Exploiting Highly Ordered Subnanoliter Volume Microcapillaries as Microtools for the Analysis of Antibody Producing Cells
January 20, 2015 Volume 87, Issue 2 Pages 829-1420

Content

1. Development of High-Performance Chemical Isotope Labeling LC–MS for Profiling the Human Fecal Metabolome

Wei Xu, Deying Chen, Nan Wang, Ting Zhang, Ruokun Zhou, Tao Huan, Yingfeng Lu, Xiaoling Su, Qing Xie, Liang Li, and Lanjuan Li
Analytical Chemistry 2015 87 (2), 829-836

2. Twenty Natural Amino Acids Identification by a Photochromic Sensor Chip

Meng Qin, Fengyu Li, Yu Huang, Wei Ran, Dong Han, and Yanlin Song
Analytical Chemistry 2015 87 (2), 837-842

3. High Resolution Solid State 2D NMR Analysis of Biomass and Biochar

Yann Le Brech, Luc Delmotte, Jesus Raya, Nicolas Brosse, Roger Gadiou, and Anthony Dufour
Analytical Chemistry 2015 87 (2), 843-847

4. Hexamethyldisilazane as an Acylation Generator for Perfluorocarboxylic Acids in Quantitative Derivatization of Primary Phenylalkyl Amines Confirmed by GC/MS and Computations

Borbála Molnár, Antal Csámpai, and Ibolya Molnár-Perl
Analytical Chemistry 2015 87 (2), 848-852

5. Flexible Microfabricated Film Sensors for the in Situ Quantum Dot-Based Voltammetric Detection of DNA Hybridization in Microwells

Christos Kokkinos, Anastasios Economou, Thanasis Speliots, Panagiota Petrou, and Sotirios Kakabakos
Analytical Chemistry 2015 87 (2), 853-857

6. MALDI-MS-Based Quantitative Analysis for Ketone Containing Homoserine Lactones in Pseudomonas aeruginosa

Yoon-Woo Kim, Changmin Sung, Seulee Lee, Kyoung-Jin Kim, Yung-Hun Yang, Byung-Gee Kim, Yoo Kyung Lee, Hee Wook Ryu, and Yun-Gon Kim
Analytical Chemistry 2015 87 (2), 858-863

7. Characterization of DNA-Conjugated Compounds Using a Regenerable Chip

Weilin Lin, Francesco V. Reddavide, Veselina Uzunova, Fatih Nadi Gür, and Yixin Zhang
Analytical Chemistry 2015 87 (2), 864-868
8. Data Size Reduction Strategy for the Classification of Breath and Air Samples Using Multicapillary Column-Ion Mobility Spectrometry

Ewa Szymańska, Emma Brodrick, Mark Williams, Antony N. Davies, Henk-Jan van Manen, and Lutgarde M. C. Buydens
*Analytical Chemistry* 2015 87 (2), 869-875

9. Exciton Energy Transfer-Based Quantum Dot Fluorescence Sensing Array: “Chemical Noses” for Discrimination of Different Nucleobases

Jianbo Liu, Gui Li, Xiaohai Yang, Kemin Wang, Li Li, Wei Liu, Xing Shi, and Yali Guo
*Analytical Chemistry* 2015 87 (2), 876-883

10. Autonomous Metabolomics for Rapid Metabolite Identification in Global Profiling

*Analytical Chemistry* 2015 87 (2), 884-891

11. Genetically Encoded Molecular Biosensors To Image Histone Methylation in Living Animals

Thillai V. Sekar, Kira Foygel, Juri G. Gelovani, and Ramasamy Paulmurugan
*Analytical Chemistry* 2015 87 (2), 892-899

12. Barcoded Microchips for Biomolecular Assays

Yi Zhang, Jiashu Sun, Yu Zou, Wenwen Chen, Wei Zhang, Jianzhong Jeff Xi, and Xingyu Jiang
*Analytical Chemistry* 2015 87 (2), 900-906


Zhen Gu, Yi-Lun Ying, Chan Cao, Pingang He, and Yi-Tao Long
*Analytical Chemistry* 2015 87 (2), 907-913


Deyun Wang, Colin Wynne, Flora Gu, Chris Becker, Jia Zhao, Hans-Martin Mueller, Huijuan Li, Mohammed Shameem, and Yan-Hui Liu
*Analytical Chemistry* 2015 87 (2), 914-921

15. Centrifugal Microfluidic Platform for Ultrasensitive Detection of Botulinum Toxin

*Analytical Chemistry* 2015 87 (2), 922-928

16. Target-Triggering Multiple-Cycle Amplification Strategy for Ultrasensitive Detection of Adenosine Based on Surface Plasma Resonance Techniques
Gui-Hong Yao, Ru-Ping Liang, Xiang-Dan Yu, Chun-Fang Huang, Li Zhang, and Jian-Ding Qiu
*Analytical Chemistry* **2015** 87 (2), 929-936

**17. Toward Culture-Free Raman Spectroscopic Identification of Pathogens in Ascitic Fluid**

Sandra Klooß, Petra Rösch, Wolfgang Pfister, Michael Kiehntopf, and Jürgen Popp
*Analytical Chemistry* **2015** 87 (2), 937-943

**18. Immittance Electroanalysis in Diagnostics**

Amol V. Patil, Flávio C. Bedatty Fernandes, Paulo R. Bueno, and Jason J. Davis
*Analytical Chemistry* **2015** 87 (2), 944-950

**19. Coupling of a Headspace Autosampler with a Programmed Temperature Vaporizer for Stable Carbon and Hydrogen Isotope Analysis of Volatile Organic Compounds at Microgram per Liter Concentrations**

Sara Herrero-Martín, Ivonne Nijenhuis, Hans H. Richnow, and Matthias Gehre
*Analytical Chemistry* **2015** 87 (2), 951-959

**20. Characterizing Variability of In Vivo Raman Spectroscopic Properties of Different Anatomical Sites of Normal Colorectal Tissue towards Cancer Diagnosis at Colonoscopy**

Mads Sylvest Bergholt, Wei Zheng, Kan Lin, Jianfeng Wang, Hongzhi Xu, Jian-lin Ren, Khek Yu Ho, Ming Teh, Khay Guan Yeoh, and Zhiwei Huang
*Analytical Chemistry* **2015** 87 (2), 960-966

**21. Identification of RIP-II Toxins by Affinity Enrichment, Enzymatic Digestion and LC-MS**

Sten-Åke Fredriksson, Elisabet Artursson, Tomas Bergström, Anders Östlin, Calle Nilsson, and Crister Åstot
*Analytical Chemistry* **2015** 87 (2), 967-974

**22. Derivatization Method of Free Cyanide Including Cyanogen Chloride for the Sensitive Analysis of Cyanide in Chlorinated Drinking Water by Liquid Chromatography-Tandem Mass Spectrometry**

Hye-In Kang and Ho-Sang Shin
*Analytical Chemistry* **2015** 87 (2), 975-981

**23. Fast and Highly Sensitive Fiber-Enhanced Raman Spectroscopic Monitoring of Molecular H2 and CH4 for Point-of-Care Diagnosis of Malabsorption Disorders in Exhaled Human Breath**

Stefan Hanf, Timea Bögözi, Robert Keiner, Torsten Frosch, and Jürgen Popp
*Analytical Chemistry* **2015** 87 (2), 982-988

25. Exploiting Highly Ordered Subnanoliter Volume Microcapillaries as Microtools for the Analysis of Antibody Producing Cells

Valerie Fitzgerald, Brian Manning, Barry O’Donnell, Brian O’Reilly, Dermot O’Sullivan, Richard O’Kennedy, and Paul Leonard
Analytical Chemistry 2015 87 (2), 997-1003


Christian Hilty and Mukundan Ragavan
Analytical Chemistry 2015 87 (2), 1004-1008

27. Two Orders of Magnitude Improvement in Detection Limit of Lateral Flow Assays Using Isotachophoresis

Babak Y. Moghadam, Kelly T. Connelly, and Jonathan D. Posner
Analytical Chemistry 2015 87 (2), 1009-1017


Ana Ucédés Moreno, Sonia Herrera López, Barbara Reichert, Ana Lozano Fernández, María Dolores Hernando Guil, and Amadeo Rodríguez Fernández-Alba
Analytical Chemistry 2015 87 (2), 1018-1025

29. Inkjet Printed Nanohydrogel Coated Carbon Nanotubes Electrodes For Matrix Independent Sensing

Andreas Lesch, Fernando Cortés-Salazar, Véronique Amstutz, Philippe Tacchini, and Hubert H. Girault
Analytical Chemistry 2015 87 (2), 1026-1033

30. Investigation of the Persistence of Nerve Agent Degradation Analytes on Surfaces through Wipe Sampling and Detection with Ultrahigh Performance Liquid Chromatography-Tandem Mass Spectrometry

Stuart A. Willison
Analytical Chemistry 2015 87 (2), 1034-1041


David Ropartz, Alexandre Giuliani, Cécile Hervé, Audrey Geairon, Murielle Jam, Mirjam Czjzek, and Hélène Rogniaux
Analytical Chemistry 2015 87 (2), 1042-1049

32. Quantitative Analysis in Capillary Electrophoresis: Transformation of Raw Electropherograms into Continuous Distributions
33. Extraction of Absorption and Scattering Contribution of Metallic Nanoparticles Toward Rational Synthesis and Application

Bi-Ju Liu, Kai-Qiang Lin, Shu Hu, Xiang Wang, Zhi-Chao Lei, Hai-Xin Lin, and Bin Ren
*Analytical Chemistry* **2015** 87 (2), 1056-1065

34. Theory and Experiments for Voltammetric and SECM Investigations and Application to ORR Electrocatalsis at Nanoelectrode Ensembles of Ultramicroelectrode Dimensions

José L. Fernández, Manjula Wijesinghe, and Cynthia G. Zoski
*Analytical Chemistry* **2015** 87 (2), 1066-1074

35. Aptamer-Based Label-Free Impedimetric Biosensor for Detection of Progesterone

Gastón Contreras Jiménez, Shima Eissa, Andy Ng, Hani Alhadrami, Mohammed Zourob, and Mohamed Siaj
*Analytical Chemistry* **2015** 87 (2), 1075-1082

36. Approach for Selective Separation of Thiophenic and Sulfidic Sulfur Compounds from Petroleum by Methylation/Demethylation

Meng Wang, Suoqi Zhao, Keng H Chung, Chunming Xu, and Quan Shi
*Analytical Chemistry* **2015** 87 (2), 1083-1088

37. Determination of Sub-Nanomolar Levels of Low Molecular Mass Thiols in Natural Waters by Liquid Chromatography Tandem Mass Spectrometry after Derivatization with p-(Hydroxymercuri) Benzoate and Online Preconcentration

Van Liem-Nguyen, Sylvain Bouchet, and Erik Björn
*Analytical Chemistry* **2015** 87 (2), 1089-1096

38. Natural Flanking Sequences for Peptides Included in a Quantification Concatamer Internal Standard

Crystal S. F. Cheung, Kyle W. Anderson, Meiyao Wang, and Illarion V. Turko
*Analytical Chemistry* **2015** 87 (2), 1097-1102

39. Sensitive Targeted Quantification of ERK Phosphorylation Dynamics and Stoichiometry in Human Cells without Affinity Enrichment

*Analytical Chemistry* **2015** 87 (2), 1103-1110

40. Nonlinear Absorbance Amplification Using a Diffuse Reflectance Cell: Total Organic Carbon Monitoring at 214 nm

Yin-Huan Li, C. Phillip Shelor, and Purnendu K. Dasgupta
*Analytical Chemistry* **2015** 87 (2), 1111-1117
41. **Amphipols Outperform Dodecylmaltoside Micelles in Stabilizing Membrane Protein Structure in the Gas Phase**

Antonio N. Calabrese, Thomas G. Watkinson, Peter J. F. Henderson, Sheena E. Radford, and Alison E. Ashcroft  
*Analytical Chemistry 2015 87 (2), 1118-1126*

42. **Metabolic Profiling of Bile Acids in Human and Mouse Blood by LC–MS/MS in Combination with Phospholipid-Depletion Solid-Phase Extraction**

Jun Han, Yang Liu, Renxue Wang, Juncong Yang, Victor Ling, and Christoph H. Borchers  
*Analytical Chemistry 2015 87 (2), 1127-1136*

43. **Ion Mobility-Derived Collision Cross Section As an Additional Measure for Lipid Fingerprinting and Identification**

*Analytical Chemistry 2015 87 (2), 1137-1144*

44. **Graphene Quantum Dots Combined with Endonuclease Cleavage and Bidentate Chelation for Highly Sensitive Electrochemiluminescent DNA Biosensing**

Jing Lou, Shanshan Liu, Wenwen Tu, and Zhihui Dai  
*Analytical Chemistry 2015 87 (2), 1145-1151*

45. **“Wave” Signal-Smoothing and Mercury-Removing Device for Laser Ablation Quadrupole and Multiple Collector ICPMS Analysis: Application to Lead Isotope Analysis**

Zhaocu Hu, Wen Zhang, Yongsheng Liu, Shan Gao, Ming Li, Keqing Zong, Haihong Chen, and Shenghong Hu  
*Analytical Chemistry 2015 87 (2), 1152-1157*

46. **Solid-Phase Extraction and Nanoflow Liquid Chromatography-Nanoelectrospray Ionization Mass Spectrometry for Improved Global Urine Metabolomics**

Andrew J. Chetwynd, Alaa Abdul-Sada, and Elizabeth M. Hill  
*Analytical Chemistry 2015 87 (2), 1158-1165*

47. **Ion Mobility–Mass Spectrometry of Lasso Peptides: Signature of a Rotaxane Topology**

Kevin Jeanne Dit Fouque, Carlos Afonso, Séverine Zirah, Julian D. Hegemann, Marcel Zimmermann, Mohamed A. Marahiel, Sylvie Rebuffat, and Hélène Lavannant  
*Analytical Chemistry 2015 87 (2), 1166-1172*

48. **Ionophore-Containing Siloprene Membranes: Direct Comparison between Conventional Ion-Selective Electrodes and Silicon Nanowire-Based Field-Effect Transistors**
49. Surface-Bubble-Modulated Liquid Chromatography: A New Approach for Manipulation of Chromatographic Retention and Investigation of Solute Distribution at Water/Hydrophobic Interfaces

Keisuke Nakamura, Hiroki Nakamura, Shingo Saito, and Masami Shibukawa
*Analytical Chemistry* 2015 87 (2), 1180-1187

50. Toward a Selective, Sensitive, Fast-Responsive, and Biocompatible Two-Photon Probe for Hydrogen Sulfide in Live Cells

Subhankar Singha, Dokyoung Kim, Hyunsoo Moon, Taejun Wang, Ki Hean Kim, Youn Ho Shin, Junyang Jung, Eunseok Seo, Sang-Joon Lee, and Kyo Han Ahn
*Analytical Chemistry* 2015 87 (2), 1188-1195

51. Phosphate Ion Targeted Colorimetric and Fluorescent Probe and Its Use to Monitor Endogeneous Phosphate Ion in a Hemichannel-Closed Cell

Lin E. Guo, Jun Feng Zhang, Xin Yi Liu, Li Mei Zhang, Hong Li Zhang, Jian Hua Chen, Xiao Guang Xie, Ying Zhou, Kaijun Luo, and Juyoung Yoon
*Analytical Chemistry* 2015 87 (2), 1196-1201

52. Fully Automated Sample Preparation Microsystem for Genetic Testing of Hereditary Hearing Loss Using Two-Color Multiplex Allele-Specific PCR

Bin Zhuang, Wupeng Gan, Shuaiqin Wang, Junping Han, Guangxin Xiang, Cai-Xia Li, Jing Sun, and Peng Liu
*Analytical Chemistry* 2015 87 (2), 1202-1209

53. Electrospray Droplet Exposure to Organic Vapors: Metal Ion Removal from Proteins and Protein Complexes

J. Corinne DeMuth and Scott A. McLuckey
*Analytical Chemistry* 2015 87 (2), 1210-1218

54. One-Dimensional Approach to Study Kinetics of Reversible Binding of Protein on Capillary Walls

Leonid T. Cherney, Alexander P. Petrov, and Sergey N. Krylov
*Analytical Chemistry* 2015 87 (2), 1219-1225

55. Simple Quantitative Determination of Potent Thiols at Ultratrace Levels in Wine by Derivatization and High-Performance Liquid Chromatography–Tandem Mass Spectrometry (HPLC-MS/MS) Analysis

Dimitra L. Capone, Renata Ristic, Kevin H. Pardon, and David W. Jeffery
*Analytical Chemistry* 2015 87 (2), 1226-1231

56. Molecular Speciated Isotope Dilution Mass Spectrometric Methods for Accurate, Reproducible and Direct Quantification of Reduced, Oxidized and Total Glutathione in Biological Samples
57. Evaluating Multiplexed Quantitative Phosphopeptide Analysis on a Hybrid Quadrupole Mass Filter/Linear Ion Trap/Orbitrap Mass Spectrometer

Brian K. Erickson, Mark P. Jedrychowski, Graeme C. McAlister, Robert A. Everley, Ryan Kunz, and Steven P. Gygi
*Analytical Chemistry* 2015 87 (2), 1241-1249

58. Surface-Enhancement Raman Scattering Sensing Strategy for Discriminating Trace Mercuric Ion (II) from Real Water Samples in Sensitive, Specific, Recyclable, and Reproducible Manners

Bin Sun, Xiangxu Jiang, Houyu Wang, Bin Song, Ying Zhu, Hui Wang, Yuanyuan Su, and Yao He
*Analytical Chemistry* 2015 87 (2), 1250-1256

59. Rapid Detection of Protein Phosphatase Activity Using Zn(II)-Coordinated Gold Nanosensors Based on His-Tagged Phosphopeptides

Jin Oh Lee, Eun-Ji Kim, Butaek Lim, Tae-Wuk Kim, and Young-Pil Kim
*Analytical Chemistry* 2015 87 (2), 1257-1265

60. Profiling of Oxidized Phospholipids in Lipoproteins from Patients with Coronary Artery Disease by Hollow Fiber Flow Field-Flow Fractionation and Nanoflow Liquid Chromatography–Tandem Mass Spectrometry

Ju Yong Lee, Seul Kee Byeon, and Myeong Hee Moon
*Analytical Chemistry* 2015 87 (2), 1266-1273

61. Practical Assay for Nitrite and Nitrosothiol as an Alternative to the Griess Assay or the 2,3-Diaminonaphthalene Assay

Yanming Shen, Quanjuan Zhang, Xuhong Qian, and Youjun Yang
*Analytical Chemistry* 2015 87 (2), 1274-1280

62. Investigating Protein Folding and Unfolding in Electrospray Nanodrops Upon Rapid Mixing Using Theta-Glass Emitters

Daniel N. Mortensen and Evan R. Williams
*Analytical Chemistry* 2015 87 (2), 1281-1287

63. A Label-Free Fluorescence Sensing Approach for Selective and Sensitive Detection of 2,4,6-Trinitrophenol (TNP) in Aqueous Solution Using Graphitic Carbon Nitride Nanosheets

Mingcong Rong, Liping Lin, Xinhong Song, Tingting Zhao, Yunxin Zhong, Jiawei Yan, Yiru Wang, and Xi Chen
*Analytical Chemistry* 2015 87 (2), 1288-1296

64. Evaluation of Nanoparticle–Ligand Distributions To Determine Nanoparticle Concentration
65. Counting Missing Values in a Metabolite-Intensity Data Set for Measuring the Analytical Performance of a Metabolomics Platform

Tao Huan and Liang Li
*Analytical Chemistry* 2015 87 (2), 1306-1313

66. Real-Time Air Monitoring of Mustard Gas and Lewisite 1 by Detecting Their In-Line Reaction Products by Atmospheric Pressure Chemical Ionization Ion Trap Tandem Mass Spectrometry with Counterflow Ion Introduction

Akihiko Okumura, Yasuaki Takada, Susumu Watanabe, Hiroaki Hashimoto, Naoya Ezawa, Yasuo Seto, Hiroshi Sekiguchi, Hisashi Maruko, Yasuo Takayama, Ryoji Sekioka, Shintaro Yamaguchi, Shintaro Kishi, Takafumi Satoh, Tomohide Kondo, Hisayuki Nagashima, and Tomoki Nagoya
*Analytical Chemistry* 2015 87 (2), 1314-1322

67. Plasma Ionization Source for Atmospheric Pressure Mass Spectrometry Imaging Using Near-Field Optical Laser Ablation

Maryia M. Nudnova, Jérôme Sigg, Pascal Wallimann, and Renato Zenobi
*Analytical Chemistry* 2015 87 (2), 1323-1329

68. Determination of 14 Nitrosamines at Nanogram per Liter Levels in Drinking Water

Yichao Qian, Minghuo Wu, Wei Wang, Beibei Chen, Hao Zheng, Stuart W. Krasner, Steve E. Hrudey, and Xing-Fang Li
*Analytical Chemistry* 2015 87 (2), 1330-1336

69. Analysis of Complex Reacting Mixtures by Time-Resolved 2D NMR

Rupashree Dass, Wiktor Koźmiński, and Krzysztof Kazimierczuk
*Analytical Chemistry* 2015 87 (2), 1337-1343

70. Method for Automatically Identifying Spectra of Different Wood Cell Wall Layers in Raman Imaging Data Set

Xun Zhang, Zhe Ji, Xia Zhou, Jian-Feng Ma, Ya-Hong Hu, and Feng Xu
*Analytical Chemistry* 2015 87 (2), 1344-1350

71. Aggregation-Induced Emission: A Simple Strategy to Improve Chemiluminescence Resonance Energy Transfer

Lijuan Zhang, Nan He, and Chao Lu
*Analytical Chemistry* 2015 87 (2), 1351-1357

72. Hairpin DNA as a Biobarcode Modified on Gold Nanoparticles for Electrochemical DNA Detection
Hui-Fang Cui, Tai-Bin Xu, Yu-Long Sun, An-Wei Zhou, Yu-Han Cui, Wei Liu, and John H. T. Luong
*Analytical Chemistry* 2015 87 (2), 1358-1365

73. **Metal Carbonyl Vapor Generation Coupled with Dielectric Barrier Discharge To Avoid Plasma Quench for Optical Emission Spectrometry**

Yi Cai, Shao-Hua Li, Shuai Dou, Yong-Liang Yu, and Jian-Hua Wang
*Analytical Chemistry* 2015 87 (2), 1366-1372

74. **Dual Recognition Unit Strategy Improves the Specificity of the Adenosine Triphosphate (ATP) Aptamer Biosensor for Cerebral ATP Assay**

Ping Yu, Xiulan He, Li Zhang, and Lanqun Mao
*Analytical Chemistry* 2015 87 (2), 1373-1380

75. **LED-Based UV Absorption Detector with Low Detection Limits for Capillary Liquid Chromatography**

Sonika Sharma, H. Dennis Tolley, Paul B. Farnsworth, and Milton L. Lee
*Analytical Chemistry* 2015 87 (2), 1381-1386

76. **Development of a Nanobody–Alkaline Phosphatase Fusion Protein and Its Application in a Highly Sensitive Direct Competitive Fluorescence Enzyme Immunoassay for Detection of Ochratoxin A in Cereal**

Xing Liu, Yang Xu, De-bin Wan, Yong-hua Xiong, Zhen-yun He, Xian-xian Wang, Shirley J. Gee, Dojin Ryu, and Bruce D. Hammock
*Analytical Chemistry* 2015 87 (2), 1387-1394

77. **Protein Electro catalysis for Direct Sensing of Circulating MicroRNAs**

Mahmoud Labib, Nasrin Khan, and Maxim V. Berezovski
*Analytical Chemistry* 2015 87 (2), 1395-1403

78. **Highly-Sensitive Amplification-Free Analysis of Multiple miRNAs by Capillary Electrophoresis**

David W. Wegman, Farhad Ghasemi, Anna Khorshidi, Burton B. Yang, Stanley K. Liu, George M. Yousef, and Sergey N. Krylov
*Analytical Chemistry* 2015 87 (2), 1404-1410

79. **Emulsion PCR Significantly Improves Nonequilibrium Capillary Electrophoresis of Equilibrium Mixtures-Based Aptamer Selection: Allowing for Efficient and Rapid Selection of Aptamer to Unmodified ABH2 Protein**

Roman Yufa, Svetlana M. Krylova, Christine Bruce, Eleanor A. Bagg, Christopher J. Schofield, and Sergey N. Krylov
*Analytical Chemistry* 2015 87 (2), 1411-1419