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Descrizione fisica	1 online resource (376 p.)
Altri autori (Persone)	OganessianYu. Ts ZagrebaevV. I (Valerii I.)
Disciplina	539.764
Soggetti	Nuclear fusion Nuclear fission Superheavy elements Radioactive nuclear beams Nuclear reactions
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	CONTENTS ; Preface ; Aspects of Fusion Fission and Cluster Radioactivity ; Current Problems of Superheavy Nuclei ; 1 Introduction ; 2 Two regions of increased stability ; 3 Problem of deformed superheavy nuclei ; Acknowledgments ; References Structure of Super-Heavy Nuclei in Mean-Field Models 1 Introduction ; 2 Parametrizations ; 3 Quality of the Parametrizations ; 4 The Role of the Spin-Orbit Splitting ; Acknowledgments ; References Nuclei in Deformed Mean-Field Calculations ; 1 Introduction 2 The Models ; 3 Deformed Shell Closures ; 4 Ground State Deformations ; 5 Qa-Values and

Estimated Lifetimes	;	6 Shell Structure in a
Point-Coupling Model	;	7 Conclusions
; Acknowledgments	;	References ; Extrapolation
of Mean-Field Models to Superheavy Nuclei		
; 1 Introduction		
2 Models	3 Nuclear exotica in superheavy nuclei	
; 4 Fits and Parameterizations		;
Power	5 Predictive	;
;	6 Conclusions	Acknowledgments
References	;	The Synthesis of Superheavy Nuclei in the
48Ca+244Pu Reaction		;
Introduction	;	1
;	2 Experimental Technique	
3 Experimental Results		
4 Discussion	5 Addendum	;
;	6 Acknowledgements	
References	;	Experiments on the Synthesis of Superheavy
Elements with 48Ca Beams at the Separator VASSILISSA		
;	;	
Introduction	Experiment	;
Discussion	Conclusion	Results
;		;
References		Acknowledgments
		Fusion-Fission of Superheavy Nuclei at Low Excitation Energies

Sommario/riassunto

This book deals with the properties and fusion dynamics of very heavy nuclei. It contains the latest experimental results on the formation and fission of superheavy nuclei and on the near-barrier fusion of light exotic nuclei, along with the different theoretical approaches to the description of fusion dynamics and microscopic properties of superheavy nuclei. The book also discusses nuclear collective dynamics and expectations from the use of accelerated beams of radioactive nuclei in fusion reactions.
Contents:
Aspects of Fusion, Fission and Cluster Radioactivity (W Grei

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Autore	Hook-Barnard India
Titolo	Technologies to enable autonomous detection for BioWatch : ensuring timely and accurate information for public health officials : workshop summary / / India Hook-Barnard, Sheena M. Posey Norris, and Joe Alper, Rapporteurs ; Board on Health Sciences Policy, Board on Life Sciences, Institute of Medicine and National Research Council of the National Academies
Pubbl/distr/stampa	Washington, District of Columbia : , : The National Academies Press, , [2014] ©2014
ISBN	0-309-29254-9 0-309-29252-2
Descrizione fisica	1 online resource (260 p.)
Disciplina	363.3253
Soggetti	Bioterrorism - United States - Prevention Environmental monitoring - United States - Cost effectiveness Nucleic acids - Analysis United States
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
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Nota di contenuto	""Front Matter""; ""Reviewers""; ""Contents""; ""Acronyms and Abbreviations""; ""1 Introduction""; ""2 Overview of the BioWatch Program""; ""3 Public Health's Perspective on the Role of BioWatch in the Decision-Making Process""; ""4 Potential Technologies for the BioWatch Program""; ""5 Final Thoughts""; ""Appendix A: References""; ""Appendix B: Biographical Sketches of Workshop Participants""; ""Appendix C: Workshop Agenda""; ""Appendix D: Registered Attendees""; ""Appendix E: Technology Readiness Levels in the Department of Defense"" ""Appendix F: White Paper 1: The BioWatch Program: What Information Is Needed to Inform Decision Making?""""Appendix G: White Paper 2: Nucleic-Acid Signatures at Three Levels of Readiness for BioWatch""; ""Appendix H: White Paper 3: State of the Art for Autonomous Detection Systems Using Immunoassays and Protein Signatures""; ""Appendix I:

Sommario/riassunto

"The BioWatch program, funded and overseen by the Department of Homeland Security (DHS), has three main elements--sampling, analysis, and response--each coordinated by different agencies. The Environmental Protection Agency maintains the sampling component, the sensors that collect airborne particles. The Centers for Disease Control and Prevention coordinates analysis and laboratory testing of the samples, though testing is actually carried out in state and local public health laboratories. Local jurisdictions are responsible for the public health response to positive findings. The Federal Bureau of Investigation is designated as the lead agency for the law enforcement response if a bioterrorism event is detected. In 2003 DHS deployed the first generation of BioWatch air samplers. The current version of this technology, referred to as Generation 2.0, requires daily manual collection and testing of air filters from each monitor. DHS has also considered newer automated technologies (Generation 2.5 and Generation 3.0) which have the potential to produce results more quickly, at a lower cost, and for a greater number of threat agents. Technologies to Enable Autonomous Detection for BioWatch is the summary of a workshop hosted jointly by the Institute of Medicine and the National Research Council in June 2013 to explore alternative cost-effective systems that would meet the requirements for a BioWatch Generation 3.0 autonomous detection system, or autonomous detector, for aerosolized agents . The workshop discussions and presentations focused on examination of the use of four classes of technologies--nucleic acid signatures, protein signatures, genomic sequencing, and mass spectrometry--that could reach Technology Readiness Level (TRL) 6-plus in which the technology has been validated and is ready to be tested in a relevant environment over three different tiers of temporal timeframes: those technologies that could be TRL 6-plus ready as part of an integrated system by 2016, those that are likely to be ready in the period 2016 to 2020, and those are not likely to be ready until after 2020. Technologies to Enable Autonomous Detection for BioWatch discusses the history of the BioWatch program, the role of public health officials and laboratorians in the interpretation of BioWatch data and the information that is needed from a system for effective decision making, and the current state of the art of four families of technology for the BioWatch program. This report explores how the technologies discussed might be strategically combined or deployed to optimize their contributions to an effective environmental detection capability."

--Publisher's description.