1. Record Nr. UNINA9910145832503321

Titolo	CVD diamond for electronic devices and sensors [[electronic resource] /] / edited by Ricardo S. Sussmann
Pubbl/distr/stampa	Chichester, U.K., : Wiley, 2009
ISBN	1-282-68433-7 9786612684333 0-470-74039-6 0-470-74036-1
Descrizione fisica	1 online resource (603 p.)
Collana	Wiley series in materials for electronic and optoelectronic applications
Classificazione	UP 3100 UQ 8220 ZN 4174
Altri autori (Persone)	SussmannRicardo S
Disciplina	621.381 666.88
Soggetti	Electronics - Materials Diamonds, Artificial Chemical vapor deposition Electronic books.
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	CVD Diamond for Electronic Devices and Sensors; Contents; Series Preface; Preface; List of Contributors; Basic Properties, Defects and Impurities, Surface properties and Synthesis; 1 Basic Properties of Diamond: Phonon Spectra, Thermal Properties, Band Structure; 2 Transport Properties of Electrons and Holes in Diamond; 3 Point Defects, Impurities and Doping; 4 Surface Conductivity of Diamond; 5 Recent Progress in the Understanding of CVD Growth of Diamond; 6 Heteroepitaxial Growth; Radiation Sensors; 7 Detectors for UV and Far UV Radiation; 8 Diamond Radiation Sensors for Radiotherapy 9 Radiation Sensors for High Energy Physics Experiments10 CVD-Diamond Detectors for Experiments with Hadrons, Nuclei, and Atoms; 11 Neutron Detectors; Active Electronic Devices; 12 High-Power Switching Devices; 13 H-Terminated Diamond Field-Effect Transistors; 14 Doped Diamond Electron Devices; 15 Optoelectronic Devices Using

	Homoepitaxial Diamond p -n and p -i -n Junctions; Electrochemical and Biological Sensors; 16 Biofunctionalization of Diamond Surfaces: Fundamentals and Applications; 17 Diamond Electrochemical Sensors; Micro-Electro-Mechanical Systems; 18 CVD Diamond MEMS Superconductivity in CVD Diamond19 Superconductivity in Diamond
Sommario/riassunto	Synthetic diamond is diamond produced by using chemical or physical processes. Like naturally occurring diamond it is composed of a three-dimensional carbon crystal. Due to its extreme physical properties, synthetic diamond is used in many industrial applications, such as drill bits and scratch-proof coatings, and has the potential to be used in many new application areas A brand new title from the respected Wiley Materials for Electronic and Optoelectronic Applications series, this title is the most up-to-date resource for diamond specialists. Beginning with an introduction to the pr

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Record Nr.	UNINA9910490025303321
Titolo	150 Years of the Periodic Table : A Commemorative Symposium / / edited by Carmen J. Giunta, Vera V. Mainz, Gregory S. Girolami
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-67910-1
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (453 pages)
Collana	Perspectives on the History of Chemistry, , 2662-4605
Disciplina	546.8 546.809
Soggetti	Chemistry - History Chemistry, Organic Science - History History of Chemistry Organic Chemistry History of Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.

Nota di contenuto	Chapter 1 - Introduction: Overview and Scope -- Chapter 2 - Trouble with triads -- Chapter 3 - Sir John F.W. Herschel and the concept of periodicity -- Chapter 4 - Vis tellurique of Alexandre-Emile Beguyer de Chancourtois -- Chapter 5 - Periodicity in Britain: The periodic tables of Odling and Newlands -- Chapter 6 - Gustavus Detlef Hinrichs and his Chart of the Elements -- Chapter 7 - Lothar Meyer's path to periodicity -- Chapter 8 - Mendeleev and his periodic system -- Chapter 9 - Discovery of the elements predicted by Dmitri Mendeleev's table: Scandium, gallium, and germanium -- Chapter 10 - Rare Earth Elements -- Chapter 11 - History (and pre-history) of the discovery and chemistry of the noble gases -- Chapter 12 - Hydrogen, helium, and metals: When astronomy met the periodic table -- Chapter 13 - Hydrogen to oganesson: A philatelic celebration of the periodic table -- Chapter 14 - Impact of 20th century physics on the periodic table and questions still outstanding in the 21st century -- Chapter 15 - Uses of the Periodic System after Radioactivity and the Discovery of the Neutron: the contrasting views of Lise Meitner and Ida Noddack -- Chapter 16- Mary Elvira Weeks and The Discovery of the Elements -- Chapter 17 - From neptunium to mendelevium: element discovery and the birth of the atomic age -- Chapter 18 - Transactinide elements: How the 7th row of the periodic table was discovered -- Chapter 19 - Periodic table after period 7.
Sommario/riassunto	This book provides an overview of the origins and evolution of the periodic system from its prehistory to the latest synthetic elements and possible future additions. The periodic system of the elements first emerged as a comprehensive classificatory and predictive tool for chemistry during the 1860s. Its subsequent embodiment in various versions has made it one of the most recognizable icons of science. Based primarily on a symposium titled “150 Years of the Periodic Table” and held at the August 2019 national meeting of the American Chemical Society, this book describes the origins of the periodic law, developments that led to its acceptance, chemical families that the system struggled to accommodate, extension of the periodic system to include synthetic elements, and various cultural aspects of the system that were celebrated during the International Year of the Periodic Table.