

## Electronic Supplementary Information:

### Effect of Lattice Mismatch and Shell Thickness on Strain in Core@Shell Nanocrystals

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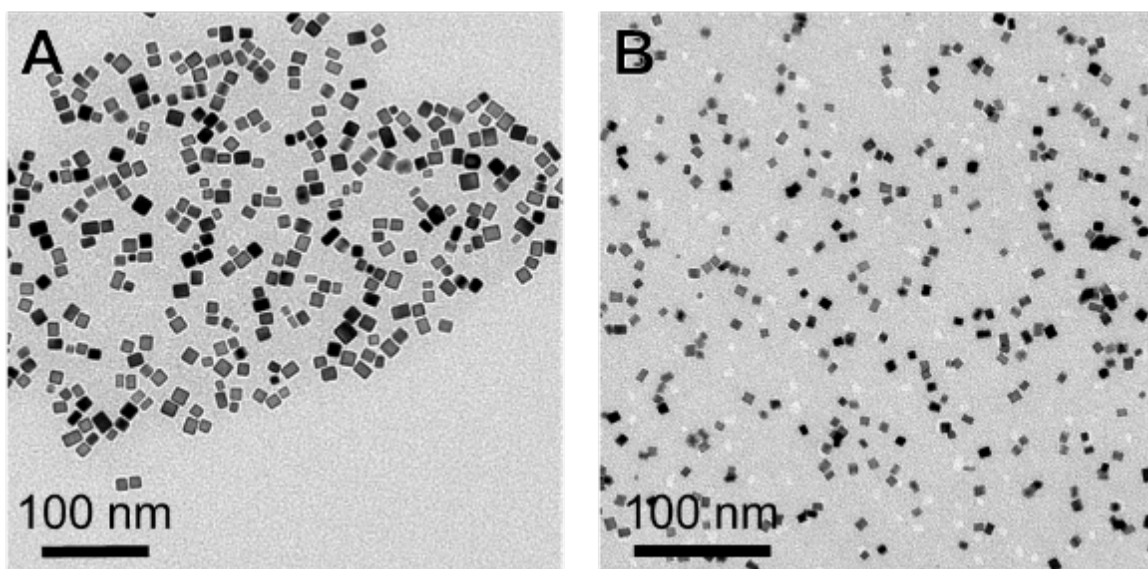
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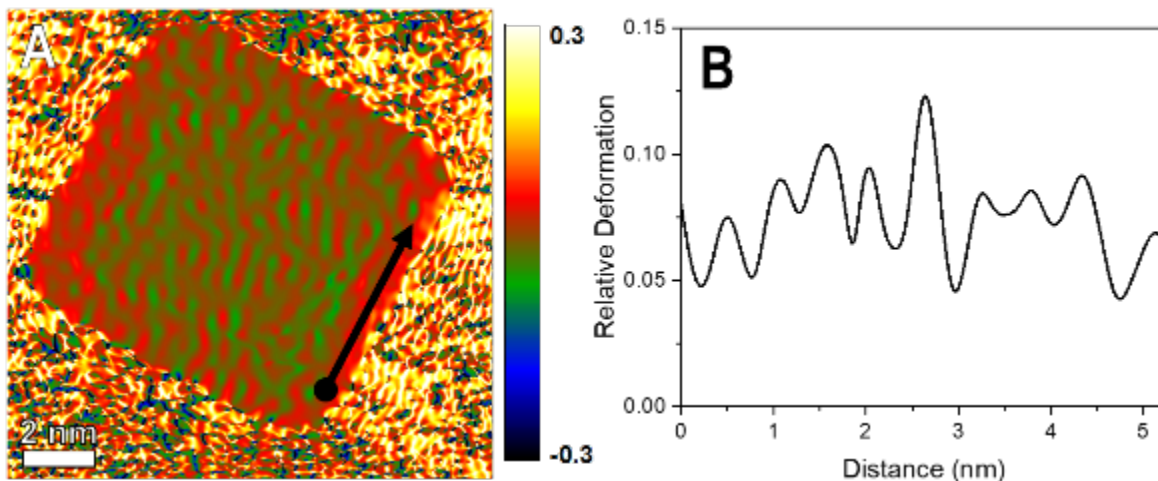
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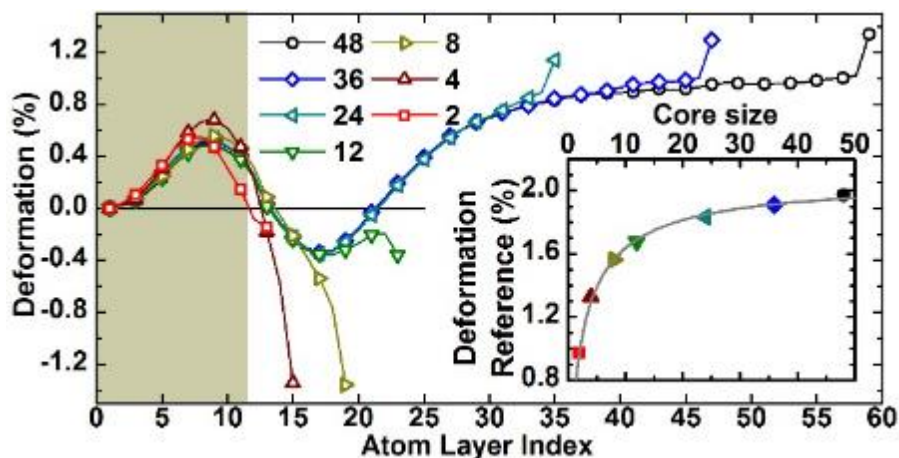
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**Figure S1.** TEM images of (A) Pd cubes and (B) Rh cubes used as cores.



**Figure S2.** (A) GPA colors maps which correspond to the in-plane strain ( $\epsilon_{xx}$ ) field from **Figure 3G**. (B) is the line profile of the relative deformation determined by GPA with the line profile locations indicated by the arrow in A where the start of the line profile begins at the black dot and ends at the point of the arrow.



**Figure S3.** Transversal lattice parameter deformation in Rh@Pt nanocrystals. Variation of the transversal deformation of the lattice parameter along a central line section normal to the surface as a function of the distance from the center for a set of nanocrystals with increasing surface-shell thickness ca. from 0.5 to 9 nm. The profiles have been shifted by the deformation at the center of the nanocrystal, which is shown in the inset.