Record Nr. UNINA9910450174803321 Autore Shuryak E. V Titolo The QCD vacuum, hadrons and superdense matter [[electronic resource]] /] / Edward V. Shuryak Hackensack, N.J.; London,: World Scientific, c2004 Pubbl/distr/stampa **ISBN** 1-281-87710-7 9786611877101 981-256-569-8 Edizione [2nd ed.] Descrizione fisica 1 online resource (637 p.) World Scientific lecture notes in physics;; v. 71 Collana Disciplina 539.7548 Soggetti Quantum chromodynamics Hadrons Nuclear matter Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references (p. 587-615) and index. Nota di contenuto Contents; Preface; Chapter 1 Theoretical Introduction; Chapter 2 Phenomenology of the QCD Vacuum; Chapter 3 Euclidean Theory of Tunneling: From Quantum Mechanics to Gauge Theories; Chapter 4 Instanton Ensemble in QCD; Chapter 5 Lattice QCD; Chapter 6 QCD Correlation Functions; Chapter 7 High Energy Hadronic Collisions; Chapter 8 QCD at Finite Temperatures; Chapter 9 Excited Hadronic Matter in Heavy Ion Collisions; Chapter 10 Early Diagnostics of Hadronic Matter; Chapter 11 QCD at High Density; Chapter 12 A Wider Picture: Appendix A Notations: Appendix B Basic Instanton Formulae Appendix C A Sample Program for Numerical Simulation of the Euclidean Quantum PathsBibliography: Index This invaluable book is an extensive set of lecture notes on Sommario/riassunto various aspects of non-perturbative quantum chromodynamics thefundamental theory of strong interaction on which nuclear and hadronicphysics is based. The original edition of the book, written in

the mid-1980's, had moreof a review style.