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Nota di contenuto	The Advanced Materials Revolution; Contents; Preface; Acknowledgments; PART I ADVANCED MATERIALS, PAST AND PRESENT; References; 1. The Coming of the Advanced-Materials Revolution; Continuity and New Directions: 1980s and 1990s; The New Materials and the Rise of the "Technological" Society; References; PART II OPPORTUNITIES AND RISKS; 2. A Great Potential-Markets and Society; The Advanced Material Families: Characteristics, Technology, and Applications; Bioengineered Materials; Advanced Metals: Advanced Stainless Steel and "Superalloys"; Advanced Ceramics and Superconductors Synthetic Engineering (Nonconduction) PolymersOrganic Electronic Materials (Conduction Polymers); Advanced (Nonthin) Coatings; Nanopowders and Nanocomposites; Nanocarbon Materials; Nanofibers; Thin Films; Advanced Composites; Global Markets: The Question of Convergence; References; 3. The Great Divide: Advanced Materials, Productivity, and Economic Growth in the United States and Europe;

Technology and Economic Performance. I-IT, Energy and Biomedical;  
Technology and Economic Performance. II-The Role of Advanced  
Materials

Localization, Globalization, and the Competitiveness Factor: European  
Union versus United StatesReferences; 4. Facing Reality: The Risk Factor  
in Advanced-Materials Technology; The Risks of Innovation; Technical  
Risk: Can This Be Done?; The Financial Capital Dilemma: Can This Be  
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"Selection" Dilemma: Can We Pick the Winner?; The Market Dilemma:  
Can We Sell This?; The Management Dilemma: Can Our Team Be  
Effective?; Public Policy and Perception Dilemmas: Will Government  
Action Derail Our Strategy?; References

PART III CREATION: RESEARCH AND DEVELOPMENT5. Research and  
Development I: The American Context; Opportunities Taken and  
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Polymer Electronics (OPEs); Nanocarbon Materials: Metal Fullerenes and  
Nanotubes; Nanocrystals and Quantum Dots; The United States, R&D,  
and Advanced Materials; What Type of R&D?; Where Is R&D Located?  
The Decentralization of Innovation; What Are the Fruits of R&D?  
Patents; References; 6. Research and Development II: The European  
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The European Dilemma in R&D II: Structural ProblemsStructural  
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Structural Problems II: The Universities, Science, and Innovation: The  
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The Coordination Question; The European Dilemma in R&D III: The  
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Issue; Cultural Bias, Public Perception, and Fear of Technology Issue;  
Discussion; References

PART IV A WIDER CONTEXT: THE SEAMLESS WEB

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Sommario/riassunto

Comprehensive investigation into the emerging advanced materials  
industry, addressing the ways in which science, technology, business,  
and markets are converging to produce one of the most dynamic  
industries of recent yearsExamines the major groups of advanced  
materials and discusses the range of markets and industries to which  
these materials are, or are likely to be, appliedOrganised thematically,  
with each chapter discussing a particular phase of an advanced material  
product's life cycleAlso includes in-depth interviews and internal  
documentationEssential reading for

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