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Nota di contenuto	Preface -- Acknowledgments -- Part I Building Shock Wave Capabilities -- Introduction -- The 1950s - Origins -- The 1960s – Explosive Growth -- The 1970s – New Opportunities -- The 1980s – Heady Times -- The 1990s – Black Monday -- The 2000s – A New Millennium -- Looking to the Future -- Part II Memories of Shock Wave Research -- James A. Ang -- James R. Asay -- Melvin R. Baer -- Lynn M. Barker -- Mark B. Boslough -- Barry M. Butcher -- Albert J. Chabai -- Lalit C. Chhabildas -- Michael J. Desjarlais -- George E. Duvall (A Tribute by the Editors) -- Michael D. Furnish -- Dennis E. Grady -- Robert A. Graham (Recollections of William J. Nellis and Tribute by the Editors) -- Thomas A. Haill -- Clint A. Hall -- Dennis B. Hayes -- Walter Herrmann (in Memoriam by Orval E. Jones) -- Eugene S. Hertel, Jr -- Roy (Red)

Hollenbach -- James N. Johnson -- Orval E. Jones (A Tribute by the Editors) -- Charles H. Karnes -- James E. Kennedy -- Marlin E. Kipp -- Marcus D. Knudson -- Carl H. Konrad -- R. Jeffery Lawrence -- Raymond W. Lemke -- C. Donald Lundergan -- Peter C. Lysne -- J. Michael McGlaun -- Steven T. Montgomery -- Bruno Morosin -- Darrell Munson -- Raymond P. Reed -- William D. Reinhart -- George A. Samara (in Memoriam by Alton D. Romig, Jr. and Robert A. Graham) -- Karl W. Schuler -- Herbert J. Sutherland -- Samuel L. Thompson (A Tribute by J. Michael McGlaun: An Enduring Nationwide Impact) -- Wayne M. Trott -- Timothy G. Trucano -- Tracy J. Vogler -- Jack L. Wise -- Bibliography -- List of Acronyms -- Indices -- Index of Key Terms -- Index of Names of Individuals.

Sommario/riassunto

This book presents a history of shock compression science, including development of experimental, material modeling, and hydrodynamics code technologies over the past six decades at Sandia National Laboratories. The book is organized into a discussion of major accomplishments by decade with over 900 references, followed by a unique collection of 45 personal recollections detailing the trials, tribulations, and successes of building a world-class organization in the field. It explains some of the challenges researchers faced and the gratification they experienced when a discovery was made. Several visionary researchers made pioneering advances that integrated these three technologies into a cohesive capability to solve complex scientific and engineering problems. What approaches worked, which ones did not, and the applications of the research are described. Notable applications include the turret explosion aboard the USS Iowa and the Shoemaker-Levy comet impact on Jupiter. The personal anecdotes and recollections make for a fascinating account of building a world-renowned capability from meager beginnings. This book will be inspiring to the expert, the non expert, and the early-career scientist. Undergraduate and graduate students in science and engineering who are contemplating different fields of study should find it especially compelling.
