Record Nr. UNINA9910741191303321 Autore Streltsov Alexander Titolo Quantum Correlations Beyond Entanglement : and Their Role in Quantum Information Theory / / by Alexander Streltsov Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2015 **ISBN** 3-319-09656-7 Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (56 p.) Collana SpringerBriefs in Physics, , 2191-5423 530 Disciplina 530.12 539 621.3 Soggetti Quantum theory Quantum computers **Spintronics Atoms Physics** Quantum Physics Quantum Information Technology, Spintronics Atomic, Molecular, Optical and Plasma Physics 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 and index. Nota di contenuto Introduction.- Quantum Theory -- Quantum Entanglement -- Quantum Correlations Beyond Entanglement -- Quantum Discord in Quantum Information Theory.- Outlook. Sommario/riassunto Quantum correlations are not restricted to the well known entanglement investigated in Bell-type experiments. Other forms of correlations, for example quantum discord, have recently been shown to play an important role in several aspects of quantum information theory. First experiments also support these findings. This book is an introduction into this up-and-coming research field and its likely

impact on quantum technology. After giving a general introduction to

the concept of quantum correlations and their role in quantum

information theory, the author describes a number of pertinent results and their implications.