Chemometric Methods in Capillary Electrophoresis
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Hardcover  ISBN: 978-0-470-39329-1  November 2009  $145.50

DESCRIPTION

Use chemometric techniques to develop optimum separation conditions for capillary electrophoreses

For all its advantages, capillary electrophoresis (CE) also carries significant disadvantages for the researcher. Offering a unique blend of information from authors active in a variety of developments of chemometrics in CE, Chemometric Methods in Capillary Electrophoresis presents modern chemometric methods as an alternative to help alleviate the problems commonly encountered during routine analysis and method development.

Focusing on current chemometric methods utilized in CE endeavours by research-active experts in the field, the book begins with a thorough introduction to CE and chemometric-related concepts and the need for modern chemometric methods in CE.

Part 1 discusses differing types of screening designs and response surface methodology in an application based format.

Part 2 includes vital discussion on various exploratory data analysis, prediction, and classification techniques utilized in CE-related studies.

Part 3 provides practical information on modelling quantitative structure relationships.

Part 4 explores transformation techniques, in particular fundamental studies and applications of cross-correlation and Hadamard Transform Electrophoresis.
Showing how chemometric methods are applied in a wide array of applications including biological, medical, pharmaceutical, food, forensic, and environmental science, *Chemometric Methods in Capillary Electrophoresis* is not only highly significant to capillary electrophoresis-based endeavours, but instructive for investigators active in other areas of separation science who could benefit from its informative content.

### ABOUT THE AUTHOR

**Grady Hanrahan, PhD**, received his doctorate in environmental analytical chemistry from the University of Plymouth, England. Dr. Hanrahan is currently the John Stauffer Endowed Professor of Analytical Chemistry at California Lutheran University with research interests in the use of modern chemometric methods in the design and development of environmental and bioanalytical instrumentation. He is also exploring the use of neural and evolutionary computational techniques for solving complex chemical problems.

**Frank A. Gomez, PhD**, received his BS in chemistry from California State University, Los Angeles (CSULA), and his PhD in chemistry from UCLA, where he was a NIH Predoctoral Fellow. From 1991–1994, he was a Damon Runyon-Walter Winchell Cancer Research Fund Postdoctoral Fellow in the department of chemistry at Harvard University. He is a professor of chemistry at CSULA and is a visiting associate at Caltech in the Applied Physics department.

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