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Titolo	MALDI MS : a practical guide to instrumentation, methods and applications // edited by Franz Hillenkamp and Jasna Peter-Katalinic
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Altri autori (Persone)	HillenkampF Peter-KatalinicJasna
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Soggetti	Matrix-assisted laser desorption-ionization Electronic books.
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Livello bibliografico	Monografia
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Related Titles; Title page; Copyright page; Contents; Preface to the Second Edition; List of Contributors; 1: The MALDI Process and Method; 1.1 Introduction; 1.2 Analyte Incorporation; 1.3 Absorption of the Laser Radiation; 1.4 The Ablation/Desorption Process; 1.5 Ionization; 1.6 Fragmentation of MALDI Ions; 1.7 MALDI of Noncovalent Complexes; 1.8 The Optimal Choice of Matrix: Sample Preparation; 1.8.1 Surface Preparation; 1.8.2 Anchor Sample Plates; 1.8.3 Matrix Additives and Influence of the Sample Plate Surface; Abbreviations; References; 2: MALDI Mass Spectrometry Instrumentation 2.1 Introduction 2.2 Lasers for MALDI-MS; 2.3 Fragmentation of MALDI Ions; 2.3.1 MALDI at Elevated Pressure; 2.3.2 Tandem Mass Spectrometry of MALDI Ions; 2.4 Mass Analyzers; 2.4.1 Axial TOF Mass Spectrometers; 2.4.2 Reflectron TOF Mass Spectrometers; 2.4.3 Tandem TOF Mass Spectrometers; 2.4.4 Orthogonal TOF Mass Analyzers; 2.4.5 Tandem Mass Spectrometry in oTOF Mass Analyzers; 2.4.6 Ion Detectors and Data Processing in MALDI-TOF Analyzers; 2.5 Fourier Transform Ion Cyclotron Resonance Mass Spectrometers; 2.5.1 Tandem Mass Spectrometry on FTICR Mass Spectrometers

2.6 Quadrupole Ion Trap Mass Spectrometers 2.6.1 RF-Only Ion Guides and LIT Mass Spectrometers; 2.6.2 Tandem Mass Spectrometry on QIT Mass Spectrometers; 2.7 Hybrid Mass Spectrometers; 2.7.1 Quadrupole TOF Mass Spectrometers; 2.7.2 Quadrupole FT Mass Spectrometers; 2.7.3 QIT-TOF Mass Spectrometers; 2.7.4 Ion Mobility oTOF Mass Spectrometers; 2.7.5 Orbitrap; 2.8 Future Directions; Definitions and Acronyms; References; 3: MALDI-MS in Protein Chemistry and Proteomics; 3.1 Introduction; 3.2 Sample Preparation for Protein and Peptide Analysis by MALDI-MS 3.3 Strategies for Using MALDI-MS in Protein Biochemistry 3.3.1 Peptide Mass Mapping of Purified Proteins; 3.3.2 Peptide Sequencing by MALDI-MS/MS; 3.3.3 Analysis of Post-Translational Modifications; 3.4 Applications of MALDI-MS in Proteomics; 3.4.1 Protein Identification by MALDI-MS Peptide Mass Mapping; 3.4.2 Quantitation of Proteins by MALDI-MS; 3.5 Computational Tools for Protein Analysis by MALDI-MS; 3.6 Clinical Applications of MALDI-MS; 3.7 Conclusions; Acknowledgments; References; 4: MALDI-Mass Spectrometry Imaging; 4.1 Introduction 4.2 History of Mass Spectrometry Imaging (MSI) and Microprobing Techniques 4.3 MALDI in Micro Dimensions: Instruments and Mechanistic Differences; 4.4 Visualization of Mass Spectrometric Information; 4.5 Data Processing and Data Exchange; 4.6 Matrix Deposition for High-Resolution Imaging; 4.7 Organisms, Organs, and Tissues: MALDI Imaging at Various Lateral Resolutions; 4.7.1 Phospholipid Analysis; 4.7.2 Peptide Analysis; 4.7.3 Drug Monitoring; 4.8 Whole-Cell and Single-Cell Analysis; 4.8.1 Cellular Analysis; 4.8.2 Individually Isolated Cells; 4.8.3 Direct Cellular and Subcellular Imaging 4.9 Cell Sorting and Capturing

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Sommario/riassunto

This authoritative book on MALDI MS, now finally available in its second edition and edited by one of its inventors, gives an in-depth description of the many different applications, along with a detailed discussion of the technology itself. Thoroughly updated and expanded, with contributions from key players in the field, this unique book provides a comprehensive overview of MALDI MS along with its possibilities and limitations. The initial chapters deal with the technology and the instrumental setup, followed by chapters on the use of MALDI MS in protein research (including proteomi

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2. Record Nr.	UNISA996582068803316
Autore	Bernhardt Floris
Titolo	StadtTeilen : Neue Praktiken gemeinschaftlicher Nutzung urbaner Räume // Florian Koch, Carsten Keller, Constantin Hörburger, Elisabeth Güde, Helena Cermeño, Josefine Buzwan-Morell, Nada Bretfeld, Floris Bernhardt, Sina Doukas
Pubbl/distr/stampa	Bielefeld : , : transcript Verlag, , [2024] ©2024
ISBN	9783839466339
Descrizione fisica	1 online resource (224 p.)
Collana	Urban Studies
Soggetti	SOCIAL SCIENCE / Sociology / Urban
Lingua di pubblicazione	Tedesco
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Frontmatter -- Inhalt -- Danksagung -- Abbildungsverzeichnis -- Tabellenverzeichnis -- Autor*innenangaben -- Einleitung -- TEIL I Öffentliche Räume und Wohnen als neue Gemeingüter (Was?) -- Kapitel 1 Kollektives Handeln und die Wiederbelebung der (städtischen) Gemeingüter: Praktiken des Teilens als eine Form des commonings -- Kapitel 2 Neue öffentliche Räume: Konzepte und Beispiele -- TEIL II Orte und Räume des Teilens (Wo?) -- Kapitel 3 Wandel und Herausforderungen innerstädtischer Nachbarschaften -- Kapitel 4 Architektur und Stadtraum als Grundlagen für Begegnung und Teilen -- Kapitel 5 Gebaute Beispiele: Architekturen des Teilens -- TEIL III Akteur*innen, Formen und Motive (Wer, Wie, Warum?) -- Kapitel 6 Nichtkommerzielles Teilen und die Bedeutung der Nachbarschaft: Eine quantitative Umfrage -- Kapitel 7 Hierarchie oder Kooperation? Initiativen des Teilens und institutionelle Akteur*innen -- TEIL IV Praktiken des Teilens (Wie?) -- Kapitel 8 Das Praxislabor: Forschen in und mit Nachbarschaften -- Kapitel 9 Expert*innenwissen und dialektisches Lernen: Dialoge über Praktiken des Teilens und urban commoning -- Kapitel 10 Wissenspraktiken in Sharing- und commoning-Initiativen -- Kapitel 11 Drei Entwurfsansätze zur Förderung des Teilens im Stadtraum -- Ausblick. Vom Teilen in der Nachbarschaft zur Transformation der Stadt -- Anhang

## Sommario/riassunto

Praktiken des Teilens stellen Möglichkeiten dar, Stadt alternativ zu gestalten, und sind zugleich komplexe Aushandlungsprozesse. Kann der Schulhof abends von der Nachbarschaft genutzt werden? Oder hat die Hausgemeinschaft Interesse an einem gemeinsamen Garten und Veranstaltungsraum? Offen ist, was solidarische und widerständige Praxen des Teilens begünstigt und welche architektonischen Interventionen die Teilbarkeit von öffentlichem Raum erleichtern. Auf der Grundlage empirischer Studien in drei deutschen Städten und einem Praxislabor werden Praktiken des Teilens, ihre Bedingungen, Potenziale und Grenzen untersucht. Die Autor\*innen liefern Denkanstöße für Politik, Verwaltung, Wissenschaft, Initiativen und Wohnungsunternehmen.

3. Record Nr.	UNINA9910154647603321
Autore	Clarke Arthur C (Arthur Charles), <1917-2008.>
Titolo	2010 : odyssey two // Arthur C. Clarke
Pubbl/distr/stampa	New York, : RosettaBooks, 2012, c1982
ISBN	0-7953-3256-4 0-7953-2481-2
Edizione	[Electronic ed.]
Descrizione fisica	1 online resource (176 p.)
Collana	Arthur C. Clarke Collection : The Odyssey ; ; v.2
Disciplina	823/.914
Soggetti	Science fiction, English Space flights
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	""Cover""; ""Title Page""; ""Copyright""; ""Dedication""; ""CONTENTS""; ""FOREWORD""; ""AUTHORa€?S NOTE""; ""I. LEONOV""; ""1. MEETING AT THE FOCUS""; ""2. THE HOUSE OF THE DOLPHINS""; ""3. SAL 9000""; ""4. MISSION PROFILE""; ""5. LEONOV""; ""II. TSIEN""; ""6. AWAKENING""; ""7. TSIEN""; ""8. TRANSIT OF JUPITER""; ""9. THE ICE OF THE GRAND CANAL""; ""10. A CRY FROM EUROPA""; ""11. ICE AND VACUUM""; ""III. DISCOVERY""; ""12. DOWNHILL RUN""; ""13. THE WORLDS OF GALILEO""; ""14. DOUBLE ENCOUNTER""; ""15. ESCAPE FROM THE GIANT""; ""16. PRIVATE LINE""; ""17. BOARDING PARTY""; ""18. SALVAGE""

""19. OPERATION WINDMILL""""20. GUILLOTINE""; ""21. RESURRECTION""; ""IV. LAGRANGE""; ""22. BIG BROTHER""; ""23. RENDEZVOUS""; ""24. RECONNAISSANCE""; ""25. THE VIEW FROM LAGRANGE""; ""26. PROBATION""; ""27. INTERLUDE: TRUE CONFESSIONS""; ""28. FRUSTRATION""; ""29. EMERGENCE""; ""V. A CHILD OF THE STARS""; ""30. HOMECOMING""; ""31. DISNEYVILLE""; ""32. CRYSTAL SPRING""; ""33. BETTY""; ""34. VALEDICTION""; ""35. REHABILITATION""; ""36. FIRE IN THE DEEP""; ""37. ESTRANGEMENT""; ""38. FOAMSCAPE""; ""39. IN THE POD BAY""; ""40. a€œDAISY, DAISYa€? a€?""; ""41. GRAVEYARD SHIFT"" ""VI. DEVOURER OF WORLDS""""42. THE GHOST IN THE MACHINE""; ""43. THOUGHT EXPERIMENT""; ""44. VANISHING TRICK""; ""45. ESCAPE MANEUVER""; ""46. COUNTDOWN""; ""47. FINAL FLYBY""; ""48. OVER THE NIGHTSIDE""; ""49. DEVOURER OF WORLDS""; ""VII. LUCIFER RISING""; ""50. FAREWELL TO JUPITER""; ""51. THE GREAT GAME""; ""52. IGNITION""; ""53. A GIFT OF WORLDS""; ""54. BETWEEN SUNS""; ""55. LUCIFER RISING""; ""EPILOG: 20,001""; ""ACKNOWLEDGMENTS""; ""POSTSCRIPT""

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Sommario/riassunto

"A daring romp through the solar system and a worthy successor to 2001 ."--Carl Sagan Nine years after the disastrous Discovery mission to Jupiter in 2001, a joint U.S.-Soviet expedition sets out to rendezvous with the derelict spacecraft--to search the memory banks of the mutinous computer HAL 9000 for clues to what went wrong...and what became of Commander Dave Bowman. Without warning, a Chinese expedition targets the same objective, turning the recovery mission into a frenzied race for the precious information Discovery may hold about the enigmatic monolith that orbits Jupiter. Meanwhile, the being that was once Dave Bowman--the only human to unlock the mystery of the monolith--streaks toward Earth on a vital mission of its own . . . "Clarke deftly blends discovery, philosophy, and a newly acquired sense of play."-- Time " 2010 is easily Clarke's best book in over a decade." -- The San Diego Tribune

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4. Record Nr.	UNINA9910337634703321
Titolo	31st International Symposium on Shock Waves 1 : Fundamentals // edited by Akihiro Sasoh, Toshiyuki Aoki, Masahide Katayama
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
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Soggetti	Aerospace engineering Astronautics Continuum mechanics Fluid mechanics Chemistry, Physical and theoretical Computational intelligence Aerospace Technology and Astronautics Continuum Mechanics Engineering Fluid Dynamics Physical Chemistry Computational Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter1.Aerodynamic Testing at Duplicated Hypersonic Flight Conditions with Hyper-Dragon -- Chapter2.Shock wave research: Remembrance of Professor I. I. Glass -- Chapter3.Legacy at T5 -- Chapter4.Experimental studies of shock wave phenomena at the Ben Gurion University ? A Review -- Chapter5.Shock Compression Spectroscopy Under a Microscope -- Chapter6.Research on Shock-induced Aerothermodynamics for Future Planetary Explorations -- Chapter7.Kinetic shock Tubes: Recent developments for The study of homogeneous and heterogeneous chemical processes -- Chapter8. Structure and Unsteadiness of 3D Shock Wave / Turbulent Boundary Layer Interactions. -- Chapter9.Propagation Behavior and Mitigation of Shock Wave along Water inside a Rectangular Tube -- Chapter10.Dust

Lofting behind shock waves what is the dominate Lofting Mechanism -- Chapter11. Development of a fast running method for blast wave propagation -- Chapter12. On the Energy Exchange Mechanisms Controlling Blast and Fragment Evolution in a Responding Stone Pipe -- Chapter13. Interaction of a Blast Wave with a Material Interface -- Chapter14. Laboratory simulation of explosions using conical shock tubes -- Chapter15. Shock Tube Study of the Effect of Nitric Oxide Addition on Ignition Delay Times of n-Dodecane/Air Mixtures -- Chapter16. Ignition Delay Times of Methane and Hydrogen Highly Diluted in Carbon Dioxide -- Chapter17. A Study of the Chemiluminescence of  $\text{C}_2$ ,  $\text{C}_2^*$  and  $\text{C}_2^{**}$  during the Oxidation of  $\text{C}_2\text{H}_2$  behind Reflected Shock Waves -- Chapter18. A Study on Soot Formation Characteristics of a Gasoline Surrogate Fuel Using a Shock Tube -- Chapter19. Effect of Dimethyl Methylphosphonate (DMMP) Addition on  $\text{H}_2$ ,  $\text{CH}_4$ , and  $\text{C}_2\text{H}_4$  ignition Behind Reflected Shock Waves -- Chapter20.  $\text{CO}$  and  $\text{H}_2\text{O}$  Time-histories in a Shock-heated  $\text{H}_2\text{S}/\text{CH}_4$  Blend near Atmospheric Pressure -- Chapter21. Thermochemical nonequilibrium modeling of  $\text{O}_2$  -- Chapter22. State-Resolved Transport Properties of Electronically Excited High-Temperature Flows behind Strong Shock Waves -- Chapter23. Oxygen Catalytic Recombination on Titanium Surface -- Chapter24. Computations of a Shock Layer Flow with a Vibrational-Specific Kinetics Model -- Chapter25. A One-dimensional Modeling of Seed-electron Generation and Electron Avalanche in Laser-supported Detonation -- Chapter26. PLIF-based concentration measurement of  $\text{OH}$  behind the blast wave emanating from an oxy-hydrogen detonation-driven shock tube -- Chapter27. Flame Propagation over the Heat Absorbing Substrate -- Chapter28. Propagation Mechanism of Detonations in Rough Walled Tube -- Chapter29. Effect of hydrodynamic instabilities on the development of hydrogen-air flame -- Chapter30. Characteristics of Crumpling Behavior of Graphene Oxide and Its Effects on Deflagration-to-Detonation Transition -- Chapter31. Detonation decay and flame propagation through a channel with porous walls -- Chapter32. Gas Flow with Stabilized Detonation in a Plane Channel -- Chapter33. Numerical Investigation on Vibrational Nonequilibrium Effect on ZND detonation model -- Chapter34. Stabilities of Rotating Detonation -- Chapter35. The influence of shock reflections on detonation re-initiation -- Chapter36. Experimental studies around shock tube for dynamic calibrations of high-frequency pressure transducers -- Chapter37. Effect of Imaging Blurring on 3D Computed Tomography of Chemiluminescence -- Chapter38. Time-Resolved Optical Flow of Supersonic Beveled Nozzles -- Chapter39. The Effect of Adaptive Sampling on Fluorescence Velocimetry Measurements in High-Speed Flows -- Chapter40. High-resolution background oriented schlieren technique for a laser-induced underwater shock wave -- Chapter41. Evaluation of the effect of an air plasma on the degradation of metallic coatings based on an analysis of the emission from the air behind the front of strong shock waves in the spectral range of 120400 nm -- Chapter42. Application of NO Laser Induced Fluorescence in JF-10 Detonation-Driven Shock Tunnel -- Chapter43. Molecular Tagging Velocimetry of  $\text{NH}$  Fluorescence in a High-enthalpy Rarefied Gas Flow -- Chapter44. Measurements of Jet A-1 Vapor Concentration Using Quantum Cascade Laser -- Chapter45. Temperature Measurement in a Shock Tunnel Using Tunable Diode Laser Absorption Spectroscopy -- Chapter46. Measurement and Formulation of Velocity, Attitude and Trajectory of Moving Object Using Magnet-Coil Method for High-Speed Penetration Experiment -- Chapter47. Investigations of density field on a flat plate shock-boundary layer interaction at Hypersonic speeds

using BOS -- Chapter48.Schlieren Tomography to Visualise Three Dimensional Supersonic Flows -- Chapter49.Interaction of a planar shock wave with a water surface -- Chapter50.Basic Experiment on Focusing Schieren PIV Method with LED Light Source -- Chapter51. Boundary-Layer Transition Detection at High Enthalpy Flow Conditions using Temperature-Sensitive Paint -- Chapter52.Development of Sprayable Ultrafast-PSP for Unsteady Flow -- Chapter53.Three-Dimensional Measurement of the Lateral Jet / Cross Flow Interaction Field by Colored-Grid Background Oriented Schlieren (CGBOS) Technique -- Chapter54.Numerical Investigation of Dust Lifting Induced by Vertical Shock Wave -- Chapter55.Gas Surface Interaction of Carbon Ablator in a Shock Tube -- Chapter56.Numerical Simulations of Shock Wave Interaction with a Water Droplet by Sharp Interface Methods -- Chapter57.High Order Hybrid Compact-WENO-Z Finite Difference Scheme for Hyperbolic Conservation Laws -- Chapter58.A fast mathematical modelling method for aerodynamic-heating predictions -- Chapter59.A Multi-Space Interrelation Theory for Correlating Aerodynamic Data from Hypersonic Ground Testing -- Chapter60.Reynolds Stress Models for Shock ? Turbulence Interaction -- Chapter61.On the analysis of full-spectrum k-distributions databases for thermal radiation in shock waves within CO<sub>2</sub> rich atmospheres -- Chapter62.Measurement of Electron Density by Heterodyne Interferometer for Atmospheric Pressure Plasmas -- Chapter63.Parametrical Quasiresonant Amplification of Alfvén Waves in Heat-Releasing Isentropic Unstable Medium -- Chapter64.Two-Dimensional MHD Structures in Heat-Releasing Plasma -- Chapter65. Mode transition from fast gas-ionization wave to laser-supported detonation wave -- Chapter66.Gas-Dynamic Flow behind Shock Wave Initiated by a Sliding Surface Discharge Channel -- Chapter67.Jet Formation of SF<sub>6</sub> Bubble Induced by Incident and Reflected Shock Waves -- Chapter68.Interaction of Cylindrical Converging Shock Wave with SF<sub>6</sub> Gas Bubble -- Chapter69.Numerical Study on Converging Richtmyer-Meshkov Instability -- Chapter70.Light/heavy converging Richtmyer-Meshkov instability in a conventional shock tube -- Chapter71.The Imploding Cylindrical Richtmyer-Meshkov Instability with a Two-Fluid Plasma Model -- Chapter72.Experimental Study on a Single-mode Interface Impacted by a Converging Shock -- Chapter73. The Richtmyer-Meshkov instability of a flat interface initiated by a perturbed shock -- Chapter74.A study of variable density mixing with reshock -- Chapter75.Wave Patterns in the Interaction of an Incident Shock with a Heavy Elliptic Gas Cylinder -- Chapter76.Reshocked Richtmyer-Meshkov instability: Numerical study on interface stretch and vortex cores characterization -- Chapter77.Self-generated magnetic fields in the plasma Richtmyer-Meshkov instability -- Chapter78.The Evolution of a Square SF<sub>6</sub> Gas Cylinder Impacted by a Converging Shock Wave -- Chapter79.Electron shock dynamics in the two-fluid plasma Richtmyer-Meshkov instability -- Chapter80.The Evolution of Concentration and Velocity-Fluctuations in the Richtmyer-Meshkov Instability -- Chapter81.Numerical Investigation of High-Temperature Effects in a Shock-Bubble Interaction. -- Chapter82. Transmitted wave of shock wave through various materials -- Chapter83.Numerical investigation of the interaction between a planar shock wave with a square bubble containing different gases -- Chapter84.Underwater Shock Wave by Explosion in a Closed Space -- Chapter85.Collision of underwater explosion with compressible porous wall -- Chapter86.Disturbance Waves behind the Shock Propagating through Non-uniform Gas -- Chapter87.Study on Mach stem shape of the asymmetric Mach reflection -- Chapter88.Experimental and

numerical investigations of a shock wave propagation through a bifurcation -- Chapter89.The Reflection of Cylindrical Shock-Waves on Cylindrical Walls -- Chapter90.On InMR-TRR Transition on a Concave Cylindrical Reflector -- Chapter91.Reflection of a Planar Shock Wave over a Concave Double Wedge -- Chapter92.Shock Wave Reflections from a Plane of Symmetry -- Chapter93.The influence of short acting pressure driver pulses on the behavior of shock waves in micro shock tubes -- Chapter94.Investigation of an Expansion Fan/Shock Wave Interaction between High Aspect Ratio Wedges -- Chapter95. Interaction of multiple cylindrical expanding shock waves -- Chapter96.Shock Interaction on a V-shaped Blunt Leading Edge -- Chapter97.Delayed Ventilation of Partially Confined Detonation Products by Shock Reflection from a Convergent Nozzle Opening -- Chapter98. Geometrical perception of convex surface reflections -- Chapter99. Numerical Simulation of Supersonic/Hypersonic Flow for TSTO's Staging Separation -- Chapter100.Experimental Study of Normal Shock Wave-Isotropic Turbulence Interaction Using Counter-Driver Shock Tube -- Chapter101.Numerical Studies on Form of Weak Shock Reflection over Wedges -- Chapter102.Shock Wave Generation Method using High-Speed Jet -- Chapter103.Analytical Prediction of Mach Stem Height for Asymmetric Wedge Reflection in 2-D Steady Flows -- Chapter104. Upstream Pressure Induced MR-RR Shock Transitions -- Chapter105. Revisiting Shock Propagation in a Temperature Gradient -- Chapter106. On Hysteresis at Axisymmetric Curved Shock Reflection from an Axial Cylinder -- Chapter107.Singularity formation in the geometry of perturbed shocks -- Chapter108.A Gen.

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## Sommario/riassunto

This is the first volume of a two volume set which presents the results of the 31st International Symposium on Shock Waves (ISSW31), held in Nagoya, Japan in 2017. It was organized with support from the International Shock Wave Institute (ISWI), Shock Wave Research Society of Japan, School of Engineering of Nagoya University, and other societies, organizations, governments and industry. The ISSW31 focused on the following areas: Blast waves, chemical reacting flows, chemical kinetics, detonation and combustion, ignition, facilities, diagnostics, flow visualization, spectroscopy, numerical methods, shock waves in rarefied flows, shock waves in dense gases, shock waves in liquids, shock waves in solids, impact and compaction, supersonic jet, multiphase flow, plasmas, magnetohydrodynamics, propulsion, shock waves in internal flows, pseudo-shock wave and shock train, nozzle flow, re-entry gasdynamics, shock waves in space, Richtmyer-Meshkov instability, shock/boundary layer interaction, shock/vortex interaction, shock wave reflection/interaction, shock wave interaction with dusty media, shock wave interaction with granular media, shock wave interaction with porous media, shock wave interaction with obstacles, supersonic and hypersonic flows, sonic boom, shock wave focusing, safety against shock loading, shock waves for material processing, shock-like phenomena, and shock wave education. These proceedings contain the papers presented at the symposium and serve as a reference for the participants of the ISSW 31 and individuals interested in these fields.

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