Record Nr. UNINA9910132329803321 Proceedings of the 240 Conference: science's great challenges // **Titolo** edited by Aaron R. Dinner Pubbl/distr/stampa Hoboken, New Jersey:,: John Wiley & Sons Inc.,, [2015] ©2015 **ISBN** 1-118-95961-2 1-118-95960-4 1-118-95962-0 Descrizione fisica 1 online resource (364 p.) Collana Advances in chemical physics; ; volume 157 SCI013050SCI009000TEC009010 Classificazione 541/.2 Disciplina Soggetti Chemistry, Physical and theoretical Research Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references and index. Nota di bibliografia Nota di contenuto PROCEEDINGS OF THE 240 CONFERENCE: SCIENCE'S GREAT CHALLENGES: ADVANCES IN CHEMICAL PHYSICS VOLUME 157; EDITORIAL BOARD; CONTRIBUTORS TO VOLUME 157; PREFACE; SESSIONS AT THE "240" CONFERENCE (SEPTEMBER 13-15, 2012): CONTENTS; Part I The Emergence and Breakdown of Complexity; 1 Features of Complexity; I. Introduction; II. The Emergence of Classical Dynamics from the Underlying Quantum Laws; A. Insight from Quantum Control Theory; III. The Emergence of Thermodynamical Phenomena; A. The Quantum Otto Cycle; B. Quantum Dynamics of the Working Medium: C. Quantum Thermodynamics D. The Quantum TricycleE. The Third Law of Thermodynamics; IV. Perspective; Acknowledgments; References; Discussion; 2 Exploring Quantum-Classical Boundary; I. Motivation; II. Development of Experimental Tools; III. Toward the Quantum-Classical Boundary; Acknowledgements; References; Discussion; 3 Transition from Atoms to Clusters to Condensed Matter; Acknowledgments; References; Discussion: 4 Free Energies of Staging a Scenario and Perpetual Motion Machines of the Third Kind; I. Introduction; II. Perpetual Motion Machines of the Third Kind; III. The Free Energy Cost of Staging A

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Sommario/riassunto

"Based on the '240' Conference held at the University of Chicago in September of 2012, this special volume of The Advances in Chemical Physics series celebrates scientific research contributions and careers of R. Stephen Berry, Stuart A. Rice and Joshua Jortner"--