Record Nr. UNINA9911019099603321 Memory function approaches to stochastic problems in condensed **Titolo** matter / / edited by Myron W. Evans, Paolo Grigolini, Giuseppe Pastori Parravicini New York, : Wiley, c1985 Pubbl/distr/stampa **ISBN** 9786612347177 9781282347175 1282347179 9780470142868 0470142863 9780470143315 0470143312 Descrizione fisica 1 online resource (574 p.) Advances in chemical physics, , 0065-2385;; v. 62 Collana Altri autori (Persone) EvansMyron W <1950-> (Myron Wyn) GrigoliniPaolo Pastori ParraviciniGiuseppe Disciplina 530.4 541.305 541/.08 Soggetti Condensed matter Molecular dynamics Stochastic processes Relaxation methods (Mathematics) Chemistry, Physical and theoretical Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia "An Interscience publication." Note generali Nota di bibliografia Includes bibliographies and indexes. Nota di contenuto MEMORY FUNCTION APPROACHES TO STOCHASTIC PROBLEMS IN CONDENSED MATTER; CONTENTS; I. Theoretical Foundations; II.Basic Description of the Rules Leading to the Adiabatic Elimination of Fast Variables; III. Continued Fractions in the Theory of Relaxation; IV. Memory Function Methods in Wid State Physics; V. Molecular Dynamics: Intense External Fields; VI. Nonlinear Effects in Molecular Dynamics of

the Liquid State; VII. Dynamical bperties of Hydrogen-Bonded Liquids;

VIII. Slow Motion EPR Spectra in Terms of a Generalized Langevin Equation; IX. The Theory of chemical Reaction Rates X. Experimental Investigation on the Effect of Multiplicative Noise by Means of Electric CircuitsXI. Interdisciplinary Subjects (Population Genetics): The Time Properties of a Model of Random Fluctuating Selection; XII. Stochastic Processes in Astrophysics: Stellar Formation and Galactic Evolution; Author Index; Subject Index

Sommario/riassunto

An international group of scholars presents a very important development in the theory of relaxation processes. For the first time, the basic equations of motion have been put into a form suitable for computation of a variety of observable phenomena in several different disciplines. This book begins with a description of the foundations of the memory function techniques, of the adiabatic elimination procedure and of the mathematics of continued fractions. It also covers depth relaxation phenomena in several areas of physics, chemistry, biology, electronic engineering, spectroscopy, computer si