

1. Record Nr.	UNINA9910800186003321
Titolo	Algorithmic techniques for the polymer sciences // edited by Bradley S. Tice, PhD
Pubbl/distr/stampa	Waretown, NJ : , : Apple Academic Press, Inc. Boca Raton, FL : , : CRC Press, , [2015] ©2015
ISBN	0-429-10165-1 1-926895-39-8
Edizione	[1st edition]
Descrizione fisica	1 online resource (254 p.)
Disciplina	620.1/92
Soggetti	Polymers Polymers - Compression testing Algorithms
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.
Nota di contenuto	Front Cover; About the Editor; Preface; Contents; Introduction; Review of the Literature; Chapter 1: Polymers; Chapter 2: Compression of Data; Chapter 3: Natural Language Compression; Chapter 4: Formal Language Compression; Chapter 5: Types of Compression Programs; Chapter 6: Algorithmic Compression; Chapter 7: Chemical Formulas; Chapter 8: Fischer Projection; Chapter 9: Compression of Polymers; Chapter 10: Line Notation Systems and Compression; Chapter 11: Current Trends in Research; Chapter 12: Big Data; Chapter 13: Modeling Complexity in Molecular Systems: A Revised Edition Chapter 14: Feedback Systems for Nontraditional Medicines: A Case for the Signal Flow Diagram Chapter 15: Chromatic Aspects of the Signal Flow Diagram; Chapter 16: Junction Graphs; Chapter 17: Embedded Symbol Notation Diagrams and Embedded Symbol Notation Matrix Diagrams; Chapter 18: Feedback Theory: Properties of Signal Flow Graphs; Chapter 19: An Overview of Signal Flow Graphs; Chapter 20: A Theory on Neurological Systems-Part I and Part II; Chapter 21: A Theoretical Model of Feedback in Pharmacology Using Signal Flow Diagrams; Appendix A: A New Foundation for Information

Appendix B: Compression and Geometric Data
Appendix C: The Analysis of Binary, Ternary, and Quaternary Based Systems for Communications Theory; Appendix D: The Use of a Radix 5 Base for Transmission and Storage of Information; Appendix E: A Comparison of a Radix 2 and a Radix 5 Based Systems; Appendix F: Random and Non-Random Sequential Strings Using a Radix 5 Based System; Appendix G: A Comparison of Compression Values of Binary and Ternary Base Systems; Appendix H: Patterns within Patternless Sequences; Appendix I: A Radix 4 Based System for Use in Theoretical Genetics
Appendix J: A Compression Program for Chemical, Biological, and Nanotechnologies
Appendix K: Statistical Physics and the Fundamentals of Minimum Description Length and Minimum Message Length; Appendix L: The Use of Signal Flow Diagrams in Pharmacology; Appendix M: Signal Flow Diagrams Verses Block Diagrams; Appendix N; Appendix O; Appendix P; A List of the Editor's Papers on Signal Flow Diagrams; References

Sommario/riassunto

This new book-the first of its kind-examines the use of algorithmic techniques to compress random and non-random sequential strings found in chains of polymers. The book is an introduction to algorithmic complexity. Examples taken from current research in the polymer sciences are used for compression of like-natured properties as found on a chain of polymers. Both theory and applied aspects of algorithmic compression are reviewed. A description of the types of polymers and their uses is followed by a chapter on various types of compression systems that can be used to compress polymer chains in
