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Nota di contenuto	Electric Field Applications in Chromatography, Industrial and Chemical Processes; Table of Contents; 1 Introduction and Summary Takao Tsuda; Part 1 Electrochromatography; 2 Electrochromatography in Analytical Chemistry; 2.1 Theory of Band Broadening; 2.2 Apparent Mean Linear Flow Velocity and Elution Time; 2.3 Processes in Band Broadening; 2.4 Electrochromatography Zones; 2.5 Profiles of Pressurized Flow, Electroosmotic Flow, and Zones of Ionic Solutes; 2.5.1 Flow Profiles of Pressurized Flow; 2.5.2 Flow Profiles of Electroosmosis in an Open Tube; 2.5.3 Flow Profiles for Charged Molecules 2.6 Pressurized Flow-Driven Electrochromatography on Microlcolumns 2.6.1 Instrumentation; 2.6.2 Features and Operational Factors; 2.6.3 Chromatographic Behavior in Pressurized Flow-Driven Electrochromatography; 2.6.4 Chromatographic Variation due to the Application of High Voltage; 2.6.5 Relation between Elution Time Ratio and pH; 2.6.6 Variation of Electrophoretic and Electroosmotic Flow Velocities with pH; 2.6.7 Dependence of Electrophoretic and Electroosmotic Velocities on the Composition of Eluents Containing

Methanol; 2.6.8 Ion-Exchange Chromatography in an Electric Field
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4.2.2 Preparation of Stationary Phases; 4.3 Redox Separation of Electroactive Metals on the Conductive Stationary Phase; 4.4 Direct Electrostatic Interactions for Potential-Dependent Separation of Electroinactive Species; 4.4.1 Pretreated Carbon for the Separation of Metal Ions; 4.4.2 Stationary Phase Coated with Crown Ether for the Separation of Alkali Metal Ions; 4.4.3 Electrosorption for the Separation of Neutral Organic Compounds; 4.5 Indirect Electrostatic Interactions for Potential-Dependent Separation of Electroinactive Species
4.5.1 Conducting Polymers for Separation of Anions

Sommario/riassunto

This authoritative review brings scientists up-to-date with the exciting recent developments in modern electric field applications and highlights their benefits compared with other methods. In Part 1 the book opens with a complete account of electrochromatography - a state-of-the-art technique that combines chromatography and electrophoresis. It reveals how you can achieve first-class separations in numerous analytical and biochemical applications. Part 2 focuses on the unique characteristics of electroprocesses in industry, and several examples, such as electroosmotic dewatering, n
