1. Record Nr. UNINA9910372786503321 Autore Bec Krzysztof B **Titolo** Advances in Near Infrared Spectroscopy and Related Computational Methods MDPI - Multidisciplinary Digital Publishing Institute, 2020 Pubbl/distr/stampa **ISBN** 3-03928-053-8 Descrizione fisica 1 electronic resource (496 p.) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Sommario/riassunto In the last few decades, near-infrared (NIR) spectroscopy has distinguished itself as one of the most rapidly advancing spectroscopic techniques. Mainly known as an analytical tool useful for sample characterization and content quantification. NIR spectroscopy is essential in various other fields, e.g. NIR imaging techniques in biophotonics, medical applications or used for characterization of food products. Its contribution in basic science and physical chemistry should be noted as well, e.g. in exploration of the nature of molecular vibrations or intermolecular interactions. One of the current development trends involves the miniaturization and simplification of instrumentation, creating prospects for the spread of NIR spectrometers at a consumer level in the form of smartphone attachments—a breakthrough not yet accomplished by any other analytical technique. A growing diversity in the related methods and applications has led to a dispersion of these contributions among disparate scientific communities. The aim of this Special Issue was to bring together the communities that may perceive NIR spectroscopy from different perspectives. It resulted in 30 contributions presenting

spectroscopy in a variety of applications.

the latest advances in the methodologies essential in near-infrared