxide

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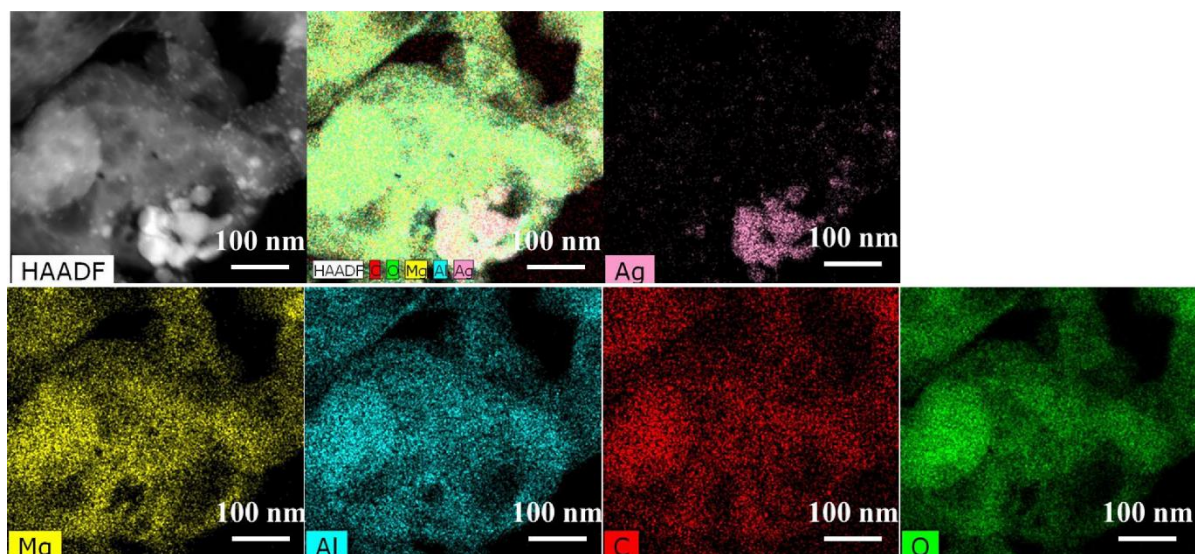


**Figure S1.** High-angle annular dark-field (HAADF) and TEM energy dispersive spectroscopic (EDS) mapping images of pristine MgAl-citrate LDH.

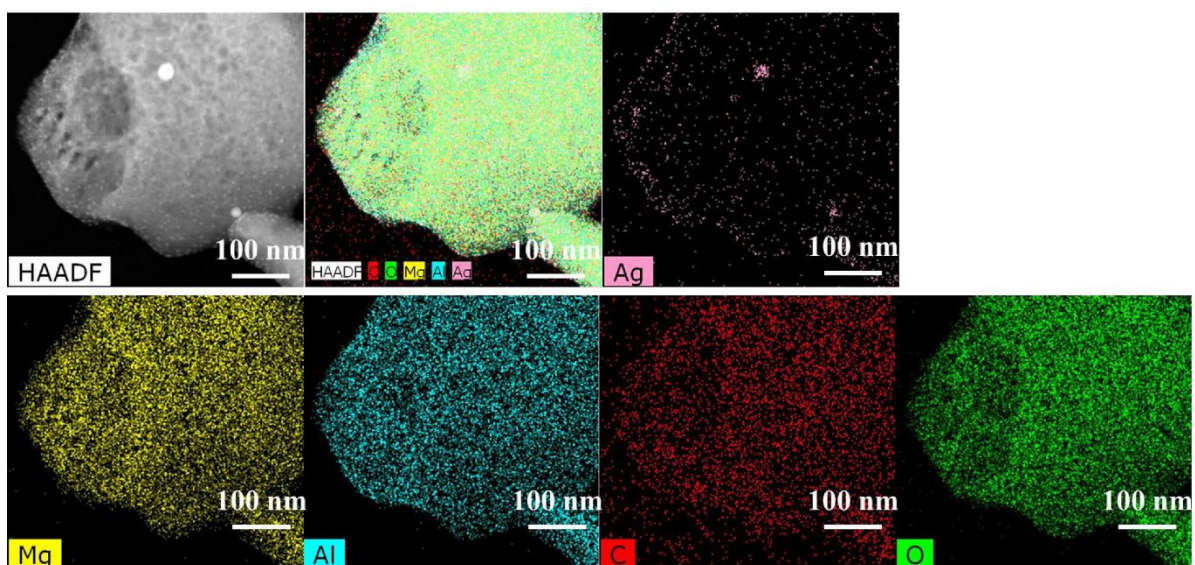


**Figure S2.** High-angle annular dark-field (HAADF) and TEM energy dispersive spectroscopic (EDS) mapping images of SONP@LDH-1.

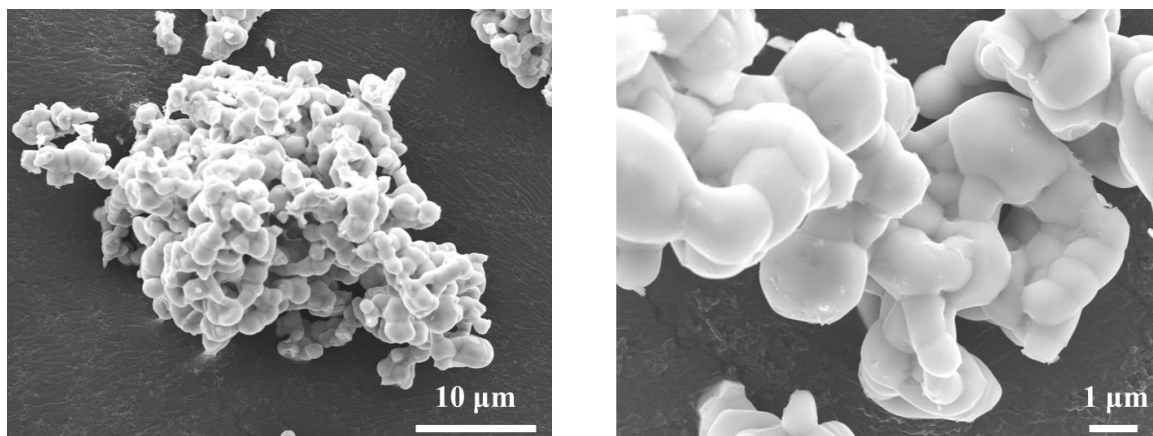




**Figure S3.** High-angle annular dark-field (HAADF) and TEM energy dispersive spectroscopic (EDS) mapping images of SONP@LDH-1/3.

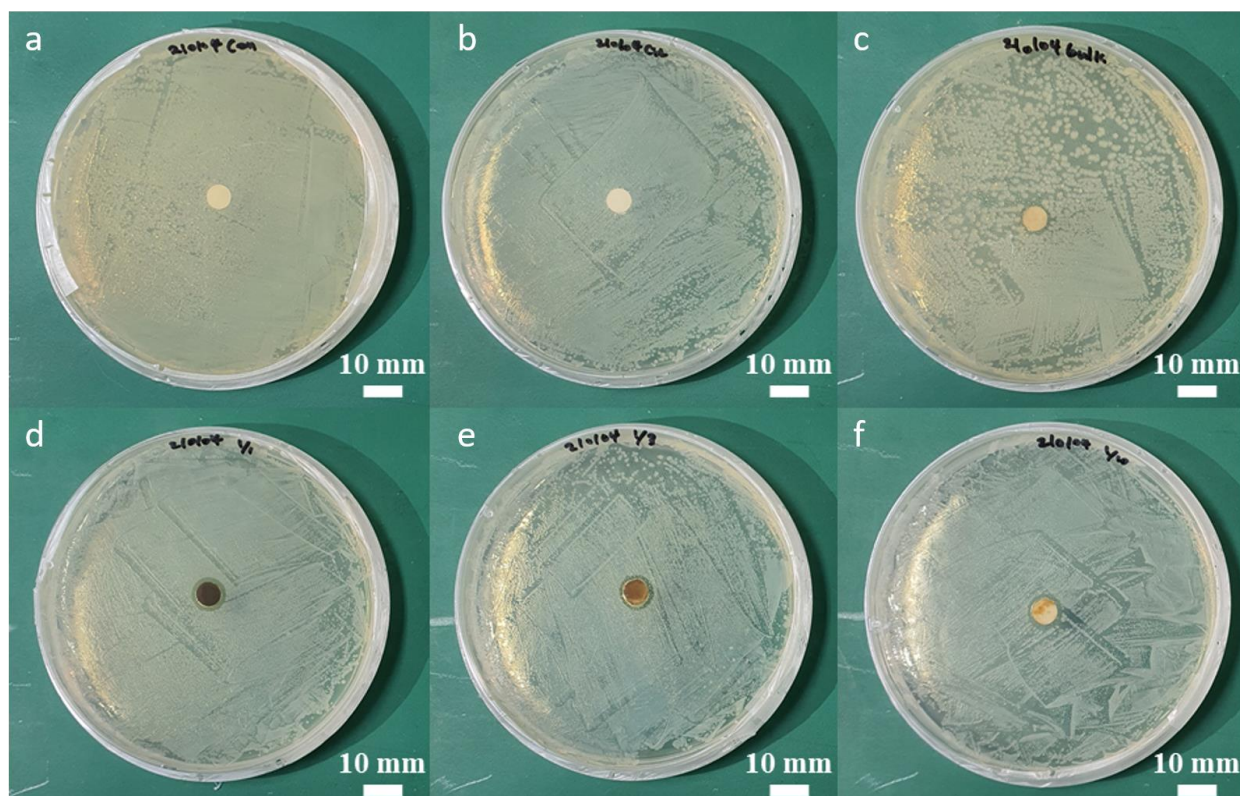


**Figure S4.** High-angle annular dark-field (HAADF) and TEM energy dispersive spectroscopic (EDS) mapping images of SONP@LDH-1/10.

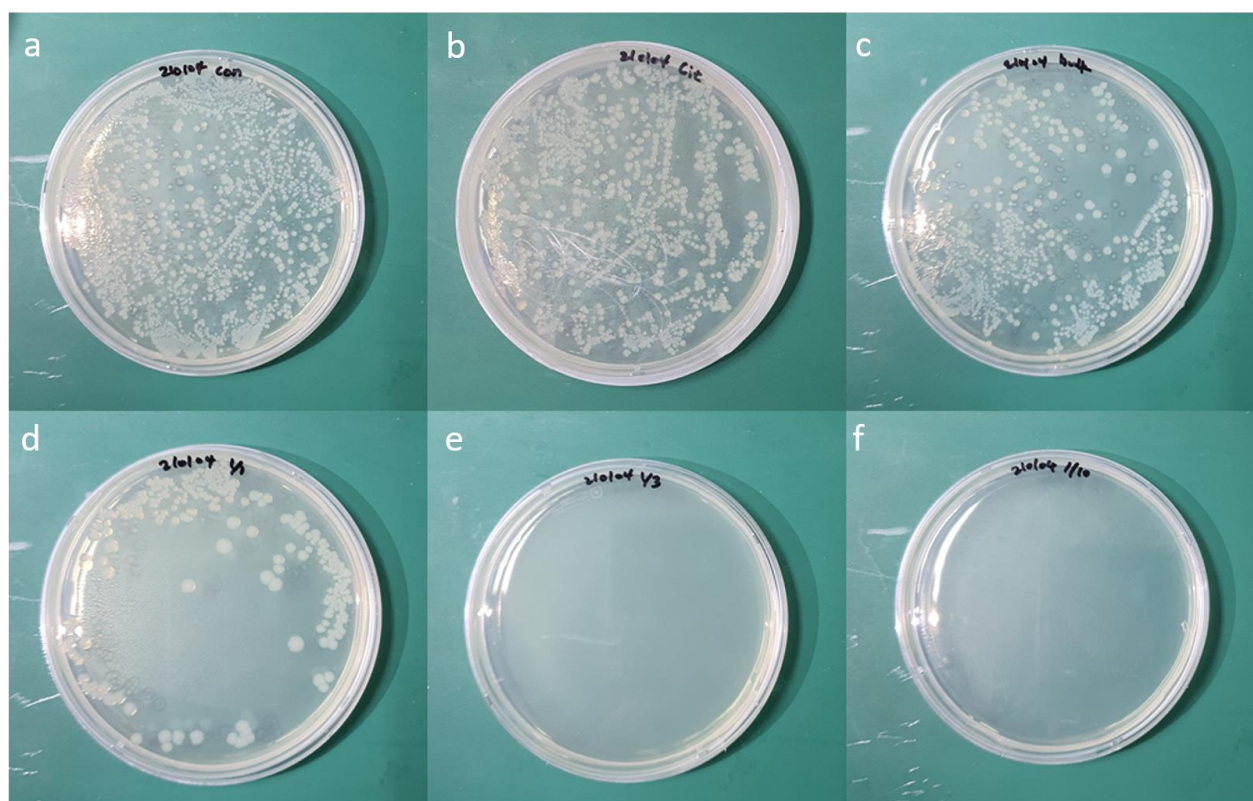


**Figure S5.** Field emission-scanning electron microscopy images of bulk Ag<sub>2</sub>O.





**Figure S6.** Optical images of zone of inhibition assay for (a) negative control, (b) pristine MgAl-citrate LDH, (c) bulk Ag<sub>2</sub>O, (d) SONP@LDH-1, (e) SONP@LDH-1/3 and (f) SONP@LDH-1/10 containing paper on LB agar plates incubated at 37 °C, 24 h. Each paper is 6 mm in diameter.



**Figure S7.** Optical images of colony forming unit test assay for (a) negative control, (b) pristine MgAl-citrate LDH, (c) bulk Ag<sub>2</sub>O, (d) SONP@LDH-1, (e) SONP@LDH-1/3 and (f) SONP@LDH-1/10 on LB agar plates incubated at 37 °C, 24 h.