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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Crystal Plasticity Finite Element Methods; Notation; Contents; Preface; 1 Introduction to Crystalline Anisotropy and the Crystal Plasticity Finite Element Method; Part One Fundamentals; 2 Metallurgical Fundamentals of Plastic Deformation; 3 Continuum Mechanics; 4 The Finite Element Method; 5 The Crystal Plasticity Finite Element Method as a Multiphysics Framework; Part Two The Crystal Plasticity Finite Element Method; 6 Constitutive Models; 7 Homogenization; 8 Numerical Aspects of Crystal Plasticity Finite Element Method Implementations; Part Three Application 9 Microscopic and Mesoscopic Examples 10 Macroscopic Examples; 11 Outlook and Conclusions; References; Index
Sommario/riassunto	Written by the leading experts in computational materials science, this handy reference concisely reviews the most important aspects of plasticity modeling: constitutive laws, phase transformations, texture methods, continuum approaches and damage mechanisms. As a result, it provides the knowledge needed to avoid failures in critical systems

under mechanical load. With its various application examples to micro- and macrostructure mechanics, this is an invaluable resource for mechanical engineers as well as for researchers wanting to improve on this method and extend its outreach.

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