1. Record Nr. UNINA9910298363703321 Autore Teisseyre Roman Titolo Asymmetric Continuum: Extreme Processes in Solids and Fluids / / by Roman Teisseyre, Maria Teisseyre-Jeleska Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, , 2014 **ISBN** 3-642-31860-6 Edizione [1st ed. 2014.] Descrizione fisica 1 online resource (189 p.) Collana GeoPlanet: Earth and Planetary Sciences, , 2190-5193 Disciplina 530.14 Soggetti Geophysics Continuum physics Geophysics/Geodesy Classical and Continuum Physics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references. Nota di contenuto Introduction: independent strain and transport motions -- Asymmetric Continuum: basic motions and equations -- Transport and float transport motions -- Vortices and molecular fracture transport --Defect densities -- Structural and fracture anisotropy -- Induced strains -- Thermodynamic relations -- Mutual interactions: electric / magnetic fields and strains -- Quantum analogies -- Extreme processes -- Release-Rebound Processes and Motions. Sommario/riassunto This book deals with a class of basic deformations in Asymmetric Continuum Theory. It describes molecular deformations and transport velocities in fluids, strain deformations in solids as well as the molecular transport, important in fracture processes. In solids, a separate problem relates to the displacements; their recording, e.g., by means of the seismometers, proves only the existence of the displacement derivatives and not a real displacement. However, the molecular displacements and new fracture criterion including the defect distributions and induced strains are defined in the book too. fluids, the transport velocities and molecular strains describe the motion processes. The vortex motions are defined by means of the

rotational transport; this approach leads to more complicated

The interaction

problems, like the turbulence phenomena.

processes, including the electric and magnetic fields, and some thermodynamical problems and quantum theory analogies help to understand the extreme processes.