Record Nr. UNINA9910821323803321 Autore Blenkinsop Tom G Titolo Deformation microstructures and mechanisms in minerals and rocks // by Tom Blenkinsop Dordrecht;; Boston,: Kluwer Academic Publishers, c2000 Pubbl/distr/stampa **ISBN** 1-280-20030-8 9786610200306 0-306-47543-X Edizione [1st ed. 2000.] Descrizione fisica 1 online resource (163 p.) Disciplina 552/.06 Petrofabric analysis Soggetti Rock deformation **Deformations (Mechanics)** Microstructure Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references (p. 107-125) and index. and Terminology -- Cataclasis -- Diffusive Mass Transfer by Solution Nota di contenuto -- Intracrystalline Plasticity -- Diffusive Mass Transfer and Phase Transformations in the Solid State -- Magmatic and Sub-magmatic Deformation -- Microstructural Shear Sense Criteria -- Shock-induced microstructures and shock metamorphism -- From Microstructures to Mountains: Deformation Microstructures, Mechanisms and Tectonics. This book is a systematic guide to the recognition and interpretation of Sommario/riassunto deformation microstructures and mechanisms in minerals and rocks at the scale of a thin section. Diagnostic features of microstructures and mechanisms are emphasized, and the subject is extensively illustrated with high-quality color and black and white photomicrographs, and many clear diagrams. After introducing three main classes of deformation microstructures and mechanisms, low- to high-grade deformation is presented in a logical sequence in Chapters 2 to 5. Magmatic/submagmatic deformation, shear sense indicators, and shock microstructures and metamorphism are described in Chapters 6

to 8, which are innovative chapters in a structural geology textbook. The final chapter shows how deformation microstructures and

mechanisms can be used quantitatively to understand the behavior of the earth. Recent experimental research on failure criteria, frictional sliding laws, and flow laws is summarized in tables, and palaeopiezometry is discussed. Audience: This book is essential to all practising structural and tectonic geologists who use thin sections, and is an invaluable research tool for advanced undergraduates, postgraduates, lecturers and researchers in structural geology and tectonics.