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Altri autori (Persone)	OzakiY (Yukihiro)
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Nota di contenuto	Two-dimensional Correlation Spectroscopy - Applications in Vibrational and Optical Spectroscopy; Contents; Preface; Acknowledgements; 1 Introduction; 1.1 Two-dimensional Spectroscopy; 1.2 Overview of the Field; 1.3 Generalized Two-dimensional Correlation; 1.3.1 Types of Spectroscopic Probes; 1.3.2 External Perturbations; 1.4 Heterospectral Correlation; 1.5 Universal Applicability; 2 Principle of Two-dimensional Correlation Spectroscopy; 2.1 Two-dimensional Correlation Spectroscopy; 2.1.1 General Scheme; 2.1.2 Type of External Perturbations; 2.2 Generalized Two-dimensional Correlation 2.2.1 Dynamic Spectrum 2.2.2 Two-dimensional Correlation Concept; 2.2.3 Generalized Two-dimensional Correlation Function; 2.2.4 Heterospectral Correlation; 2.3 Properties of 2D Correlation Spectra; 2.3.1 Synchronous 2D Correlation Spectrum; 2.3.2 Asynchronous 2D Correlation Spectrum; 2.3.3 Special Cases and Exceptions; 2.4 Analytical Expressions for Certain 2D Spectra; 2.4.1 Comparison of Linear Functions; 2.4.2 2D Spectra Based on Sinusoidal Signals; 2.4.3

Exponentially Decaying Intensities; 2.4.4 Distributed Lorentzian Peaks; 2.4.5 Signals with more Complex Waveforms

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5 Further Expansion of Generalized Two-dimensional Correlation Spectroscopy - Sample-Sample Correlation and Hybrid Correlation 5.1 Sample-Sample Correlation Spectroscopy; 5.1.1 Correlation in another Dimension; 5.1.2 Matrix Algebra Outlook of 2D Correlation; 5.1.3 Sample-Sample Correlation Spectra; 5.1.4 Application of Sample-Sample Correlation; 5.2 Hybrid 2D Correlation Spectroscopy; 5.2.1 Multiple Perturbations; 5.2.2 Correlation between Data Matrices; 5.2.3 Case Studies; 5.3 Additional Remarks

6 Additional Developments in Two-dimensional Correlation Spectroscopy - Statistical Treatments, Global Phase Maps, and Chemometrics

Sommario/riassunto

A valuable tool for individuals using correlation spectroscopy and those that want to start using this technique. Noda is known as the founder of this technique, and together with Ozaki, they are the two biggest names in the area. First book on 2D vibrational and optical spectroscopy - single source of information, pulling together literature papers and reviews. Growing number of applications of this methodology - book now needed for people thinking of using this technique. Limitations and benefits discussed and comparisons made with 2D NMR. Discusses 20 optical and vibrational s
