

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: *In situ* TEM video of the nucleation and growth processes of Pt on Pd cubic seed in the presence of Br⁻ ions at a low concentration of Pt^{II} precursor (0.015 mM).

File Name: Supplementary Movie 2

Description: Deposition of Pt on Pd cubic seed in the presence of Br⁻ ions at a high concentration of Pt^{II} precursor (1.5 mM).

File Name: Supplementary Movie 3

Description: Growth of Pt shell on Pd cubic seed in the absence of Br⁻ ions at a high concentration of Pt^{II} precursor.