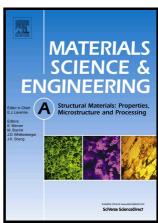
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Annealing-induced hardening in high-pressure torsion processed CoCrNi medium entropy alloy

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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 °C and 600 °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

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