

1. Record Nr.	UNINA9910857783003321
Autore	Vancik Hrvoj
Titolo	From Complexity to Systems // by Hrvoj Vanik
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2024
ISBN	3-031-56136-8
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (97 pages)
Disciplina	501
Soggetti	Science - Philosophy System theory Chemometrics Philosophy of Science Complex Systems Mathematical Applications in Chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Introduction -- Chapter 2. Concept of Complexity -- Chapter 3. System Theory -- Chapter 4. Categories of Complexity -- Chapter 5. Generalization of the Concept of Complexity -- Chapter 6. Graph-Theoretical Representation of Systems -- Chapter 7. Philosophical Consequences -- Chapter 8. Concluding Remarks.
Sommario/riassunto	This book sheds new light on the interactions between the science of complexity and the science of systems. Though both of these fields have been independently studied extensively, their interrelations have not been satisfactorily analyzed. By a superficial view, both the sciences are based on the same principles of the holistic behavior of the ensembles consisting of components. The author providing an expert analysis on the theory of complexity and bridges the gap to generalize it, by elaborating on all the observable manifestations of complex forms and behaviors and explaining how it is related to general theory of systems. Particular attention is given to the use of chemical concepts throughout the text to demonstrate the theories as well as the interactions between the two. The central point of this book is the new rational representation of systems that origins from some chemical concepts about the structure of molecules and graph theoretical

chemical theory. This novel text appeals to experienced researchers, students, and all those curious about theories of systems, complexities, and theoretical chemistry.

---