

Supporting Information

High-energy X-ray focusing and applications to pair distribution function investigation of Pt and Au nanoparticles at high pressures

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Supplementary Figures

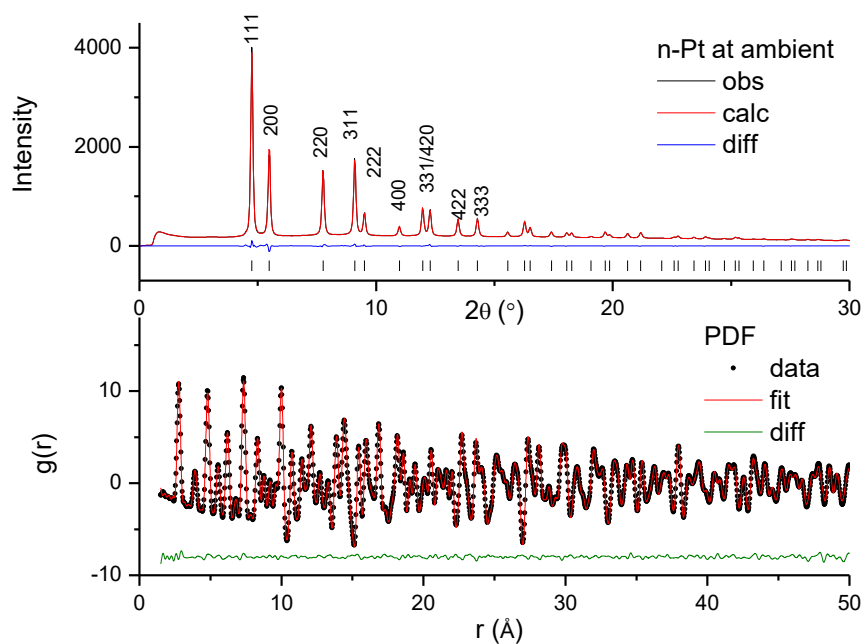


Figure S1.

(Upper panel) Rietveld refinements of the diffraction patterns of n-Pt (50nm) at ambient pressure using a simple FCC Pt structure model with a fit residual of R_{obs} : 2.32, ωR_{obs} : 3.02; and GoF_{obs} : 0.24. The observed, calculated and difference curves are represented. The tick marks indicate the calculated Bragg reflections. The lattice parameter refinements based on the simple FCC model shows a slight misfit in the intensity ratio of the 111 and 200 reflections.

(Lower panel) the corresponding high-pressure PDF fit using a simple FCC Pt structure model for the same diffraction data with a fit residual, R_w , of 0.06, in the range of 1.5-50 Å. The experimental $g(r)$, calculated and difference curves are represented.

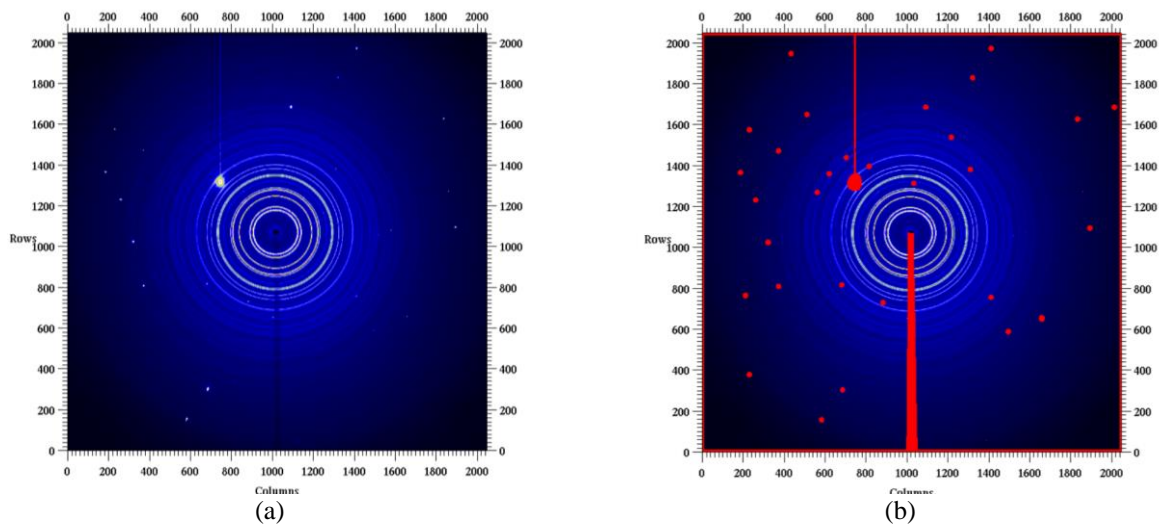


Figure S2. X-ray diffraction image of nano Pt (50 nm) loaded in M:E=4:1 medium at 12.5 GPa using a focused X-ray beam (66.054 keV). (a) Raw image; (b) image with masked unwanted peaks for Fit2D integration.