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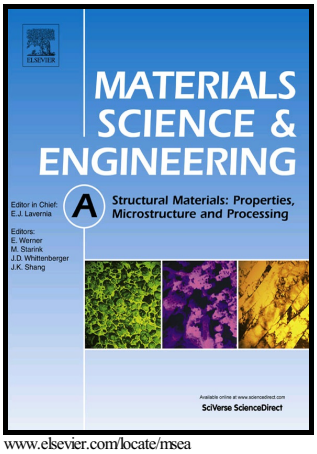

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Microstructure evolutions and nucleation mechanisms of dynamic recrystallization of a powder metallurgy Ni-based superalloy during hot compression

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Abstract

Dynamic recrystallization (DRX) has been of great concern throughout the manufacturing processes, and it deeply affects in-service performance of powder metallurgy Ni-based disk components. Understanding the underpinning mechanisms of DRX is vital to produce the desired microstructure and mechanical properties of the superalloys. In this article, microstructure evolutions and nucleation mechanisms of DRX of an advanced Ni-based superalloy during hot deformation were studied using high resolution EBSD and TEM. The experimental results show that low angle