Effects of deformation routes on the evolution of microstructure, texture and tensile properties of AA5052 aluminum alloy

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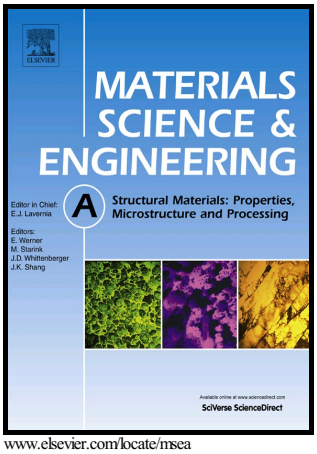

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Abstract

Effects of deformation routes on the evolution of dislocation density, microstructure, texture and mechanical properties of AA5052 aluminum alloy during equal channel angular pressing (ECAP) were investigated in this research. The results of microstructural study showed that homogeneous ultrafine grain structures with average grain size of less than 500 nm were developed after 6 passes ECAP regardless of route of deformation. Although, route C was found to be more effective in grain size

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