Electronic Supplementary Information

Nondestructive Optical Visualization of Graphene Domains and Boundaries

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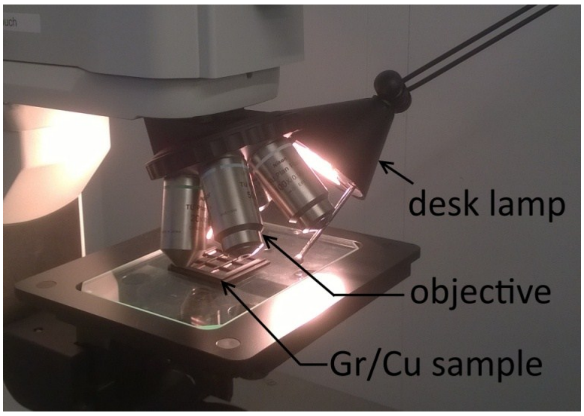

Fig. S1 Alternative enhanced-dark field optical microscopy (EDF-OM) setup using a desk lamp as the external light source.

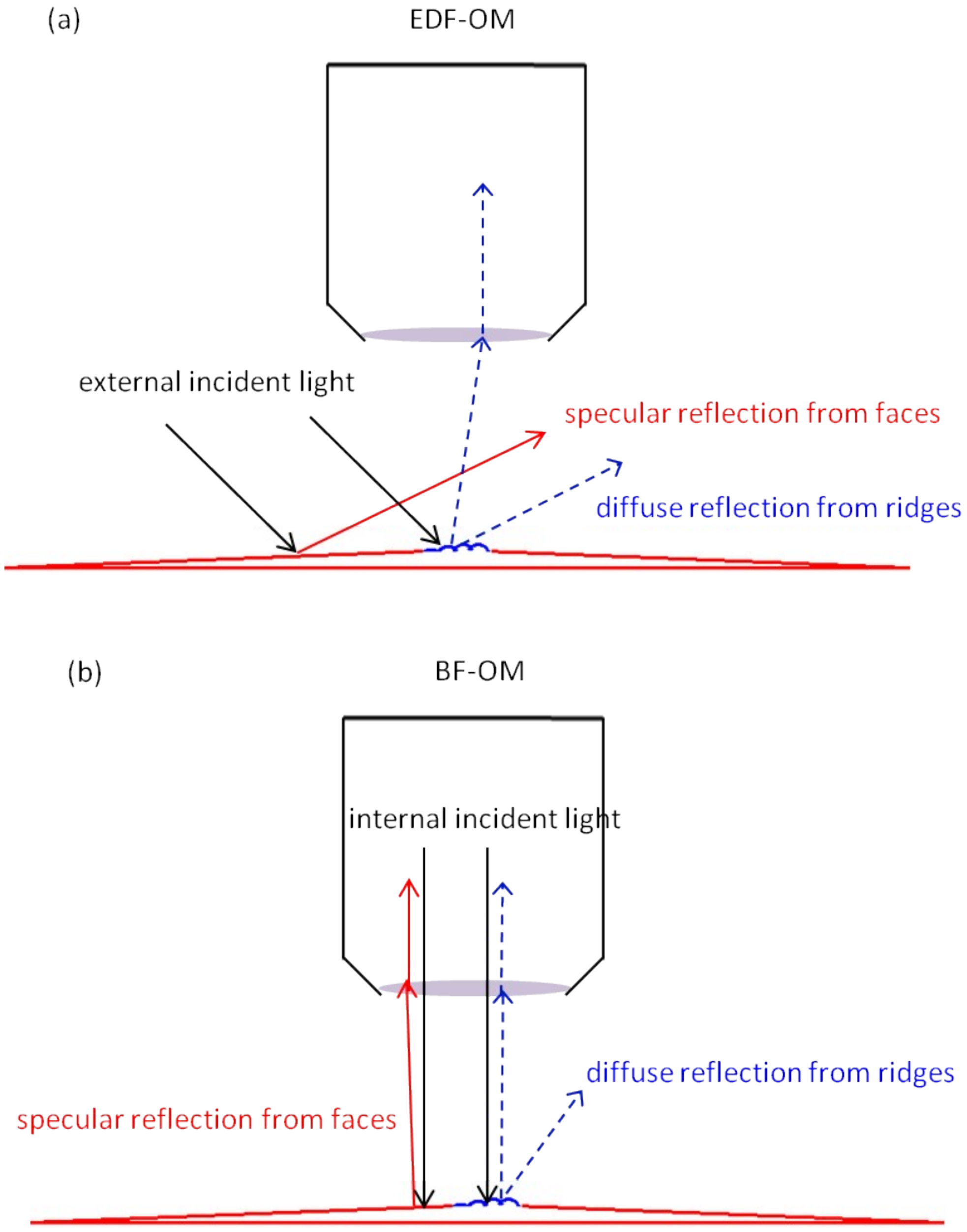

Fig. S2 Schematic of the optical configurations of the (a) EDF-OM and (b) BF-OM.

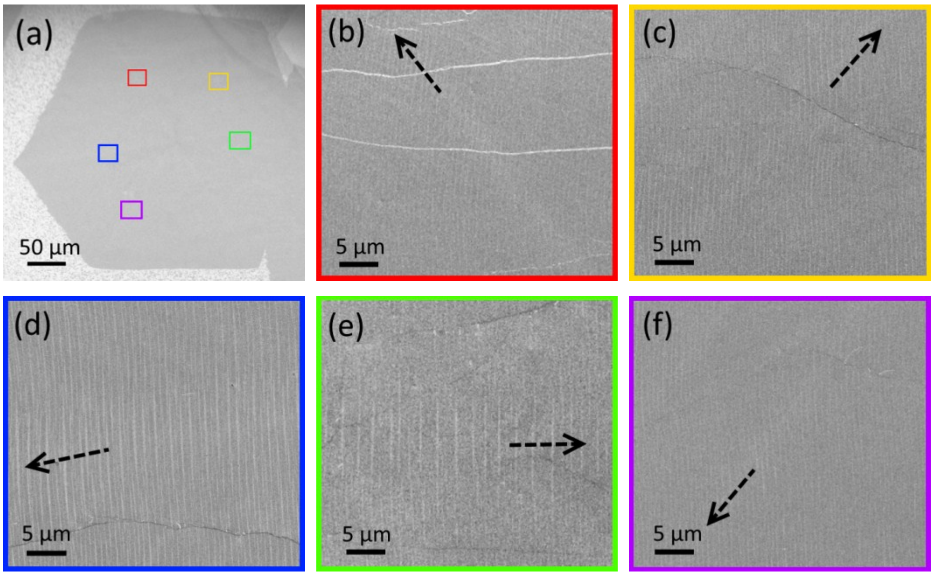

Fig. S3 SEM characterization of the ridge structure. (a) Low magnification SEM image of the same domain as studied in Figure 2. The colored open boxes mark the midpoints of five domain diagonals. (b)-(f) High magnification SEM images of the midpoints of the domain diagonals clearly demonstrating the existence of the ridges. Their outline colors are set corresponding to the colored boxes marked inside (a). The black dashed arrows mark the locations and orientations of the ridges.

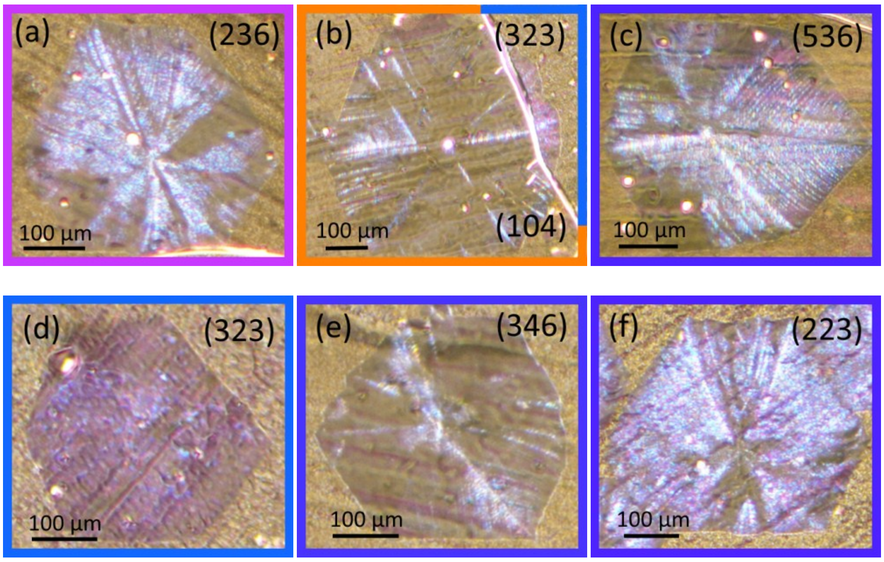

Fig. S4 (a)-(f) EDF-OM images of additional types of ridge structures. The outline color of each panel represents the EBSD-determined crystallographic orientation of the respective Cu grain (with reference to the color key inset in Figure 3).

Supplementary Movie 1. Real time evolution from the BF-OM image to the EDF-OM image of the discontinuous Gr/Cu sample.

Supplementary Movie 2. Real time evolution from the BF-OM image to the EDF-OM image of the continuous Gr/Cu sample.