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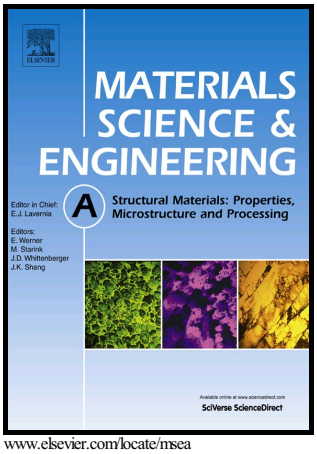

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Annealing-induced hardening in high-pressure torsion processed CoCrNi medium entropy alloy

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Abstract

Nanocrystalline CoCrNi equiatomic alloy processed by high-pressure torsion shows annealing induced hardening at 500 ^{o}C and 600 ^{o}C. The microstructural characterization indicates the hardening phenomenon is not because of precipitation hardening. The annealing-induced hardening is explained based on the reduced dislocation density and grain boundaries relaxation.

Keywords: CoCrNi equiatomic alloy; Hardening; Grain boundaries; Dislocation density; High-pressure torsion