

1. Record Nr.	UNINA9910135013703321
Titolo	Advances in chemical physics . Volume 161 // edited by Stuart A. Rice and Aaron R. Dinner
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , 2016 ©2016
ISBN	1-119-29096-1 1-119-29095-3 1-119-29097-X
Descrizione fisica	1 online resource (577 p.)
Collana	Advances in Chemical Physics ; ; Volume 161
Disciplina	541
Soggetti	Chemistry, Physical and theoretical Spintronics Photochemistry - Research 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 and index.
Nota di contenuto	Title Page ; Copyright Page ; Contents ; Contributors to Volume 161 ; Preface to the Series ; Chapter 1 Structural Analysis by X-ray Intensity Angular Cross Correlations ; I. Introduction ; II. Theory ; A. Scattering from a Disordered System of Reproducible Particles ; B. 2D Disordered Systems ; 1. Dilute Systems ; 2. Dense Systems ; C. 3D Disordered Systems ; D. Two- and Three-Point Angular CCFs and Their Fourier Decomposition ; 1. General Definitions ; 2. Analysis of Disordered Systems by Angular CCFs ; III. Applications ; A. Single-Particle Structure Recovery from FXS 1. 2D Structure Determination 2. 3D Structure Determination ; B. Correlations in Disordered and Partially Ordered Phases ; 1. Local Structure of Colloidal Systems ; 2. BO Order in Liquid Crystals ; 3. Structural Inhomogeneities in Semicrystalline Polymers ; 4. Short-Range and Medium-Range Order in Metallic Glasses ; 5. Emergent Rotational Symmetries and Domain Memory in Magnetic Multilayers ; IV. Conclusions and Outlook ; Acknowledgments ; References ; Chapter 2

Spin Relaxation in Phase Space ; I. Introduction

II. Density Matrix and Phase Space Formulations of Relaxation

Phenomena in Spin Systems A. Density Matrix Formulation of Spin Relaxation and Resonance ; 1. General Equations ; 2. Collision Kernel in the Markovian Approximation ; 3. Time-dependent Hamiltonian ; 4.

Method of Statistical Moments ; B. Quasiprobability Distribution

Functions for Particles ; 1. The Wigner Distribution Function for

Particles ; 2. Application to Transition-State Theory ; 3. Application to

Quantum Brownian Motion ; C. Quasiprobability Distribution Functions

for Spins ; 1. Spin Phase-Space Distribution Functions

2. Weyl Symbols of Some Spin Operators 3. Master Equation and

Statistical Moment Equations for Spin Relaxation in Phase Space ; D.

Equilibrium Phase Space Distribution Functions for Spins ; 1. Spins in a

Uniform External Field ; 2. Uniaxial Nanomagnet in an External Field ; 3.

Uniaxial Nanomagnet in a Transverse Field ; 4. Biaxial Anisotropy ; 5.

Cubic Anisotropy ; 6. TST Reversal Time ; 7. Switching Field Curves ; 8.

Discussion ; III. Master Equation in Phase Space for Axially Symmetric

Systems ; A. Master Equation for a Uniaxial Nanomagnet Subjected to a dc Magnetic Field

1. Explicit Form of the Master Equation 2. Differential Recurrence

Relations for the Statistical Moments ; B. Spin Relaxation in a dc

Magnetic Field ; 1. Basic Equations ; 2. Quantum Analog of the

Magnetic Langevin Equation ; 3. Exact Solution of the Master Equation

for Longitudinal Relaxation ; 4. Nonlinear Longitudinal Relaxation Time

; 5. Linear Response ; 6. Single-Mode Approximation ; C. Longitudinal

Relaxation of Uniaxial Nanomagnets ; 1. Calculation of the Observables

; 2. Analytic Equations for the Characteristic Relaxation Times and

Dynamic Susceptibility

3. Nonlinear Longitudinal Relaxation in Superimposed ac and dc

Magnetic Fields
