

Edited by Stavros Kromidas

Optimization in HPLC

Concepts and Strategies

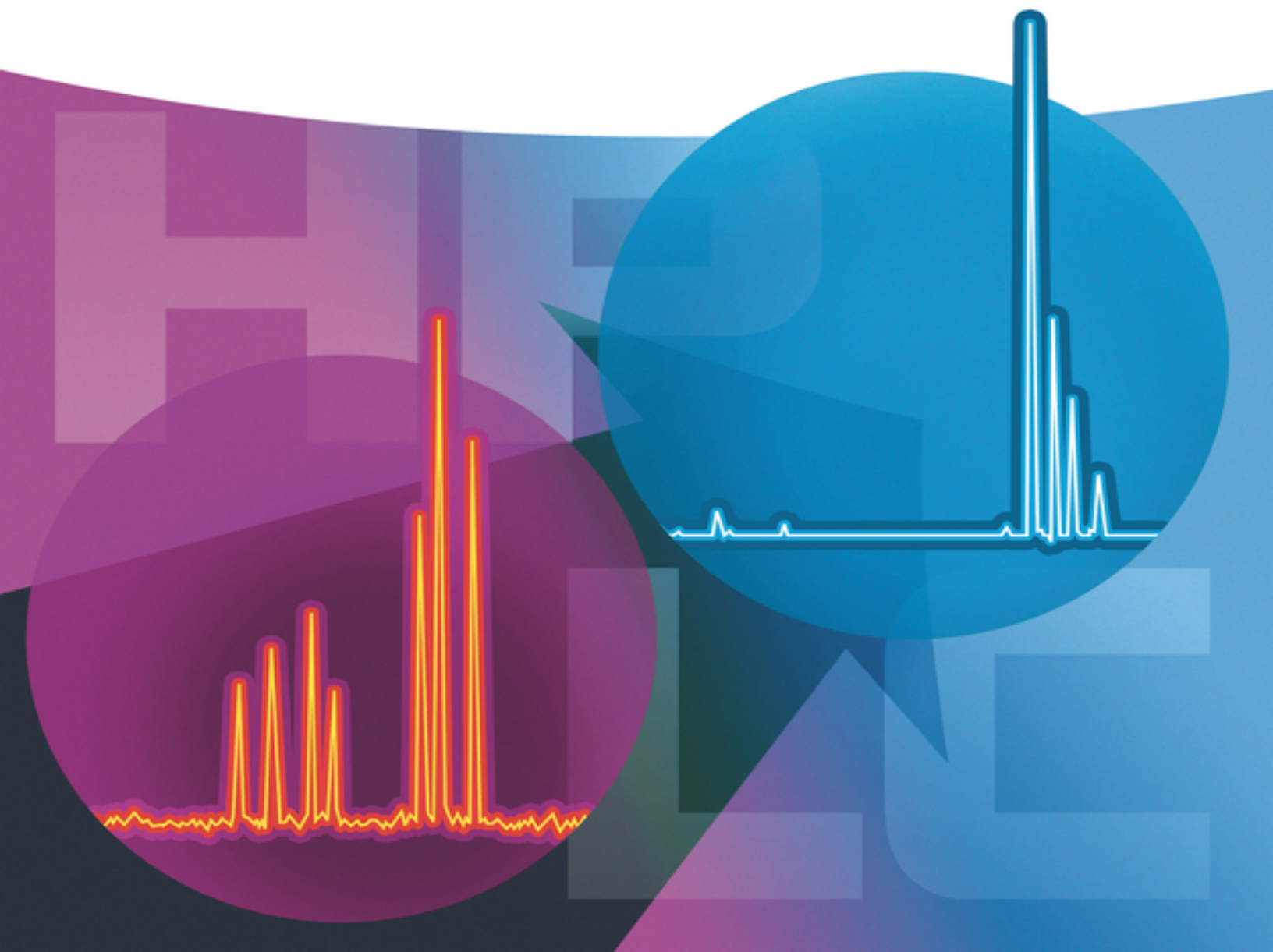


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Optimization in HPLC

Concepts and Strategies

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Library of Congress Card No.:

applied for

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library.

Bibliographic information published by**the Deutsche Nationalbibliothek**

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available on the Internet at <<http://dnb.d-nb.de>>.

© 2021 WILEY-VCH GmbH, Boschstr. 12, 69469 Weinheim, Germany

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Print ISBN: 978-3-527-34789-6**ePDF ISBN:** 978-3-527-82850-0**ePub ISBN:** 978-3-527-82851-7**Obook ISBN:** 978-3-527-83748-9**Cover Design** Formgeber, Mannheim, Germany

Preface

The “HPLC world” is a diverse one – a lucky chance and challenging at the same time. Successful strategies for a “good” result can therefore look completely different.

The aim of this book is to provide interested colleagues successful strategies and proven ways for method development and optimization for all important areas in the field of HPLC and UHPLC. With this goal in mind, experts were invited to present their knowledge and experience in a practical and compact manner.

It was important to take both into account: Different challenges of a chromatographic nature, but also different framework conditions in everyday life. Only this enables a differentiated perspective and consequently a target-oriented approach: Hence, the authors are researchers or employees of well-known manufacturers, are service providers in industrial companies or private laboratories, or they have developed tools themselves.

Readers may find inspiration in the book for developing their individual optimization strategy.

I would like to thank my fellow authors for their time and commitment as well as WILEY-VCH, who made the realization of this project possible.

Blieskastel, June 2021

Stavros Kromidas

About the Book

The book is designed as a guide and does not have to be read in a linear fashion. The individual chapters represent self-contained modules; it is possible to “jump” at any time. In this way, we have tried to do justice to the book's character as a reference and hope that readers may benefit from this.

The book consists of four parts:

[Part I](#): Optimization Strategies for Individual Problems

In the first part, optimization strategies for different analytes are discussed, from small molecules and chiral substances to biomolecules. Different modes of operation are also covered: LC-MS, 2D-HPLC, HILIC, SFC. Finally, optimization strategies based on structural info of the analytes are presented, and optimization possibilities in a regulated environment are discussed.

[Part II](#): Computer-Aided Strategies (In silico Applications)

In [Part II](#), concepts for computational method development for small molecules and biomolecules are presented, based on specific problems.

[Part III](#): Users' Report

Service providers from two industrial companies and two private laboratories present their concepts for method development in [Part III](#), based on the specifications and requests of internal and/or external customers.

[Part IV](#): Manufacturers' Report

Employees of 5 well-known HPLC manufacturers show how the design of HPLC instruments, different tools, and the underlying philosophy support HPLC users in establishing