Supplementary material

Effect of grain size on the strain rate sensitivity of CoCrFeNi high-entropy alloy

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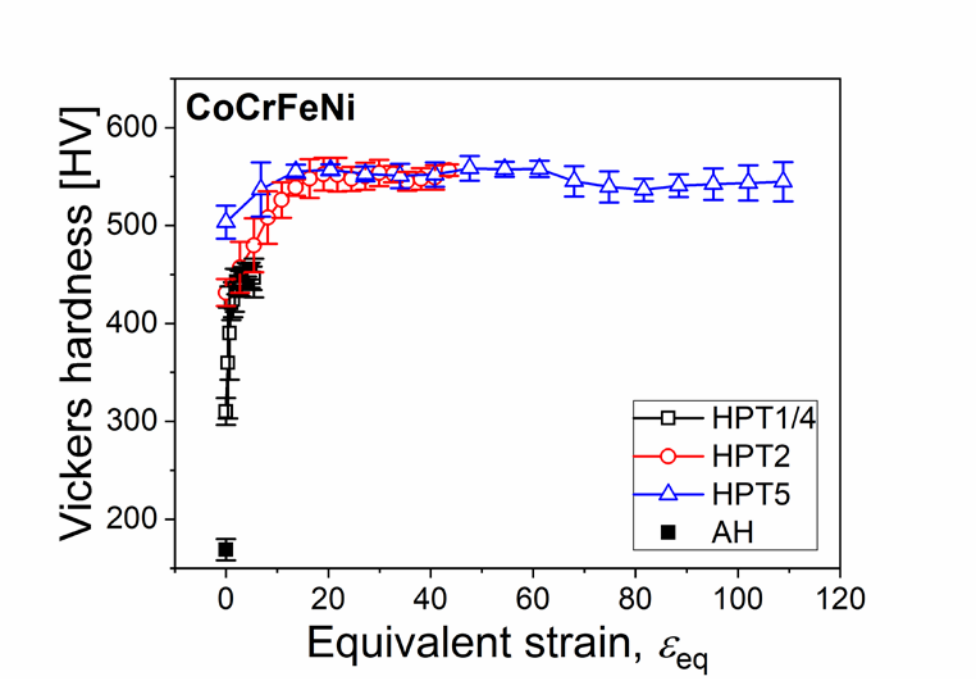
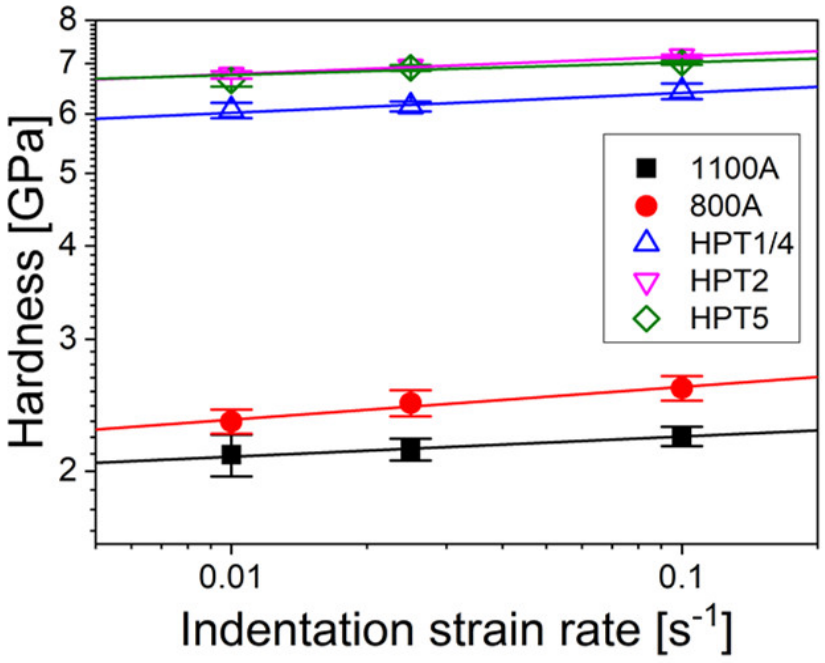
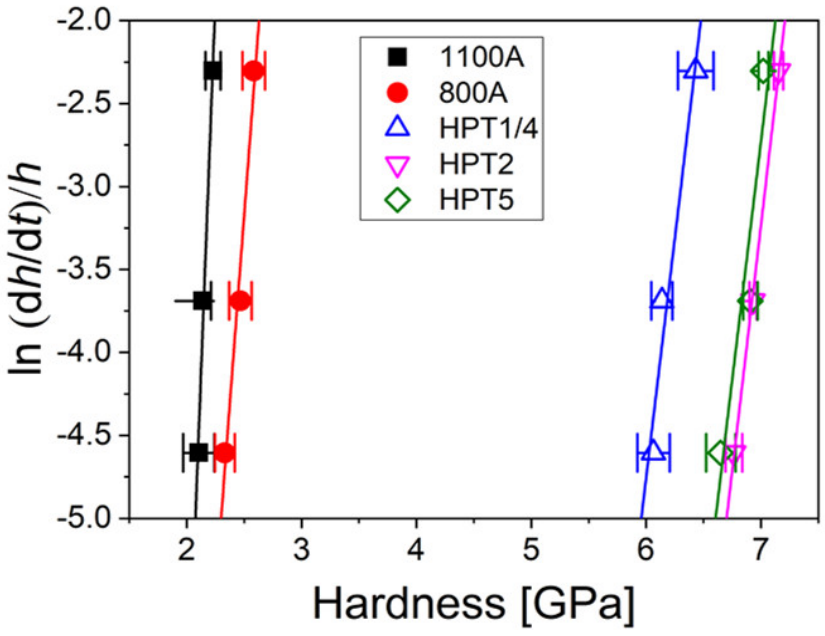


Figure S1 Variations in Vickers hardness with equivalent strain, ε_{eq}. The Vickers hardness (HV) across the diameter of each HPT disc was measured using a Wolpert-401MVD Micro-Hardness Tester (Wilson Wolpert Instruments, Aachen, Germany) with a peak load of 980 mN. The equivalent strain ε_{eq} imposed on the HPT-processed disk is given by $\varepsilon_{eq} = 2\pi Nr \Big/ \left(\sqrt{3} \cdot t\right)$, where r and t are the radius and thickness of the disk, respectively, and N is the number of torsional revolutions.



(a)



(b)

Figure S2 (a) Double logarithmic plots of hardness vs. $\dot{\varepsilon}$ (= (dh/dt)/h) for estimating strain-rate sensitivity exponent, m, and (b) plots of logarithmic $\dot{\varepsilon}$ vs. hardness for calculating activation volume, V^*.