

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: shows the reduced pair distribution function $G(r)$ for a sample deformed by high 5 pressure torsion (HPT) at 77 K and stored at 77 K.

File Name: Supplementary Movie 2

Description: shows the reduced pair distribution function $G(r)$ for a sample deformed by high 8 pressure torsion (HPT) at room temperature (RT) and stored at 77 K.