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Nota di contenuto	Introduction -- Modern Spectroscopic Analysis Technology -- Basis of Matrix and Mathematical Statistics -- Preprocessing Methods in Spectroscopy Analysis -- Wavelength Variable Selection Method -- Spectral Dimensionality Reduction Method -- Linear Regression Method -- Non-Linear Regression Method -- Selection of Representative samples -- Outlier Detection Method -- Calibration Model Maintenance -- Pattern Recognition -- Evaluation of Model Performance -- Ways to Improve Model Predictive Ability -- Multi-spectral Fusion Technology -- Multi-way Resolution and Calibration -- Calibration Transfer Method -- Deep Learning Algorithms -- Chemometrics Software and Toolbox -- Discussions.
Sommario/riassunto	This book discusses chemometric methods for spectroscopy analysis including NIR, MIR, Raman, NMR, and LIBS, from the perspective of practical applied spectroscopy. It covers all aspects of chemometrics associated with analytical spectroscopy, including representative sample selection algorithm, outlier detection algorithm, model updating and maintenance algorithm and strategy and calibration performance evaluation methods.To provide a systematic and

comprehensive overview the latest progress of chemometric methods including recent scientific research and practical applications are presented. In addition the book also highlights the improvement of classical algorithms and the extension of common strategies. It is therefore useful as a reference book for researchers engaged in analytical spectroscopy technology, chemometrics, analytical instruments and other related fields.