Record Nr. UNINA9910257384103321 Density Functionals: Theory and Applications [[electronic resource]]: **Titolo** Proceedings of the Tenth Chris Engelbrecht Summer School in Theoretical Physics Held at Meerensee, near Cape Town, South Africa, 19-29 January 1997 / / edited by Daniel Joubert Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, 1998 **ISBN** 3-540-69673-3 Edizione [1st ed. 1998.] Descrizione fisica 1 online resource (XVI, 196 p.) Lecture Notes in Physics, , 0075-8450;; 500 Collana Disciplina 530.4/11 Soggetti Mathematical physics Chemistry, Physical and theoretical Condensed matter **Atoms Physics** Theoretical, Mathematical and Computational Physics Theoretical and Computational Chemistry **Condensed Matter Physics** Atomic, Molecular, Optical and Plasma Physics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Bibliographic Level Mode of Issuance: Monograph Note generali Nota di contenuto Fundamentals of density functional theory -- Density functionals for non-relativistic coulomb systems -- Hybrid methods: Combining density functional and wavefunction theory -- Density polarization functional theory -- A guided tour of time-dependent density functional theory -- Relativistic density functional theory. This book is an excellent introduction to density functional theory for Sommario/riassunto electrons. Largely written in review style, it will also serve as an excellent overview of recent developments. Nonrelativistic and relativistic approaches are discussed and conventional ground-state as well as polarization density functional and time-dependent density functional formalisms are introduced. A careful discussion of the

exchange-correlation functional and approximations is presented and a

chapter is devoted to an analysis of hybrid wavefunction/density-functional approximations.