

Supplementary information

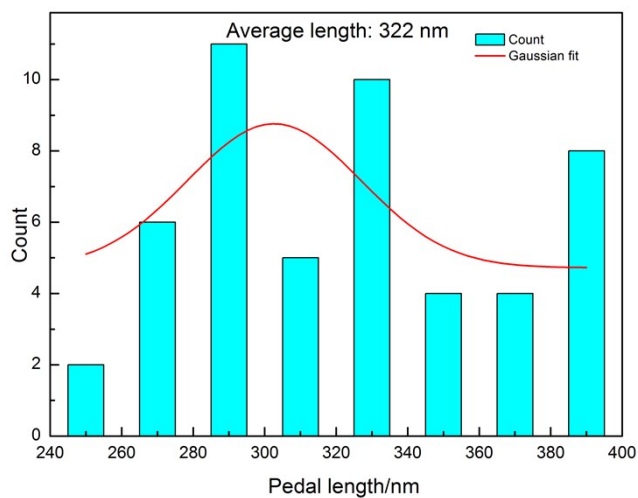


Fig.S1 the pedal length distribution based on 50 counts selected randomly in 5 SEM images

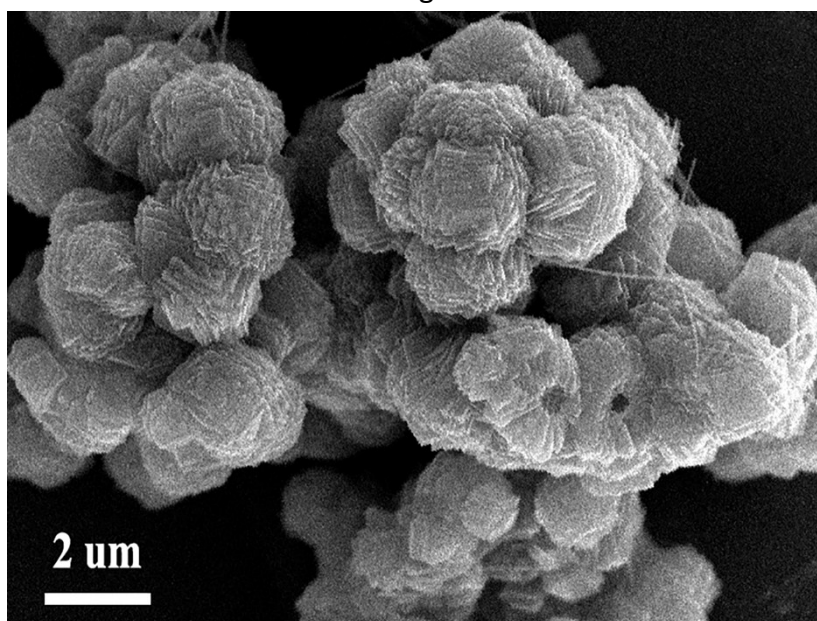


Figure S2 SEM image of the source MnCO_3

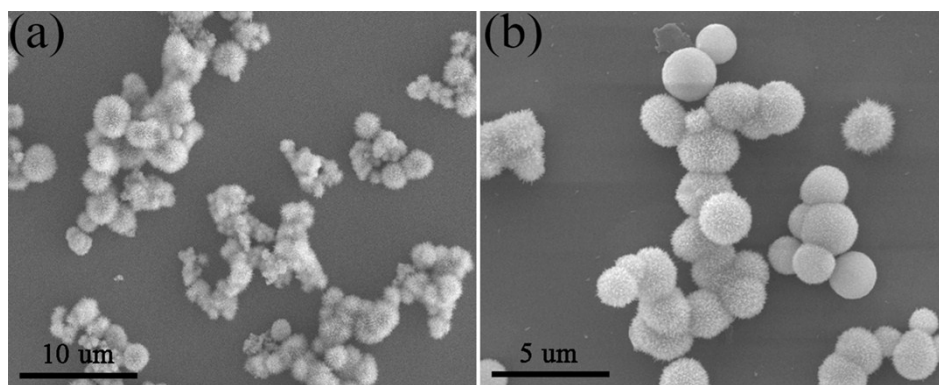


Figure S3 SEM images of the products using $\text{Mn}(\text{NO}_3)_2$ (a) and MnSO_4 (b) as raw source