**Supplementary Information**

**Hardening Mechanisms in Irradiated Cu-W Alloys**

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FIG. S1 XRD spectra of Cu99W1(red) and Cu94W6 (black) as a function of irradiation dose. Dotted lines correspond to the Bragg peaks of Cu (111), W (110), Stainless steels and Si (400) respectively. The additional peaks observed at 8, 10, 15 and 20 dpa are from stainless steel mounts used to mount these samples on the X-ray diffractometer.



FIG. S2 High resolution HAADF image of Cu94W6 irradiated to 20dpa showing a twin spacing of approximately 2.9nm