1. Record Nr. UNINA9910460207803321

Autore	Grafe Wolfgang
Titolo	Time-dependent mechanical properties of solids : relaxation of stress and density, strength (fatigue) / / Wolfgang Grafe
Pubbl/distr/stampa	Pfaffikon, Zurich, Switzerland : , : Trans Tech Publications, , 2015 ©2015
ISBN	3-03826-502-0
Descrizione fisica	1 online resource (180 p.)
Collana	Materials Science Foundations ; ; Volume 78
Disciplina	530.41
Soggetti	Solids - Mechanical properties Electronic books.
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 at the end of each chapters.
Nota di contenuto	Relaxation of Stress and Density, Strength (Fatigue); Preface; Table of Contents; 1. Migration Processes Induced in Solids; 2. Stress Relaxation in Glasses; 3. Density Relaxations in Glasses; 4. The Background of Internal Friction; 5. Creep of Steel and the Static Fatigue of Glass; 6. The Activation Energy of the Static Fatigue and Creep; 7. Fatigue due to an Oscillating Load; 8. Statistical Checks of Stromeyer's Fatigue Formula; 9. Models for Defect Growth; 10. Generalized Laws of Strength Degradation; 11. A Compressive Stress Resulting from Tamm's Electronic Surface States 12. Environmental Influences on Fatigue Strength13. The Activation Energy of Creep and the Surface Energy of Solids; 14. Open Questions; A1. Nonlinear Regression; A2. Solutions for the Damped Oscillations 1; A3. Solutions for the Damped Oscillations 2; A4. Harmonics by Stress Relaxation; A5. The Approximate Linearity of Equation (7.9); A6. A Tube-Like Specimen for Fatigue Tests; A7. Inhomogeneous Heating Caused by Internal Friction; A8. The Partial Differential Equation of the Temperature Field in a Cylinder Caused by Internal Friction A9. A Hypothetical Specimen for an Easy Assessment of Induced Compressive Stress
Sommario/riassunto	This treatment of ""Time-Dependent Mechanical Properties of Solids"" beginswith a phenomenological description of the transport of some unspecifiedentity. It is assumed that the transport is caused by

	mechanical stresses ortemperature fields. Using these assumptions, it is possible to deduceformulae for a theoretically based description of several phenomena withoutreferring to any specific process or entity. These theoretical results thenprovide the tools for performing methodologically better scientific work andfor a better analysis of data in the practical application of materials. Bypublish

2. Record Nr. UNINA9910971651603321

Autore	Thompson Marc T
Titolo	Intuitive analog circuit design : a problem-solving approach using design case studies / / by Marc T. Thompson
Pubbl/distr/stampa	Amsterdam ; ; Boston, : Elsevier Newnes, c2006
ISBN	9786611052119 9781281052117 1281052116 9780080478753 0080478751
Edizione	[1st ed.]
Descrizione fisica	1 online resource (494 p.)
Disciplina	621.3815
Soggetti	Electronic circuit design
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 and index.
Nota di contenuto	Introduction and motivation -- Review of signal-processing basics -- Review of diode physics and the ideal (and later, nonideal) diode -- Bipolar transistor models -- Basic bipolar transistor amplifiers and biasing -- Bandwidth estimation techniques and the method of open-circuit time constants -- Advanced transistor amplifier techniques -- High-gain bipolar amplifiers and BJT current mirrors -- Introduction to MOSFET devices and basic MOS amplifiers -- Bipolar transistor switching and the charge control model -- Review of feedback systems -- Basic operational amplifier topologies and a case study -- Review of current feedback operational amplifiers -- Analog low-pass filters -- Review of passive components and a case study in PC board layout --

	Other useful design techniques and loose-ends.
Sommario/riassunto	This book reflects Marc Thompson's twenty years of experience designing and teaching analog circuit design. He describes intuitive and "back of the envelope? techniques for designing and analyzing analog circuits, including transistor amplifiers (CMOS and bipolar), transistor switching, thermal circuit design, magnetic circuit design, control systems, and the like. The application of some simple rules-of-thumb and design techniques is the first step in developing an intuitive understanding of the behavior of complex electrical systems. This book outlines some ways of thinking about analog circ