Record Nr. UNINA9910484521403321 Autore Franklin Allan <1938-> Titolo Once can be enough: decisive experiments, no replication required // Allan Franklin, Ronald L. Laymon Pubbl/distr/stampa Cham, Switzerland: ,: Springer, , [2021] ©2021 **ISBN** 3-030-62565-6 Edizione [1st ed. 2021.] Descrizione fisica 1 online resource (XII, 181 p. 51 illus.) Disciplina 507.2 Replication (Experimental design) Soggetti Science - Experiments - History Science - Experiments Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Introduction -- The Meselson-Stahl Experiment: "The Most Beautiful Experiment in Biology" -- The Discovery of the Positron -- The Discovery of the Omega Minus Hyperon -- Once Should Have Been Enough: Gregor Mendel, "Experiments in Plant Hybridization" -- Once Came Close To Being Enough: Electron Polarization and Parity Nonconservation -- The Discovery of Parity Nonconservation -- The Search for the Magnetic Monopole -- Conclusion. There has recently been considerable discussion of a "replication crisis" Sommario/riassunto in some areas of science. In this book, the authors argue that replication is not a necessary criterion for the validation of a scientific experiment. Five episodes from physics and genetics are used to substantiate this thesis: the Meselson-Stahl experiment on DNA replication, the discoveries of the positron and the omega minus hyperon, Mendel's plant experiments, and the discovery of parity nonconservation. Two cases in which once wasn't enough are also discussed, the nondiscovery of parity nonconservation and the search for magnetic monopoles. Reasons why once wasn't enough are also

discussed.