

1. Record Nr.	UNINA9910736997703321
Autore	Mezzasalma Stefano A
Titolo	Interface science and technology . Volume 15 Macromolecules in solution and Brownian relativity // Stefano A. Mezzasalma
Pubbl/distr/stampa	Amsterdam ; ; London, : Elsevier/Academic Press, 2008
ISBN	1-281-37095-9 9786611370954 0-08-055798-8
Descrizione fisica	1 online resource (247 p.)
Collana	Interface science and technology ; ; v. 15
Disciplina	547.7 530.413
Soggetti	Polymers Macromolecules Brownian movements
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	Cover; Macromolecules in Solution and Brownian Relativity; Copyright page; TOCContents; Foreword; CHChapter 1. Classical and Relativistic Mechanics; 1. Historical Summary; 2. Analytical Mechanics; 3. Special Relativity; 4. Relativistic Mechanics; 5. General Relativity; 6. Particular Solutions and Reference Frames; Appendix A; Readings; CHChapter 2. The Special Theory of Brownian Relativity; 1. Brownian Motion and Diffusion (Notes); 2. Postulates of Brownian Relativity: Ideal Polymer and Universality; 3. Real Polymer in a Minkowskian Fluid; Readings CHChapter 3. The General Theory of Brownian Relativity1. Geometric Approach to Polymers in Solution; 2. Statistical Gauge and Electromagnetic Analogy; 3. Outlook and Notes; Readings; CHChapter 4. The Covariant Scaling of Probability; 1. Vineyard's Van Hove Distribution Function; 2. From Molecule to Macromolecule: True Self-Avoiding Walk Polymer; 3. From Macromolecule to Molecule: Turbulence in Liquids; Readings; CHChapter 5. Fundamental Ideas for a Shape Mechanics; 1. Brownian Simultaneity and Uncertainty Relation; 2. Lorentz-Poincare Transformation: A Toy Model for Geometry 3. The Static Uncertainty Relation4. Materiality and Geometry of Energy;

5. n-Molecular Systems and Pairwise Potential; 6. The Shape-Mechanical Issue; 7. Outlook and Notes; Readings; IDX Subject Index

Sommario/riassunto

This book illustrates the recent picture of statistical physics of polymers and polymer solutions that emerges from some paradigms of contemporary science joint together. Among its principal aims are discussing the consequences of a novel self-diffusion theory, which benefits from an extension towards relativistic-like principles, and the generalization of usual concepts met in polymer science in terms of geometry alone. The monograph gives the whole fundamentals necessary to handle the view proposed, which is set in the final chapters. All the formers see about to provide the reader with a co