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63References 643 LIBS Apparatus Fundamentals 693.1 Basic LIBS Apparatus 693.2 Lasers 703.2.1 Laser Fundamentals 703.2.2 Types of Lasers 723.2.3 Properties of Laser Light Important for LIBS 763.2.4 Generation of Additional Wavelengths 783.2.5 Double-Pulse Operation 783.3 Optical Systems 803.3.1 Focusing and Light Collection 803.3.2 Lenses 823.3.3 Fiber Optic Cables 823.4 Methods of Spectral Resolution 863.4.1 Introduction 863.4.2 Spectral Resolution Devices 883.5 Detectors 1023.6 Detection System Calibrations 1093.6.1 Wavelength Calibration 1093.6.2 Spectral Response Calibration 1103.7 Timing Considerations 1143.8 Methods of LIBS Deployment 1153.9 Problems 117References 1184 LIBS Analytical Figures of Merit and Calibration 1234.1 Introduction 1234.2 Basics of a LIBS Measurement 1234.3 Precision 1294.4 Calibration 1314.4.1 Calibration Curves 1314.4.2 Calibration Standards 1384.4.3 Calibration-Free LIBS 1404.5 Detection Limit 1444.6 Accuracy 1444.7 Problems 146References 148References for Detection Limits 1505 Qualitative LIBS Analysis 1515.1 Introduction 1515.2 Identifying Elements 1515.3 Material Identification 1565.4 Process Monitoring 1595.4.1 Introduction 1595.4.2 Experimental 1625.4.3 Results 1635.4.4 Conclusions 1695.5 Material Sorting/Distinguishing 1695.5.1 Surface Condition 1695.5.2 Type of Analysis 1715.5.3 Sorting Materials of Close Composition 1735.5.4 Other Examples of Material Identification 1745.6 Site Screening Using LIBS 1775.7 Semiquantitative Analysis 1785.8 Problems 180References 1826 Quantitative LIBS Analysis 1856.1 Introduction 1856.2 Effects of Sampling Geometry 1856.3 Other Sampling Considerations 1896.4 Incomplete Vaporization and Ablation Stoichiometry 1936.5 Use of Internal Standardization 1946.6 Chemical Matrix Effects 1966.7 Example of LIBS Measurement: Impurities in Lithium-Containing Solutions 1986.7.1 Objective 1986.7.2 Experimental 1986.7.3 Results 2016.7.4 Discussion of Results 2056.8 Example of LIBS Measurement: Detection of Materials on Swipes 2066.8.1 Objective 2066.8.2 Experimental 2066.8.3 Results 2096.9 Reported Figures of Merit for LIBS Measurements and Comparison with Standard Methods 2116.10 Enhancing Quantitative Analysis via Sophisticated Signal Processing 2196.11 Conclusions 220References 2217 Chemometric Analysis in LIBS 2237.1 Introduction 2237.2 Chemometric Terms 2277.3 Chemometric Analysis/Model Development 2327.3.1 Data Collection 2327.3.2 Data Preprocessing: Selection of Variables 2347.3.3 Train the Model (Calibration) 2367.3.4 Selecting the Criteria for Classification 2387.3.5 Test the Model (Validation) 2397.3.6 Refine the Model Parameters 2397.3.7 Using the Model 2407.3.8 Improve the Training Data 2417.4 Summary 241References 2418 Remote LIBS Measurements 2578.1 Introduction 2578.2 Conventional Open-Path LIBS 2598.2.1 Apparatus 2598.2.2 Focusing the Laser Pulse 2608.2.3 Collecting the Plasma Light 2648.2.4 Results Using Conventional Open-Path LIBS 2658.3 Standoff LIBS Using Femtosecond Pulses 2708.3.1 Conventional Remote LIBS Using Femtosecond Laser Pulses 2708.3.2 Remote Analysis by Filamentation Produced by Femtosecond Pulses 2718.4 Fiber Optic LIBS 2768.4.1 Fiber Optics for Light Collection 2768.4.2 Fibers for Laser Pulse Delivery 2778.4.3 Applications of Fiber Optics 280References 2849 Selected LIBS Applications 2899.1 Introduction 2899.2 LIBS and the CBRNE Threats 2899.2.1 Background 2899.2.2 Nuclear Material and Isotope Detection 2919.2.3 Detection of Explosives 2949.2.4 Chemical and Biological Agent Detection 2959.3 LIBS Analysis of Liquids and Solids in Liquids 2979.4 Transportable LIBS Instrument for Stand-off Analysis 3039.4.1 Instrument Design 3039.4.2 Instrument Capabilities 3079.4.3 Consideration of Detection Scenarios 3129.5 LIBS for Space

Applications 3139.5.1 Background 3139.5.2 Laboratory Studies of LIBS for Space Missions 3139.5.3 ChemCam LIBS Instrument on MSL Rover 322References 325A Safety Considerations in LIBS 333B Major LIBS References 337C Detection Limits from the Literature 341D Examples of LIBS Spectra 377E Solutions to Problems 387Index 397.

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## Sommario/riassunto

"Starting from fundamentals and moving through a thorough discussion of equipment, methods, and techniques, the Handbook of Laser-Induced Breakdown Spectroscopy provides a unique reference source that will be of value for many years to come for this important new analysis method. The authors, with a total of over 60 years of experience in the LIBS method, use a combination of tutorial discussions ranging from basic principles up to more advanced descriptions along with extensive figures and photographs to clearly explain topics addressed in the text. In this second edition, chapters on the use of statistical analysis and advances in detection of weapons of mass destruction have been added. Tables of data related to analysis with LIBS have been updated. The Handbook of Laser-Induced Breakdown Spectroscopy, Second Edition: provides a thorough but understandable discussion of the basic principles of the method based on atomic emission spectroscopy, including recently available data leading to better characterization of the LIBS plasma; presents a discussion of the many advantages of the method along with limitations, to provide the reader a balanced overview of capabilities of the method; describes LIBS instrumentation ranging from basic set-ups to more advanced configurations; presents a comprehensive discussion of the different types of components (laser, spectrometers, detectors) that can be used for LIBS apparatuses along with suggestions for their use, as well as an up-to-date treatment of the newest advances and capabilities of LIBS instruments; presents the analytical capabilities of the method in terms of detection limits, accuracy, and precision of measurements for a variety of different sample types; discusses methods of sampling different media such as gases, liquids, and solids; presents an overview of some real-world applications of the method, with new emphasis on sampling of biologically and physically dangerous materials; provides an up-to-date list of references to LIBS literature along with the latest detection limits and a unique list of element detection limits using a uniform analysis method; provides annotated examples of LIBS spectra which can serve as references for the general reader and will be especially useful for those starting out in the field. "--

"The only manual that goes from the simplest to the most complex and state-of-the-art embodiments of LIBS experimental set up"--

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