

Supplementary Information

Construction of Core-Shell Hybrid Nanoparticles Templated by Cowpea Chlorotic Mottle Virus

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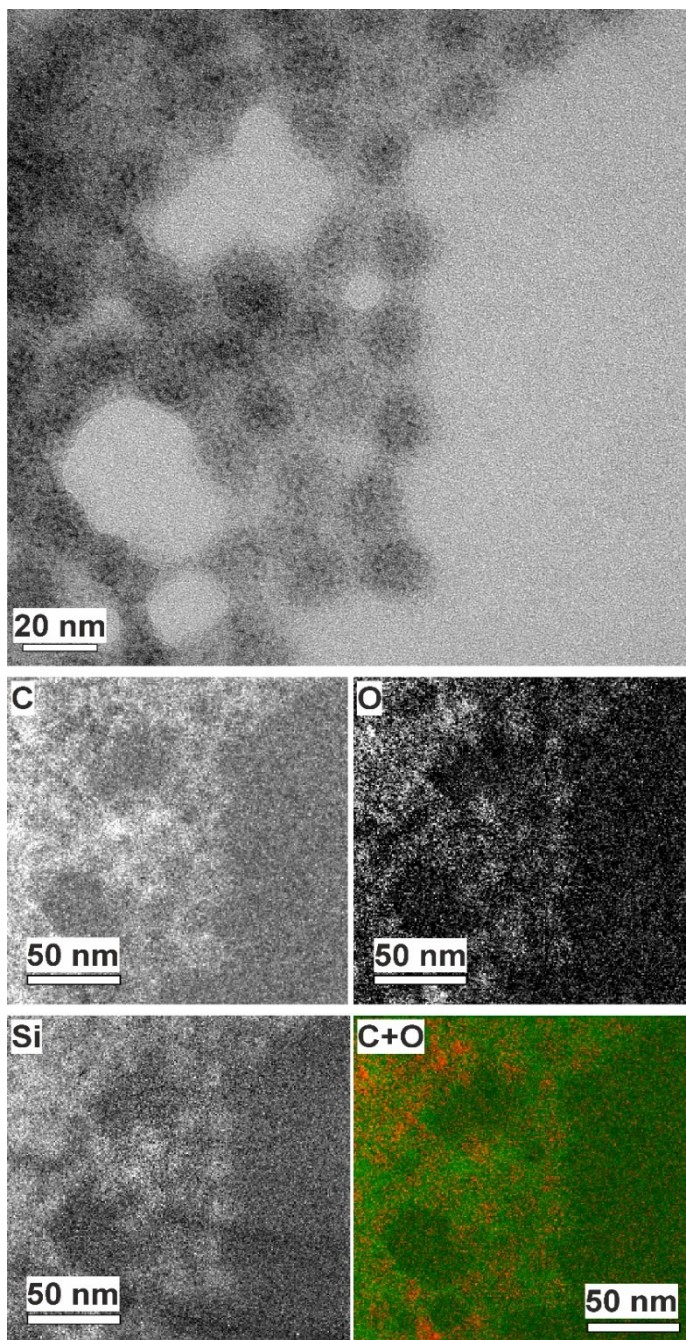


Figure S1. TEM elemental mapping of CCMVSilica4 with staining (a) carbon; (b) oxygen; (c) silicon and (d) overlap of oxygen and carbon.

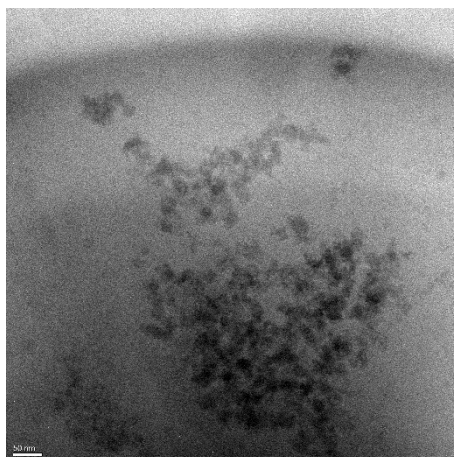


Figure S2. TEM image of CCMVSilica6 after high temperature of calcination under 550 oC for 3 hrs, resulting monodisperse silica nanoparticles with size of 14 nm.

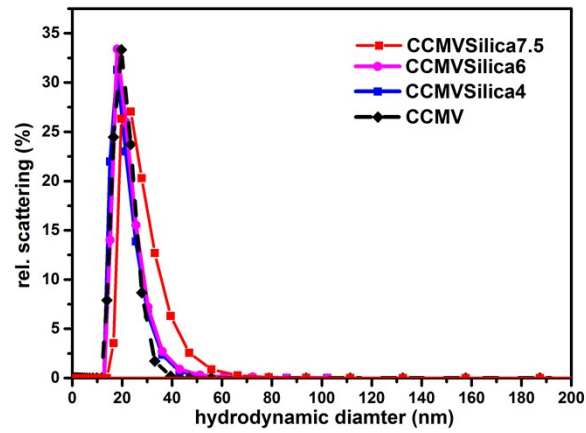
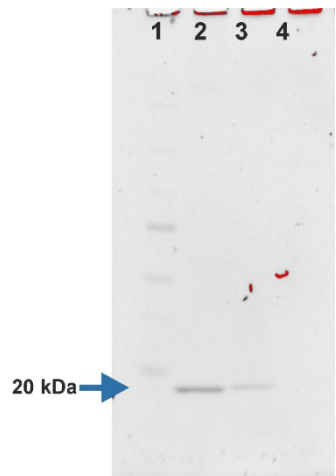


Figure S3. Dynamic light scattering (DLS) analysis of native CCMV, CCMV-silica composite NPs prepared under pH 4 (CCMVSilica4), pH6 (CCMVSilica6) and pH7.5 (CCMVSilica7.5).Figure S4. SDS-PAGE of line1: standard marker; line2: CCMV-Silica4; line3: CCMV-Silica6 and



line4: CCMV-Silica7.5.

Figure S4. SDS-PAGE of line1: standard marker; line2: CCMV-Silica4; line3: CCMV-Silica6 and line4: CCMV-Silica7.5.

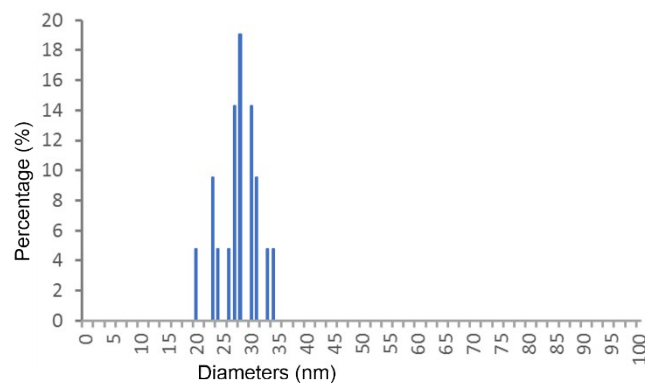


Figure S5. Diameter of CCMV/Au-silica, according to TEM images analyzed by image-J software.

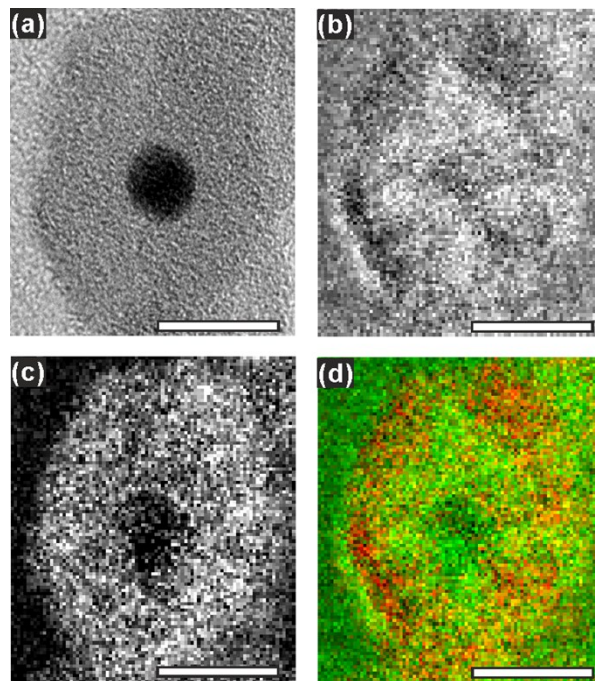


Figure S6. TEM elemental mapping of (a) CCMV/Au-silica nanoparticles; (b) carbon; (c) silicon and (d) composite of red: silicon, green: carbon. Scale bar: 10 nm.

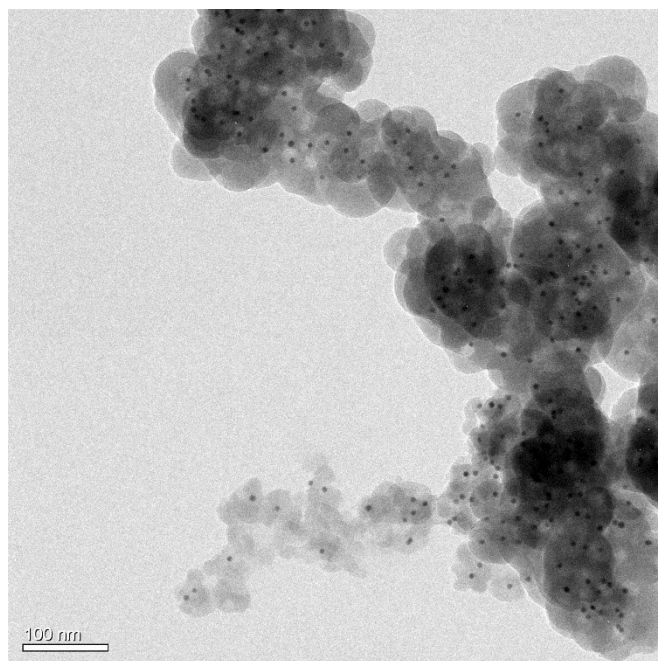


Figure S7. TEM images of (a) CCMV/Au templated silication without tannic acid in MQ