

1. Record Nr.	UNINA9911006511703321
Titolo	Nanotechnology environmental health and safety : risks, regulation and management // edited by Matthew Hull, Diana Bowman
Pubbl/distr/stampa	Oxford, U.K., : William Andrew, 2010
ISBN	9786612666018 9781282666016 1282666010 9780815519829 0815519826 9780080947662 0080947662
Edizione	[1st edition]
Descrizione fisica	1 online resource (349 p.)
Collana	Micro & nano technologies series
Altri autori (Persone)	HullMatthew BowmanDiana
Disciplina	620.5 620/.509 73 363.1196205
Soggetti	Nanotechnology - Risk assessment Nanotechnology - Environmental aspects Nanotechnology - Health aspects
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	Front Cover; Published titles; Nanotechnology Environmental Health and Safety;; Copyright; Contents; Micro- and Nanotechnologies; Foreword; Series Editor's Preface; Preface; List of Contributors; SECTION 1Risks; CHAPTER 1 Toxicological Studies with Nanoscale Materials; 1.1 INTRODUCTION; 1.2 NANOTOXICOLOGY; 1.3 RISK ASSESSMENT PROCESS FOR NANOMATERIALS; 1.4 CHARACTERIZING NANOMATERIALS FOR TOXICOLOGICAL EVALUATION; 1.5 TOXICOLOGICAL TESTING FRAMEWORKS AND SCREENING STRATEGIES FOR NANOMATERIALS; 1.6 CHALLENGES ASSOCIATED WITH EVALUATING THE SAFETY OF NANOMATERIALS; 1.7 CONCLUSIONS; REFERENCES CHAPTER 2Are We Willing to Heed the Lessons of the Past?

Nanomaterials and Australia's Asbestos Legacy2.1 INTRODUCTION; 2.2 LESSONS OF THE PAST; 2.3 BIG PROBLEMS WITH SMALL MATERIALS; 2.4 CONTROLS AND RISK ASSESSMENT; 2.5 WHAT NEEDS TO BE DONE?; 2.6 ACKNOWLEDGMENTS; REFERENCES; SECTION 2 Regulation; CHAPTER 3Global Perspectives on the Oversight of Nanotechnologies; 3.1 SHAPING BEHAVIOR THROUGH REGULATION:SUBTLE AND NOT SO SUBTLE APPROACHES; 3.2 KEY LESSONS AND RECOMMENDATIONS OF REGULATORY REVIEWS TO DATE; 3.3 MULTI-LATERAL AND MULTI-PARTY INITIATIVES:THE STORY SO FAR 3.4 MOVING FORWARD AMIDST UNCERTAINTY REFERENCES; CHAPTER 4A Nanotechnology Legal Framework; 4.1 NANO-PRODUCT LEGAL LIFE CYCLE; 4.2 LEGAL ISSUES; 4.3 CONCLUSION; REFERENCES; SECTION 3Management; CHAPTER 5 Nanotechnology Risk Management: An Insurance Industry Perspective; 5.1 INTRODUCTION; 5.2 RISK MANAGEMENT STRATEGIES; 5.3 WHICH STRATEGY TO CHOOSE?; 5.4 INSURANCE EXPOSURE AND TOOLS FOR RISK MANAGEMENT; 5.5 RISK MANAGEMENT AND REGULATORY ISSUES FOR NANOMATERIALS; 5.6 LIKELY INSURANCE SCENARIOS; 5.7 CONCLUSIONS; REFERENCES; CHAPTER 6Industry-Led Initiative for Occupational Health and Safety 6.1 INCEPTION AND FORMATION OF THE CONSORTIUM6.2 AIMS AND OBJECTIVES OF NOSH CONSORTIUM; 6.3 THE TECHNICAL PROGRAM; 6.4 PRESENTATIONS; 6.5 TECHNICAL UPDATE COMMUNICATIONS FOR ADVISORY BOARD MEETINGS; 6.6 PHASE 2 FOCUS AND OBJECTIVES; 6.7 SUMMARY; ACKNOWLEDGMENTS; REFERENCES; APPENDIX; CHAPTER 7Nanotechnology Risk Management and Small Business: A Case Study on the NanoSafe Framework1; PREFACE; 7.1 INTRODUCTION; 7.2 UNCOVERING EHS INFORMATION GAPS; 7.3 EHS MANAGEMENT AND SMALL BUSINESSES; 7.4 A PRACTICAL SMALL BUSINESS APPROACH; 7.5 ELEMENT 1: FACILITY MANAGEMENT; 7.6 ELEMENT 2: PRODUCT STEWARDSHIP 7.7 ELEMENT 3: WORKFORCE PROTECTION7.8 ELEMENT 4: ENVIRONMENTAL MANAGEMENT; 7.9 ELEMENT 5: EMERGING TECHNOLOGIES AND STRATEGIES; 7.10 SUMMARY AND CONCLUSIONS; ACKNOWLEDGMENTS; REFERENCES; APPENDIX A FOR NANOTECHNOLOGY RISK MANAGEMENT AND SMALL BUSINESS: A CASE STUDY ON THE NANOSAFE FRAMEWORK; APPENDIX B FOR NANOTECHNOLOGY RISK MANAGEMENT AND SMALL BUSINESS: A CASE STUDY ON THE NANOSAFE FRAMEWORK; APPENDIX C FOR NANOTECHNOLOGY RISK MANAGEMENT AND SMALL BUSINESS: A CASE STUDY ON THE NANOSAFE FRAMEWORK; CHAPTER 8A Case Study of a Nanoscale-Research Facility Safety through Design and Operation 8.1 THE BIRCK NANOTECHNOLOGY CENTER FACILITY

Sommario/riassunto

This book tackles the debate over nanotechnology's environmental health and safety (EHS) by thoroughly explaining EHS issues, financial implications, foreseeable risks (i.e. exposure, dose, hazards of nanomaterials), and the implications of occupational hygiene precautions and consumer protections. Real-world case studies are included, e.g. the discussion of a leading chemical company's unusual pairing with the USA's largest environmental NGO, and an innovative program designed for small- to mid-sized businesses, which became a model approach for proactive nanotechnology EHS risk man