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Titolo	The Discovery of Isotopes : A Complete Compilation // by Michael Thoennessen
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ISBN	3-319-31763-6
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (413 p.)
Disciplina	530
Soggetti	Nuclear physics Physics Nuclear chemistry Particle and Nuclear Physics History and Philosophical Foundations of Physics Nuclear Chemistry
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 at the end of each chapters.
Nota di contenuto	Preface -- Dedication -- Acknowledgements -- Introduction -- Radioactive Decay Chains -- Isotopes of Stable Elements -- First Nuclear Reactions -- Transuranium Elements -- Neutron Induced Fission -- Neutron Induced Reactions -- Photon and Pion Induced Reactions -- Light Charged Particle Reactions -- Spallation and Charged-Particle Induced Fission -- Fusion Evaporation Reactions -- Superheavy Elements -- Spontaneous Fission -- Heavy Ion Transfer and Deep Inelastic Reactions -- Projectile Fragmentation and Fission -- Unbound Isotopes -- Summary and Outlook.
Sommario/riassunto	This book describes the exciting discovery of every isotope observed on earth to date, which currently numbers some 3000. For each isotope a short essay highlights the authors of the first publication for the isotope, the laboratory and year where and when the isotope was discovered, as well as details about the production and detection methods used. In controversial cases previously claims are also discussed. At the end a comprehensive table lists all isotopes sorted by elements and a complete list of references. Preliminary versions of

these paragraphs have been published over the last few years as separate articles in the journal "Atomic Data and Nuclear Data Tables". The work re-evaluates all assignments judging them with a uniform set of criteria. In addition, the author includes over 100 new isotopes which have been discovered since the articles published. This book is a source of information for researchers as well as enthusiastic laymen alike. From the prepublication review: "The explanations focus on the essentials, which makes the various chapters pleasingly compact. The phrasing is well understandable also for non-experts. This makes the book easy to read, even thrilling. I have to confess that parts of the manuscript I was even reading as an evening lecture in the bed, so exciting was the history of isotope discoveries." Sigurd Hofmann, Helmholtz Professor at GSI Darmstadt, Germany, and a leading expert in superheavy nuclei.
