

Electronic Supplementary Information

The Effects of Vitamin C on ZnO Crystal Formation

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ZnO structures depending on the pH without vitamin C

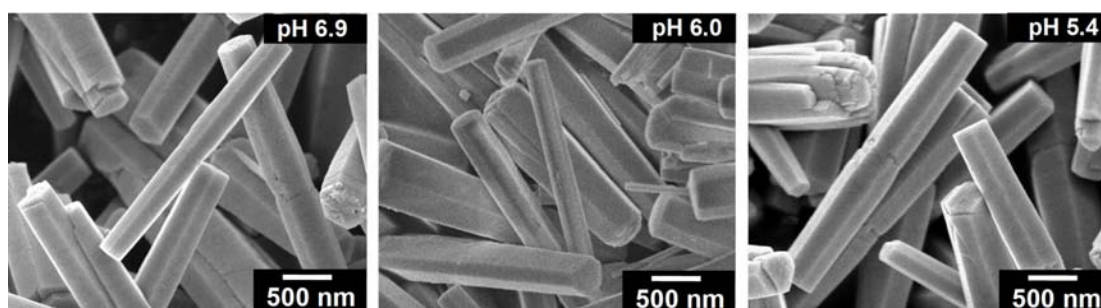


Fig. S1. SEM images of the ZnO structures depending on the pH without vitamin C. (0.01 M zinc nitrate hexahydrate aqueous HMT solution at 90 °C for 1 h)

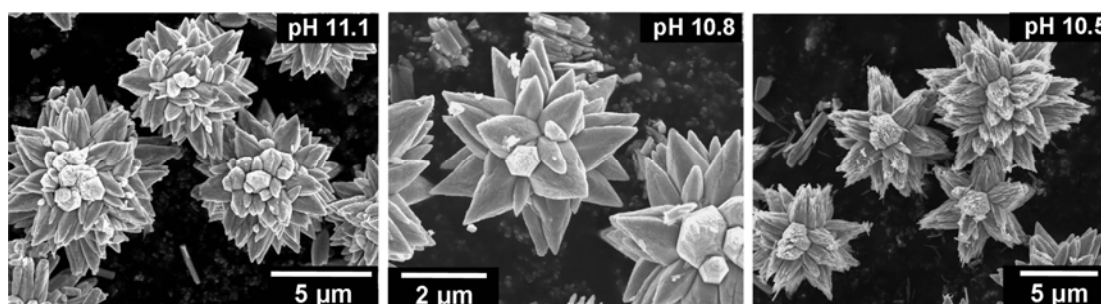


Fig. S2. SEM images of the ZnO structures depending on the pH without vitamin C. (0.01 M zinc nitrate hexahydrate aqueous ammonia solution at 90 °C for 1 h)

When vitamin C was added to the reaction solution, the range of the solution pH changed in the range from 6.9 to 5.4 and from 11.1 to 10.5 in the HMT case and the ammonia case, respectively, depending on concentrations of vitamin C added to solutions. Figs. S1 and S2 show the ZnO structures synthesized from reaction solutions (HMT: Fig. S1 and ammonia: Fig. S2) without vitamin C depending on the pH. The morphologies of the ZnO crystals do not significantly change depending on pH of the solution.