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Titolo	Advances in flow analysis / / edited by Marek Trojanowicz
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Descrizione fisica	1 online resource (704 p.)
Disciplina	543.19
Soggetti	Flow injection analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Advances in Flow Analysis; Contents; Introduction; List of Contributors; I Methodologies and Instrumentation; 1 Theoretical Aspects of Flow Analysis; 1.1 Introduction; 1.2 Classification of Flow Systems. Fundamentals; 1.2.1 Continuous Flow Analysis; 1.2.2 Flow Injection Analysis; 1.2.3 Sequential Injection Analysis; 1.2.4 Multicommutation in Flow Injection Analysis; 1.2.5 Stopped Flow; 1.2.6 Batch Flow Injection Analysis (BFA); 1.3 Dispersion in Flow Injection Analysis: From the Movement of Fluids in Open Tubes to Controlled Dispersion; 1.3.1 Transport of Fluids; 1.3.1.1 Viscosity 1.3.1.2 Thermal Conductivity1.3.1.3 Diffusivity; 1.3.1.4 Diffusion; 1.3.2 The Diffusion-Convection Equation in Open Conduits; 1.3.3 The Distribution of Times of Residence; 1.3.3.1 Characterization and Experimental Domain of Flow Systems: Dimensionless Numbers and Their Meaning; 1.3.4 From the RTD Curve to the Generation of Signals in Flow Injection Systems; 1.3.4.1 The Dispersion Process; 1.3.4.2 The Concept of Controlled Dispersion and Analytical Implications; 1.3.4.3 The Transient Profile; 1.4 The Measurement of Dispersion; 1.4.1 The Coefficient ""D"" 1.4.2 Peak Width and Time of Appearance1.4.3 Peak Variance and

Theoretical Plate Height; 1.4.4 Degree and Intensity of Axial Dispersion; 1.4.4.1 Degree of Axial Dispersion; 1.4.4.2 Intensity of the Radial Dispersion; 1.4.5 Other Approaches to the Measurement of Dispersion; 1.5 Contribution of the Different Components of a Flow System to Dispersion; 1.5.1 Injection; 1.5.2 Detection; 1.5.3 Transport: Different Models; 1.5.3.1 Descriptive Models or ""Black Boxes""; 1.5.3.2 Deterministic Models: Dispersive Models and Tank-in-Series Model; 1.5.4 Probabilistic Models; 1.5.4.1 Random Walk
1.6 Design Equations1.6.1 Influence of the Different System Variables; 1.6.1.1 Reactor Length; 1.6.1.2 Geometric Configuration; 1.6.1.3 Flow Rate; 1.6.1.4 Tube Radius; 1.6.1.5 Injection Volume; 1.6.2 Optimization of Flow Systems; 1.7 Concluding Remarks; References; 2 Injection Techniques in Flow Analysis; 2.1 Introduction; 2.2 Continuous Flow Analysis (CFA); 2.3 Segmented Flow Analysis (SFA); 2.4 Flow Injection Analysis (FIA); 2.4.1 Syringe-based Injection; 2.4.2 Injection with Rotary Valves; 2.4.3 Proportional Injection; 2.4.4 Merged Injection
2.4.5 Injection Following a Prior Flow Sample Processing2.4.5.1 Multiparametric Determination; 2.4.5.2 Dialysis; 2.4.5.3 Gas Diffusion; 2.4.5.4 Pervaporation; 2.4.6 Hydrodynamic Injection; 2.5 Sequential Injection Analysis (SIA); 2.5.1 Original Procedures; 2.5.2 Conventional Injection; 2.5.3 Controlled Variable Volume Injection; 2.5.4 Cumulative Injection; 2.5.5 The Sandwich Technique; 2.5.6 Multiparametric Analysis; 2.5.7 Gas Diffusion; 2.5.8 Dialysis; 2.5.9 Mixing Chamber-Based Injection; 2.5.10 Bead Injection; 2.5.11 Hydrodynamic Injection
2.6 Multicommutated Flow Injection Analysis (MCFIA)

Sommario/riassunto

This first book to cover different injection techniques not only provides a comprehensive overview of methodologies and instrumentation, it also covers recent advances in flow method analysis, with an appendix listing additional databases, instrumentation and methods on the Internet. A definite must-have for every chemist working in this field.

2. Record Nr. UNICAMPANIAVAN0220213

Autore	Yang, Zhongmin
Titolo	Single-Frequency Fiber Lasers / Zhongmin Yang … [et al.]]
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