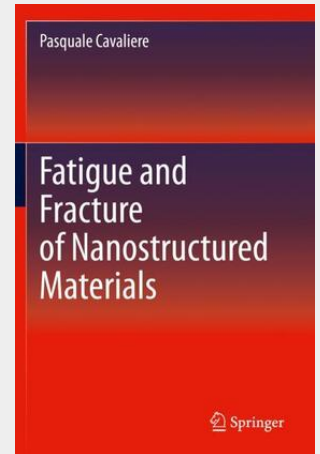


Fatigue and Fracture of Nanostructured Materials

This book describes the main approaches for production and synthesis of nanostructured metals and alloys, taking into account the fatigue behavior of materials in additive manufactured components. Depending on the material type, form, and application, a deep discussion of fatigue properties and crack behavior is also provided. Pure nanostructured metals, complex alloys and composites are further considered. Prof. Cavaliere's examination is supported by the most up-to-date understanding from the scientific literature along with a thorough presentation of theory. Bringing together the widest range of perspective on its topic, the book is ideal for materials researchers, professional engineers in industry, and students interested in nanostructured materials, fracture/fatigue mechanics, and additive manufacturing. Describes in detail the relevance of nanostructures in additive manufacturing technologies; Includes sufficient breadth and depth on theoretical modelling of fatigue and crack behavior for use in the classroom; Identifies many open questions regarding different theories through experimental finding; Contextualizes the latest scientific results for readers in industry.

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