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Sommario/riassunto	With the advances in nanomaterials and nanofabrication, surface-enhanced Raman spectroscopy (SERS) has been extensively developed and applied in the trace detection of various analytes in either a simple or a complicated sample matrix. This includes, but is not limited to, the detection of antibiotic residues in animal-producing meat products, detection of pathogenic bacteria in human body fluid, and detection of heavy metal contamination of water. This book, consisting two review articles and five research articles, covers the most recent progress and advancement in the development and application of various nanomaterials in SERS trace detection. In this book, a broad range of topics is covered, from the synthesis of novel nanomaterials that can provide improved reproducibility of SERS signals to the development of new application protocols that can facilitate the reliable detection of trace amounts of analytes without interfered by the sample matrices significantly. This book is a useful source for both new and advanced researchers in the field of SERS and its application.