

Supplementary Information

Surfactant-Free Synthesis of SrTiO₃ Hierarchical Structures in an Ethanol/Water Mixed Solvent at Room Temperature

Qing-Song Wu, Jian-Wei Liu, Shao-Feng Chen, Hai-Wei Liang and Shu-Hong Yu*

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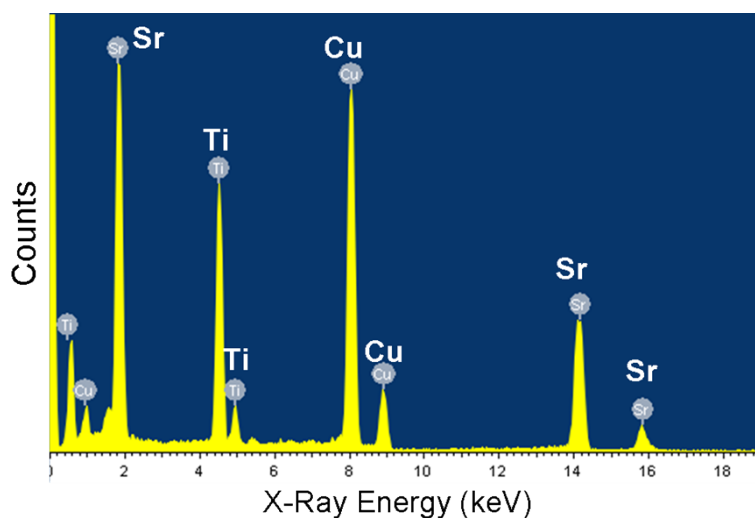


Fig. S1 EDS spectrum of the SrTiO₃ sample. The signals corresponding to Cu arise from the TEM grid.

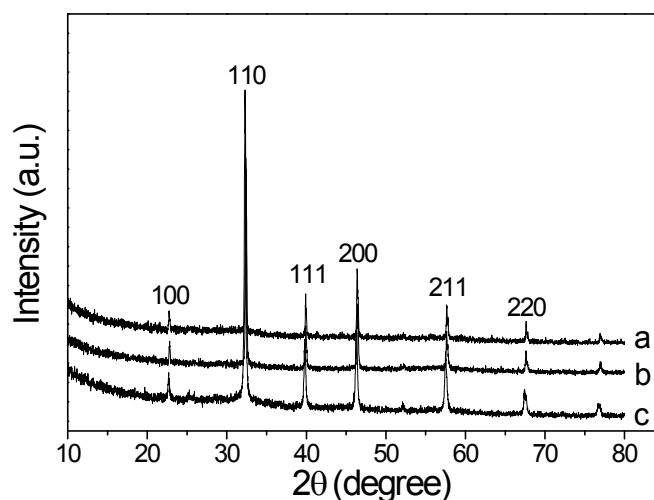


Fig. S2 XRD patterns of the samples prepared with different volume ratio of water/ethanol in 0.45 mol·dm⁻³ KOH: (a) pure water, (b) water: ethanol = 3:1, and (c) water: ethanol = 1:3.

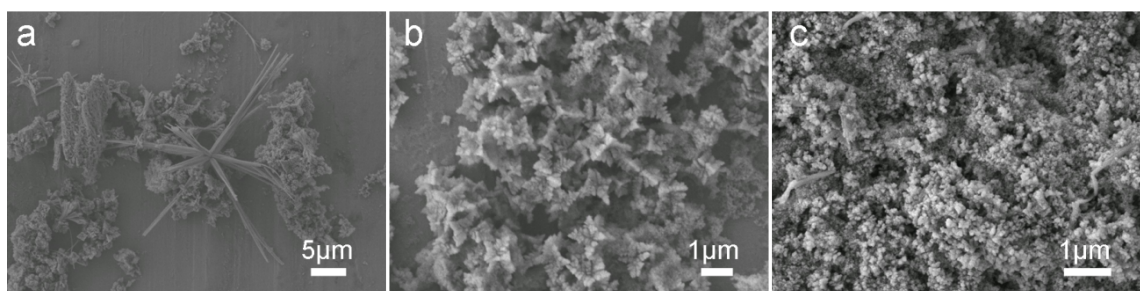


Fig. S3 SEM images of the SrTiO₃ samples prepared in a solution with different volume ratio of water/ethanol and 0.45 mol·dm⁻³ KOH: (a) pure water, (b) water: ethanol = 3:1, and (c) water: ethanol = 1:3.

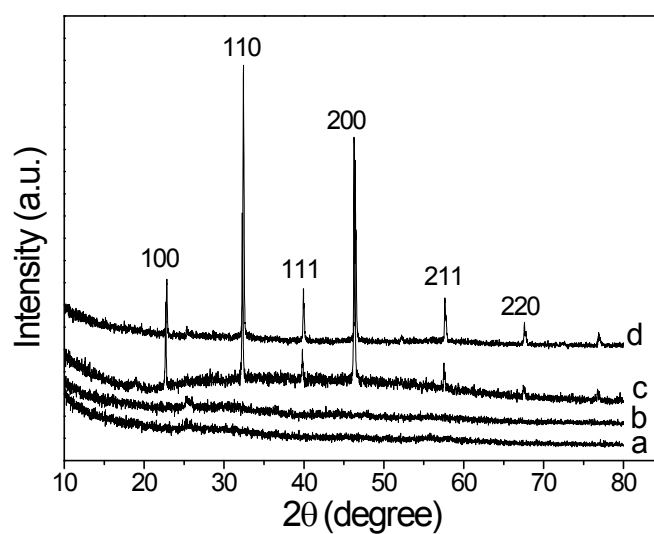


Fig. S4 XRD patterns of the samples prepared by using 0.9 mol·dm⁻³ KOH with different reaction time: (a) 5 min, (b) 1 h, (c) 24 h, and (d) 96 h.

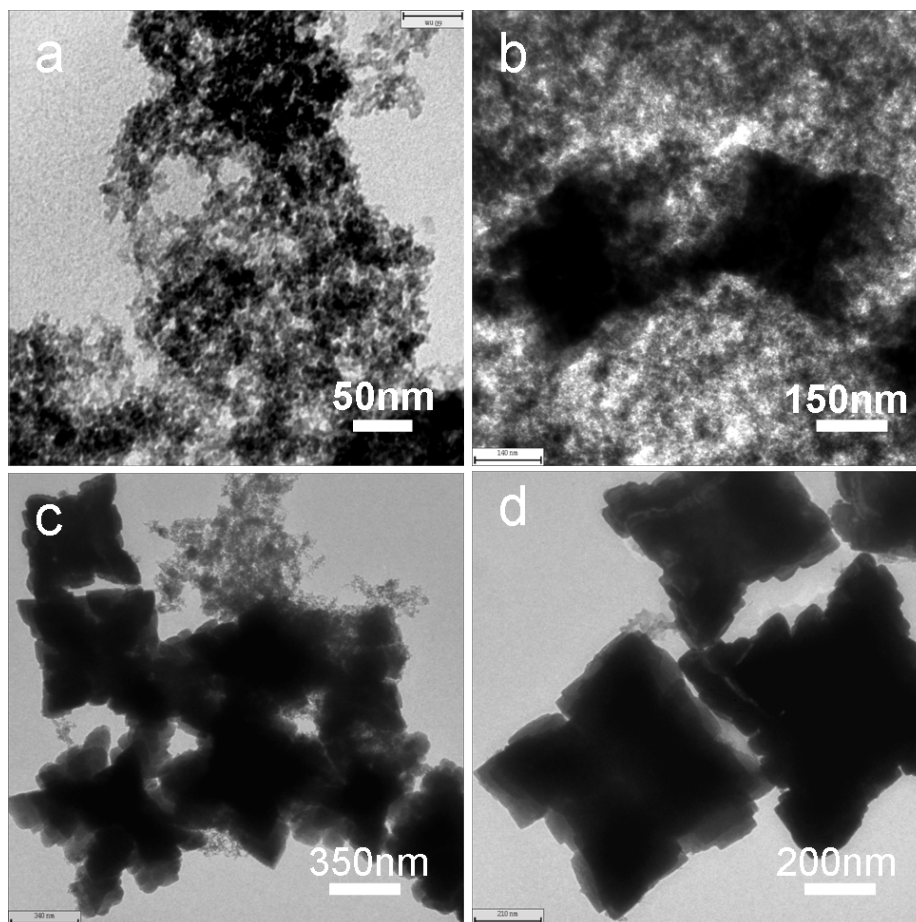


Fig S5 TEM images of the samples prepared by using $0.9 \text{ mol}\cdot\text{dm}^{-3}$ KOH with different reaction time: (a) 5 min, (b) 5 h, (c) 24 h, and (d) 96 h.

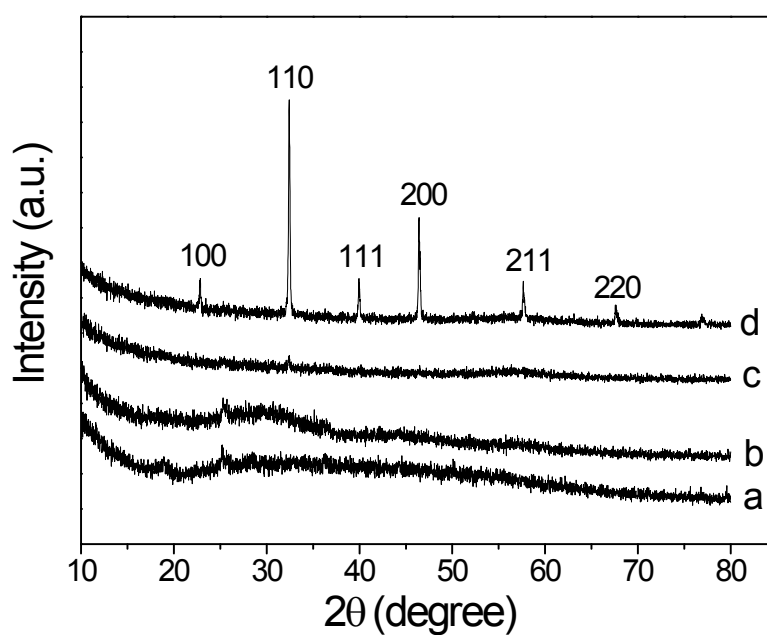


Fig. S6 XRD patterns of the samples obtained by using $0.45 \text{ mol}\cdot\text{dm}^{-3}$ KOH with different reaction time: (a) 5 min, (b) 1 h, (c) 24 h, and (d) 96 h.

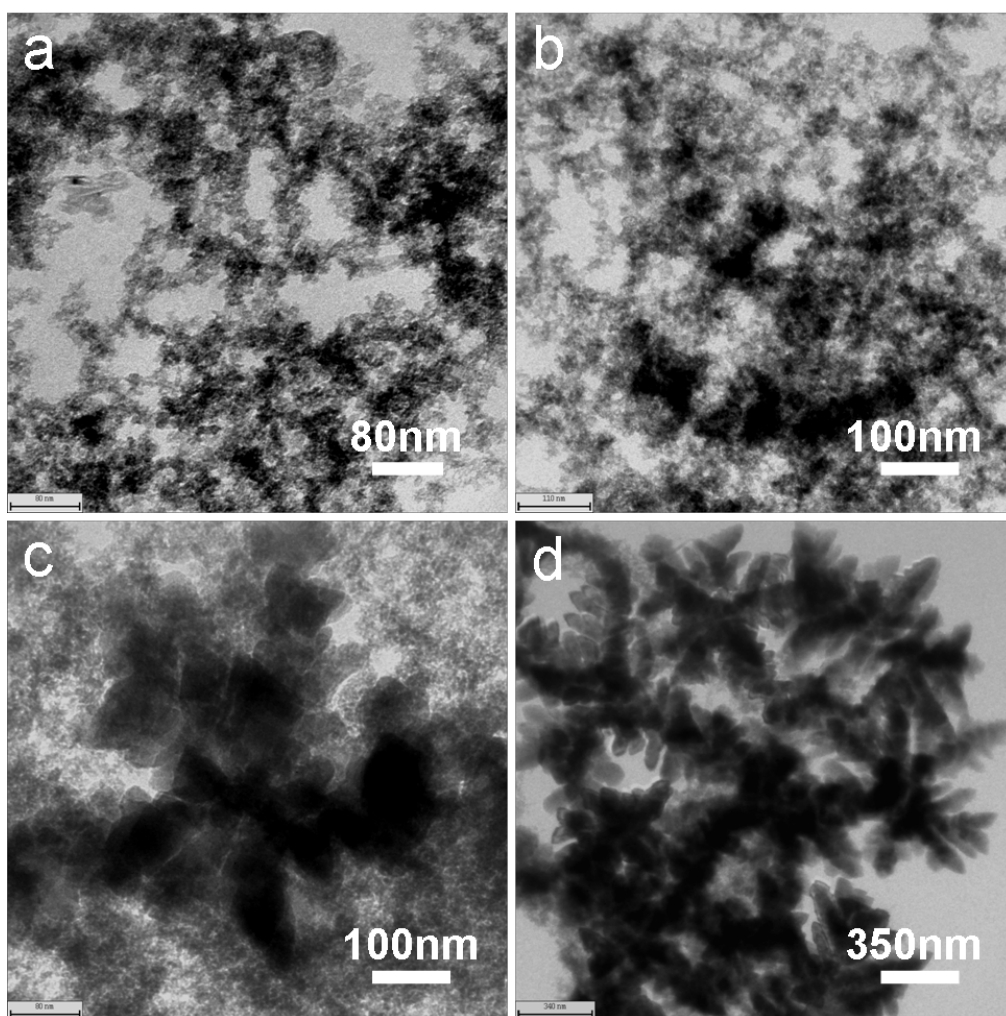


Fig. S7 TEM images of the samples obtained by using $0.45 \text{ mol}\cdot\text{dm}^{-3}$ KOH with different reaction time: (a) 5 min, (b) 5 h, (c) 24 h, and (d) 96 h.

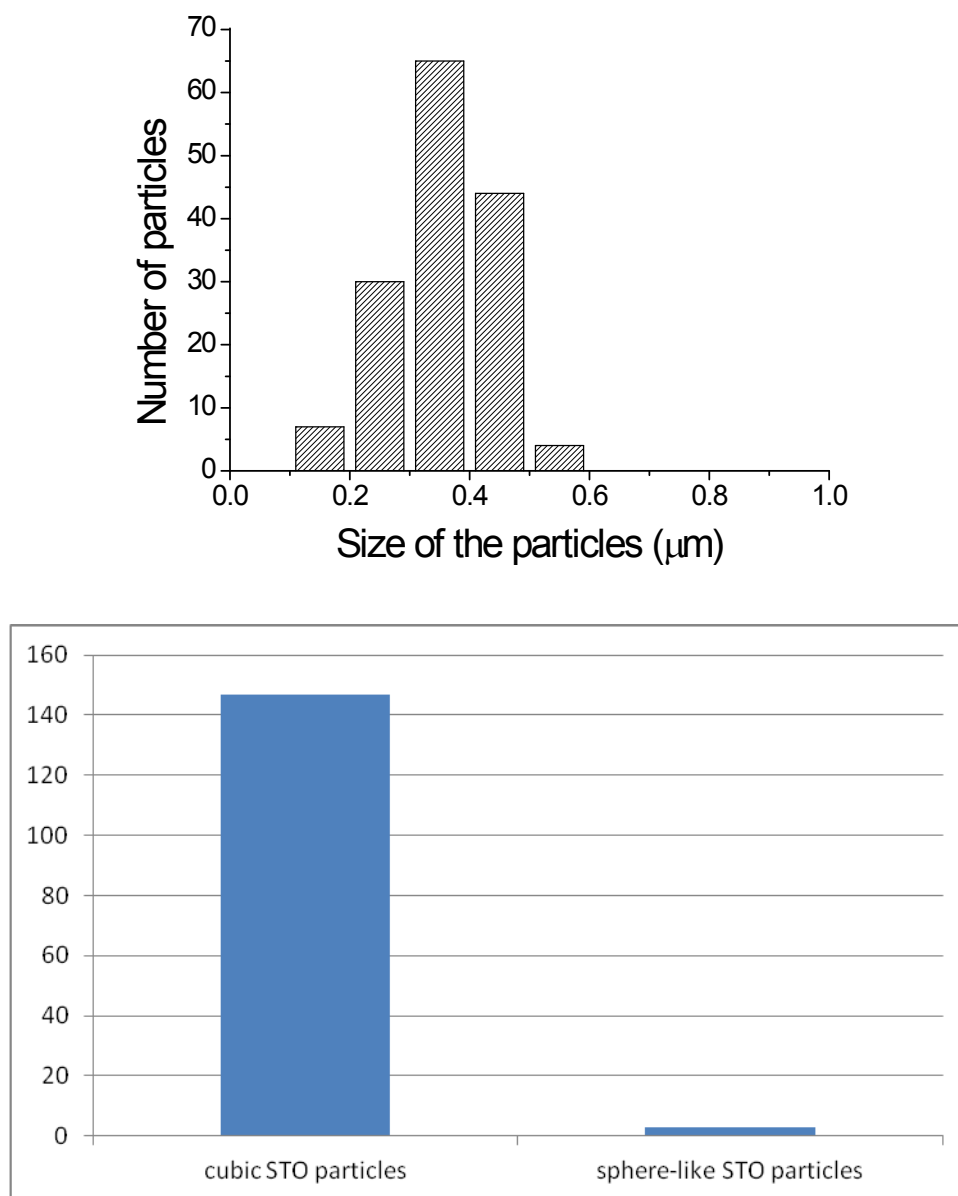


Fig. S8 Size and morphology distribution of the samples prepared by using $2.7 \text{ mol} \cdot \text{dm}^{-3}$ KOH.

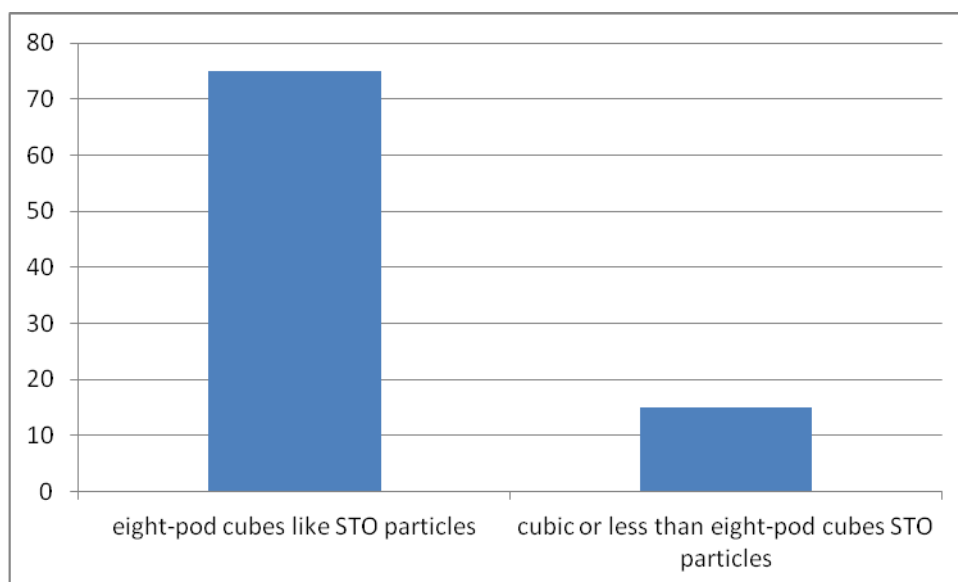
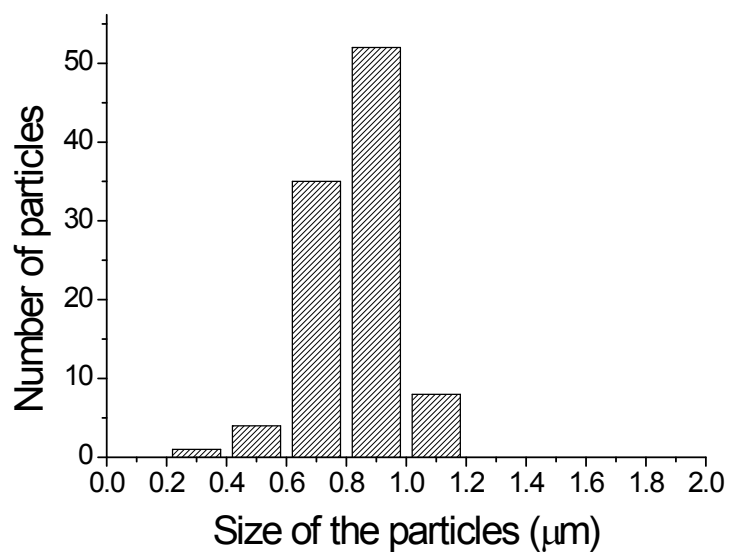


Fig. S9 Size and morphology distribution of the samples prepared by using $0.9 \text{ mol} \cdot \text{dm}^{-3}$ KOH.

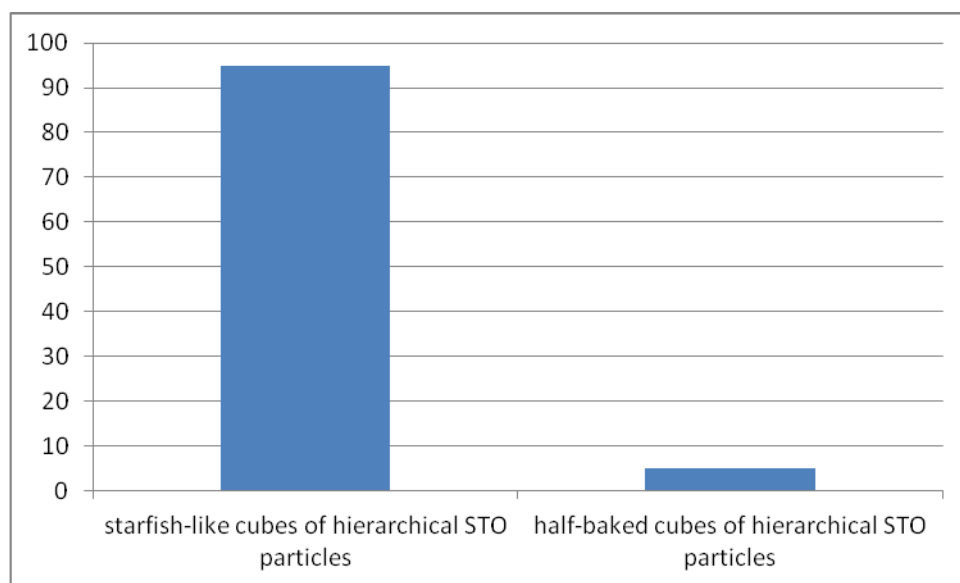
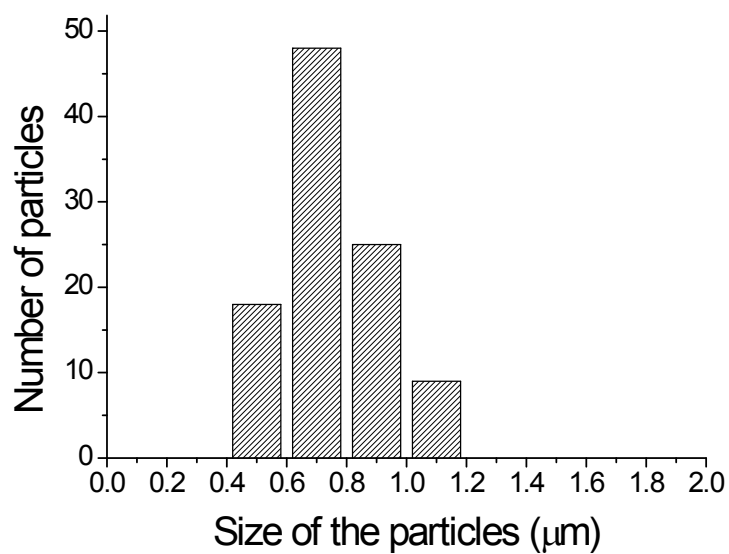


Fig. S10 Size and morphology distribution of the samples prepared by using $0.45 \text{ mol}\cdot\text{dm}^{-3}$ KOH.