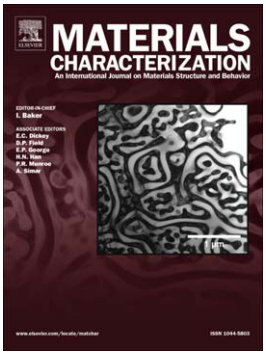

Characterizing microstructural evolution in cobalt by ausforming and subsequent annealing treatments

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Characterizing microstructural evolution in cobalt by ausforming and subsequent annealing treatments

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Abstract: Different characterization techniques are jointly utilized to investigate the effect of ausforming and subsequent annealing treatments on microstructural evolution of cobalt (Co). Results show that the microstructure characteristics in the ausformed Co consist of slender laths (γ phase) and blocky laths (ε phase). The low angle boundaries and $\sum 3$ boundaries exist in the slender laths; in addition, the special boundaries with $70.5^{\circ}/<11\bar{2}0>$ misorientation exist in the blocky laths. Moreover, the final annealing treatment has remarkable influence on the ausformed Co, including the incomplete recrystallization and annealing-induced phase transformation.

Keywords: Ausforming; Phase transformation; Recrystallization; Cobalt;