

Springer

1st
edition1st ed. 2016, XVII, 184 p.
83 illus., 80 illus. in color.**Printed book**

Hardcover

Printed book

Hardcover

ISBN 978-3-319-28671-6

\$ 149,99

Available

Discount group

Professional Books (2)

Product category

Monograph

Series

Springer Theses

Other renditions

Softcover

ISBN 978-3-319-28673-0

Softcover

ISBN 978-3-319-80403-3

Chemistry : Analytical Chemistry

Witkowska Nery, Emilia

Analysis of Samples of Clinical and Alimentary Interest with Paper-based Devices

- Nominated as an outstanding Ph.D. thesis by the University of Campinas, Brazil
- Presents detailed, step-by-step procedures of fabrication of novel paper-based analytical devices
- Provides a strong theoretical background on paper-based technology, as well as a review of novel applications
- Describes stages of development of the first electrochemical paper-based electronic tongue system

This book presents two main sets of paper-based analytical systems. The first set is a platform for the analysis of glucose, cholesterol and uric acid in biological samples, and the second set is a cutting-edge electronic tongue system for the analysis of beverages (mineral water, beer, wine). This thesis also provides an extensive review of 33 methods of enzyme immobilization on paper which have been evaluated to enhance the storage stability of the proposed system for biomarker detection. From a practical perspective, this thesis covers a diverse set of topics related to paper-based sensing, including colorimetric and electrochemical detection methods, different sets of architecture (spot-tests, lateral and tangential flow assays), methods of fabrication (wax printing, cutting, impregnation with polymers), measurements in stationary and flow conditions as well computer modeling of proposed systems and sophisticated data analysis using chemometric techniques. This book is useful for PhD students working in this or a related field who require detailed information about methodology and background to this research.

Order online at springer.com/booksellers**Springer Nature Customer Service Center LLC**

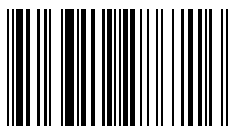
233 Spring Street

New York, NY 10013

USA

T: +1-800-SPRINGER NATURE

(777-4643) or 212-460-1500

customerservice@springernature.com

ISBN 978-3-319-28671-6 / BIC: PNF / SPRINGER NATURE: SCC11006

Prices and other details are subject to change without notice. All errors and omissions excepted. Americas: Tax will be added where applicable. Canadian residents please add PST, QST or GST. Please add \$5.00 for shipping one book and \$ 1.00 for each additional book. Outside the US and Canada add \$ 10.00 for first book, \$5.00 for each additional book. If an order cannot be fulfilled within 90 days, payment will be refunded upon request. Prices are payable in US currency or its equivalent.

Part of **SPRINGER NATURE**