1. Record Nr. UNINA9910650818903321 Autore Morris Jeff Titolo Nanomaterial research strategy [[electronic resource] /] / Earl B. Purcell, editor Pubbl/distr/stampa New York, : Nova Science Publishers, c2010 Washington, D.C.:,: U.S. Environmental Protection Agency, Office of Research and Development **ISBN** 1-61761-773-3 Descrizione fisica 1 online resource (164 p.) Nanotechnology science and technology Collana Altri autori (Persone) PurcellEarl B Disciplina 620.1/1 Soggetti Nanostructured materials - Research Nanotechnology - Research 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 and index. Nota di contenuto ""NANOMATERIAL RESEARCH STRATEGY"": ""NANOMATERIAL RESEARCH STRATEGY""; ""CONTENTS ""; ""PREFACE ""; ""DRAFT NANOMATERIAL RESEARCH STRATEGY (NRS) "": ""EXECUTIVE SUMMARY ""; ""1.0. INTRODUCTION1 ""; ""2.0. BACKGROUND ""; ""2.1. US National Nanotechnology Initiative""; ""2.2. Environment, Health, and Safety Focus""; ""2.3. EPA Regulatory Role""; ""2.4. ORB Research Accomplishments ""; ""2.4.1. ORB Science to Achieve Results (STAR) Program""; ""2.4.2. ORDa€?s In-house Research Program""; ""2.5. Collaboration/ Leveraging ""; ""3.0. RESEARCH STRATEGY OVERVIEW"" ""3.1. ORB Scientific Expertise Applied to Nanomaterials2"""3.1.1. Fate and Transport Expertise and Capabilities""; ""3.1.2. Human and Ecological Effects Expertise and Capabilities""; ""3.1.3. Computational Toxicology Expertise and Capabilities""; ""3.1.4. Risk Assessment Expertise and Capabilities ""; ""3.1.5. Source Characterization and Risk Management Expertise and Capabilities ""; ""3.1.6. Exposure Expertise and Capabilities""; ""3.2. Strategic Direction of Research Themes and Science Questions ""; ""4.0. RESEARCH THEMES "" ""4.1. Research Theme: Sources, Fate, Transport, and Exposure """"4.1.1. Key Science Question 1: Which nanomaterials have a high potential for release from a life-cycle perspective? ""; ""4.1.1.1.

Background/Program Relevance""; ""4.1.1.2. Research Activities"";

- ""4.1.1.3. Anticipated Outcomes ""; ""4.1.2. Key Science Question 2: What technologies exist, can be modified, or must be developed to detect and quantify engineered nanomaterials in environmental media and biological samples? ""; ""4.1.2.1. Background/ Program Relevance""; ""4.1.2.2. Research Activities ""
- ""4.1.2.3. Anticipated Outcomes """4.1.3 Key Science Question 3: What are the major processes/properties that govern the environmental fate of engineered nanomaterials, and how are these related to physical and chemical properties of those materials? ""; ""4.1.3.1.
- Background/Program Relevance ""; ""4.1.3.2. Research Activities""; ""4.1.3.3. Anticipated Outcomes""; ""4.1.4. Key Science Question 4: What are the exposures that will result from releases of engineered nanomaterials? ""; ""4.1.4.1. Background/ Program Relevance""; ""4.1.4.2. Research Activities ""
- ""4.1.4.3. Anticipated Outcomes """"4.2. Research Theme: Human Health and Ecological Effects Research to Inform Risk Assessments and Test Methods ""; ""4.2.1. Key Science Question 5: What are the effects of engineered nanomaterials and their applications on human and ecological receptors, and how can these effects best be quantified and predicted? ""; ""4.2.2. Background/Program Relevance""; ""4.2.3. Research Activities""; ""Ecological effects""; ""4.2.4. Anticipated Outcomes""; ""4.3. Research Theme: Developing Risk Assessment Methods""
- ""4.3.1. Key Science Question 6: Do Agency risk assessment approaches need to be amended to incorporate special characteristics of engineered nanomaterials? ""