

REVIEWS IN ANALYTICAL CHEMISTRY

EDITOR-IN-CHIEF

Israel Schechter, Haifa

EDITORIAL BOARD

Edwin De Pauw, Liege

Mattanjah S. de Vries, Santa Barbara, CA

Eli Grushka, Jerusalem

J. Javier Laserna, Malaga

Stuart Licht, Washington, DC

David M. Lubman, Ann Arbor, MI

Daniel Mandler, Jerusalem

Vincenzo Palleschi, Pisa

Michael Sigman, Orlando, FL

George M. Whitesides, Cambridge, MA

Chaim Yarnitzki, Haifa

DE GRUYTER

ABSTRACTED/INDEXED IN Analytical Abstracts, Chemical Abstracts Service (CAS), Chemistry Citation Index, Current Contents, Journal Citation Reports/Science Edition, SciSearch, Scopus, TEMA Technik und Management

The publisher, together with the authors and editors, has taken great pains to ensure that all information presented in this work (programs, applications, amounts, dosages, etc.) reflects the standard of knowledge at the time of publication. Despite careful manuscript preparation and proof correction, errors can nevertheless occur. Authors, editors and publisher disclaim all responsibility for any errors or omissions or liability for the results obtained from use of the information, or parts thereof, contained in this work.

The citation of registered names, trade names, trademarks, etc. in this work does not imply, even in the absence of a specific statement, that such names are exempt from laws and regulations protecting trademarks etc. and therefore free for general use.

ISSN 0793-0135 · e-ISSN 2191-0189

All information regarding notes for contributors, subscriptions, Open access, back volumes and orders is available online at www.degruyter.com/revac.

RESPONSIBLE EDITOR Prof. Israel Schechter, Schulich Faculty of Chemistry, Technion - Israel Institute of Technology, Haifa 32000, Israel, Tel.: +972 (4)829 – 2579, Email: revac@techunix.technion.ac.il

JOURNAL MANAGER Dr. Gunda Stöber, De Gruyter, Genthiner Straße 13, 10785 Berlin, Germany, Tel.: +49 (0)30 260 05 – 279, Fax: +49 (0)30 260 05 – 298, Email: rev.anal.chem.editorial@degruyter.com

RESPONSIBLE FOR ADVERTISEMENTS Panagiota Herbrand, De Gruyter, Mies-van-der-Rohe-Straße 1, 80807 München, Germany, Tel.: +49 (0)89 769 02 – 394, Fax: +49 (0)89 769 02 – 350, Email: panagiota.herbrand@degruyter.com

© 2013 Walter de Gruyter GmbH, Berlin/Boston

TYPESETTING Compuscript Ltd., Shannon, Ireland

PRINTING Franz X. Stücker Druck und Verlag e.K., Ettenheim
Printed in Germany



Offenlegung der Inhaber und Beteiligungsverhältnisse gem. § 7a Abs. 1 Ziff. 1, Abs. 2 Ziff. 3 des Berliner Pressegesetzes: Gisela Cram, Rentnerin, Berlin; Dr. Annette Lubasch, Ärztin, Berlin; Elsbeth Cram, Pensionärin, Rosengarten-Alvesen; Margret Cram, Studienrätin i. R., Berlin; Brigitta Duvenbeck, Oberstudienrätin i. R., Bad Homburg; Dr. Georg-Martin Cram, Unternehmens-Systemberater, Stadtbergen; Maike Cram, Berlin; Jens Cram, Mannheim; Renate Tran, Zürich; Gudula Gädeke M.A., Atemtherapeutin/Lehrerin, Tübingen; Martin Gädeke, Einzelunternehmer, Würzburg; John-Walter Siebert, Pfarrer, Oberstenfeld; Dr. Christa Schütz, Ärztin, Mannheim; Sonja Schütz, Berlin; Dorothee Seils, Apothekerin, Stuttgart; Gabriele Seils, Journalistin, Berlin; Ingrid Cram, Betriebsleiterin, Tuxpan / Michoacan (Mexiko); Sabina Cram, Mexico DF (Mexiko); Dr. Clara-Eugenie Seils, Oberstudienrätin i.R., Reppenstedt; Christoph Seils, Journalist, Berlin; Susanne Cram-Gomez, Mexico DF (Mexiko); Silke Cram, Wissenschaftlerin, Mexico DF (Mexiko); Björn Cram, Aachen; Ella Anita Cram, Rentnerin, Berlin; Dr. Sven Fund, geschäftsführender Gesellschafter, Berlin; Walter de Gruyter Stiftung, Berlin.; Berit Cram, Greifswald; Walter Cram-Heydrich, Mexico DF (Mexico), Juliane Schütz, Berlin; Antje Schütz, Berlin; Valentin Schütz, Berlin.

Contents

Chao Wang and Chenxu Yu

Detection of chemical pollutants in water using gold nanoparticles as sensors: a review — 1

Ana M. Botana, Paz Otero, Paula Rodríguez, Amparo Alfonso and Luis M. Botana

Current situation on analysis of marine toxins — 15

Jeremy L. Dahmen, Gary Stacey and Heather K. Hunt

Current and emerging analytical technologies for analyzing chitin-protein binding interactions — 35

Pedro H.B. Aoki, Leonardo N. Furini, Priscila Alessio, Alvaro E. Aliaga and Carlos J.L. Constantino

Surface-enhanced Raman scattering (SERS) applied to cancer diagnosis and detection of pesticides, explosives, and drugs — 55

Po-Jung Jimmy Huang, Minchuan Liu and Juewen Liu

Functional nucleic acids for detecting bacteria — 77

