Record Nr. UNINA9910484653703321 **Titolo** Near-infrared spectroscopy: theory, spectral analysis, instrumentation, and applications / / Yukihiro Ozaki [and three others], editors Pubbl/distr/stampa Singapore:,: Springer,, [2021] ©2021 981-15-8648-9 **ISBN** Edizione [1st ed. 2021.] 1 online resource (VIII, 593 p. 282 illus., 196 illus. in color.) Descrizione fisica Disciplina 543.57 Soggetti Near infrared spectroscopy Spectrum analysis Chemistry, Physical and theoretical Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. 1. Introduction -- 2. Theory of NIR Spectroscopy -- 3. Spectral Analysis Nota di contenuto in NIR Spectroscopy -- 4. Chemometrics -- 5. Instrumentation -- 6. Method Development -- 7. Applications: Physical Chemistry -- 8. Applications: Agriculture and Food Science and Technology -- 9. Applications: Pharmaceuticals -- 10. Applications: Bioscience -- 11. Applications: Medical Science -- 12. Applications: Polymers -- 13. Imaging -- 14. Applications: On-line Analysis. . This book provides knowledge of the basic theory, spectral analysis Sommario/riassunto methods, chemometrics, instrumentation, and applications of nearinfrared (NIR) spectroscopy—not as a handbook but rather as a sourcebook of NIR spectroscopy. Thus, some emphasis is placed on the description of basic knowledge that is important in learning and using NIR spectroscopy. The book also deals with applications for a variety of research fields that are very useful for a wide range of readers from graduate students to scientists and engineers in both academia and industry. For readers who are novices in NIR spectroscopy, this book provides a good introduction, and for those who already are familiar with the field it affords an excellent means of strengthening their knowledge about NIR spectroscopy and keeping abreast of recent developments. .