## Supplementary information

## Nanoscale interface of metals for withstanding momentary shocks of compression

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## **Supplementary Figure Captions**

- **Fig. S1** Radial distribution function of [110]||[100] (a), [111]||[100] (b) and [111]||[110] (c) nanocrystalline copper strained at the broken point for T = 4, 300 and 600 K
- Fig. S2 Stress distribution of [111]||[100] nanocrystalline copper simulated at T = 4 K (a), T = 300 K (b) and T = 600 K (c) (<No.> replaces strain ε, which is consistent with Fig. 2a in the manuscript text file)
- Fig. S3 Stress distribution of [111]||[110] nanocrystalline copper simulated at T = 4 K (a), T = 300 K (b) and T = 600 K (c) (<No.> replaces strain ε, which is consistent with Fig. 2c in the manuscript text file)
- **Video S1** A movie of deformation behavior of [110]||[100] nanocrystalline copper under ten tension and compression cycles

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Fig. S1







