Supporting information

“Quantitative nanotomography of amorphous and polycrystalline samples using coherent X-ray diffraction”

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Figure S1 (a-c) shows typical measured coherent diffraction patterns. The white cross is a blind area between detectors sensors. The white L-shape area is the shadow from the beamstop. Fig. S1 (d-f) shows the central part of the diffraction pattern. Gray pixels are measured points and colored pixels are values recovered by the iterative phase retrieval algorithm. The majority of the colored pixels have their centrosymmetric counterpart except the pixels inside the central rectangle defined by the black dashed line. The missing speckles are the ones in this rectangular area and their number can be estimated from the speckle patterns profiles shown in Fig. S1 (g-i).

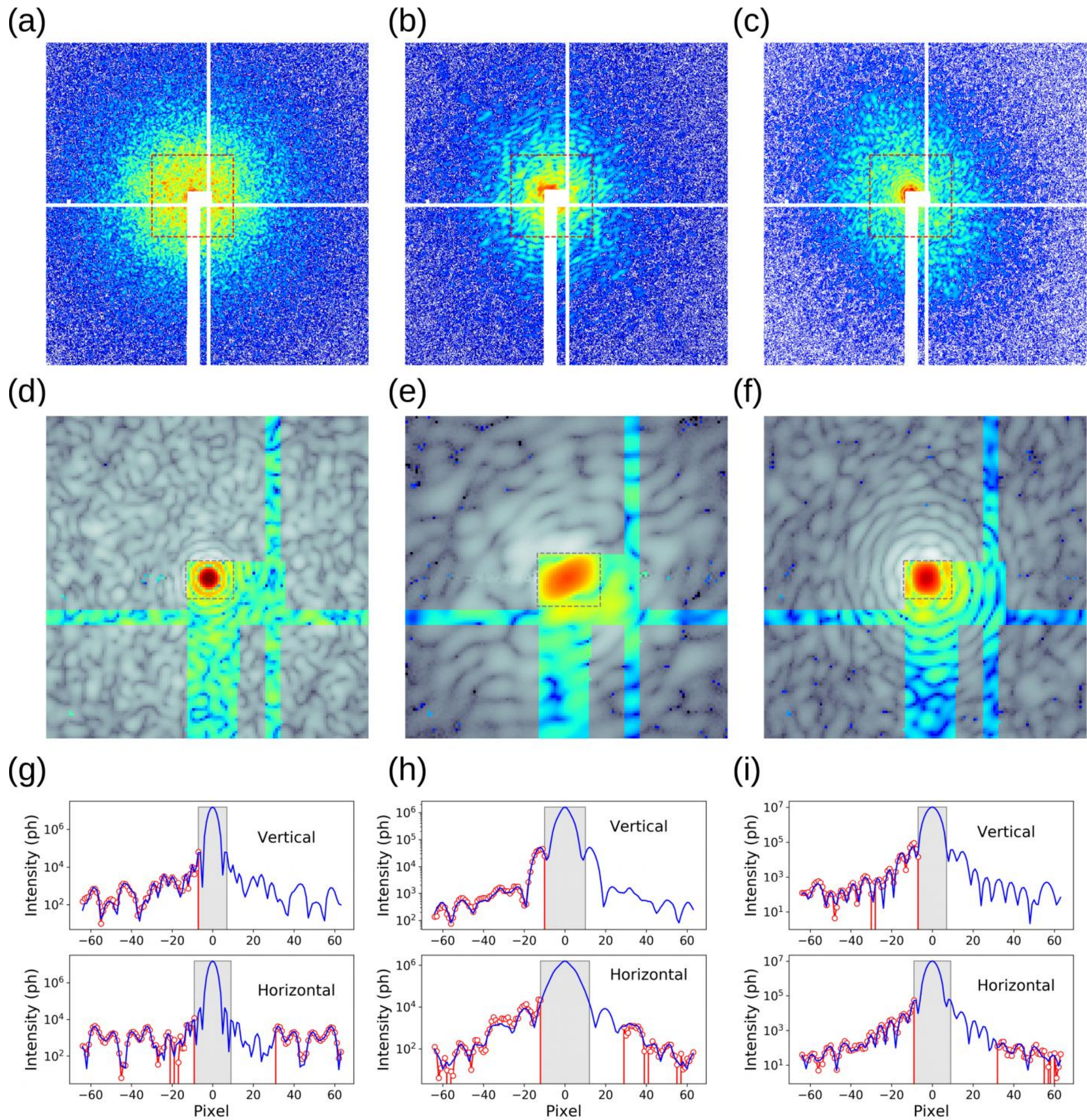

Fig. S1. Measured coherent diffraction patterns at ω=0 for (a) – porous SiO_2 microsphere; (b) – Si fragment and (c) $CaCO_3$ particle. (d-f) are corresponding enlarged views. Grey pixels are measured intensities; values in colored pixels are recovered by the phase retrieval algorithm. The intensity values are in log10 scale. (g-i) show horizontal and vertical cuts through the center of the diffraction patterns. Red circles are measured points, blue lines indicate retrieved intensities. The gray box shows the missing area corresponding to the dashed box in (d-f).