Record Nr. UNINA9910960969603321 Autore MacGregor Malcolm H (Malcolm Herbert), <1926-2019.> Titolo The power of [alpha]: electron elementary particle generation with [alpha]-quantized lifetimes and masses / / Malcolm H. Mac Gregor Hackensack, N.J.; ; London, : World Scientific, c2007 Pubbl/distr/stampa **ISBN** 9786611121013 9781281121011 1281121010 9789812708366 9812708367 Edizione [1st ed.] Descrizione fisica 1 online resource (459 p.) Disciplina 539.7/232 Soggetti Alpha rays Particles (Nuclear physics) Phenomenological theory (Physics) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references (p. 415-420) and index. Nota di contenuto Preface: The Training of an Elementary Particle Phenomenologist; Contents: List of Figures: 0. A Pictorial Journey through the Landscape of -Quantized Elementary Particle Lifetimes and Masses; 1. Lifetime and Mass -Quantization: Physics Beyond the Paradigm; 2. The Phenomenology of -Quantized Particle Lifetimes and Mass-Widths; 3. The Phenomenology of Reciprocal; 4. The Mathology of the Elementary Particle: The Relativistically Spinning Sphere; 5. The Mathology of Particle Waves: The Particle-Hole Pair: 6. The Mathology of the Fine Structure Constant = $e2=\sim c$; 7. Ramifications Postscript: The Saga of the mb = 70 MeV and mf = 105 MeV Mass Quanta Appendices; Acknowledgments; References; Index This book is centered on the most pressing unsolved problem in Sommario/riassunto elementary particle physics - the mass generation of particles. It contains physics that is not included in the Standard Model as it is now formulated, while at the same time being in conformity with the major

results of the Standard Model, i.e. isotopic spins and interactions. It differs from the Standard Model in the treatment of masses and

pseudoscalar mesons, and in the role assigned to the coupling constant ?. Presented in a careful and phenomenological way, the material can easily be followed by all physicists, both experiment