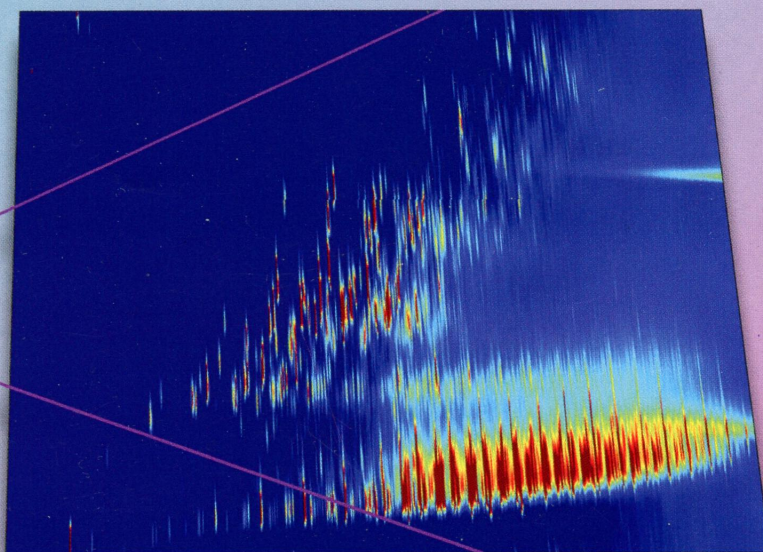
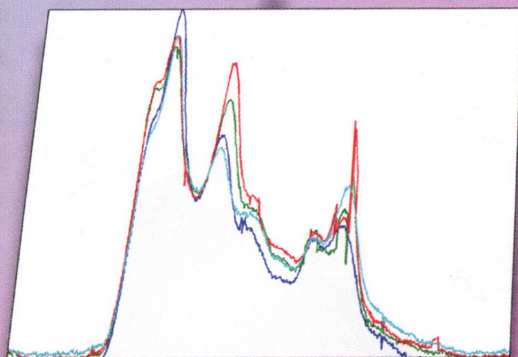
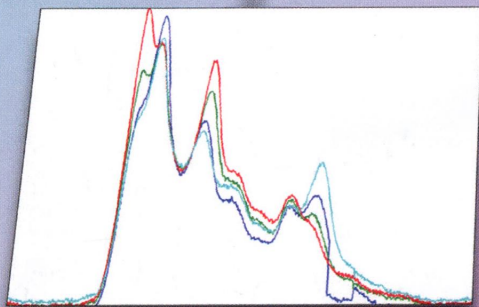
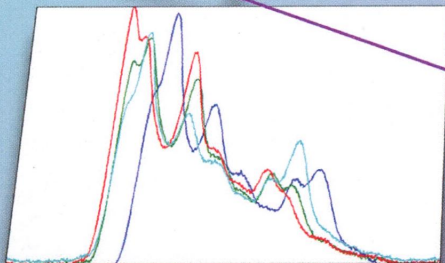
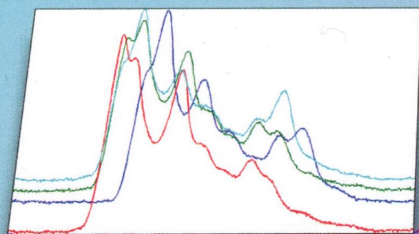


analytical chemistry

August 5, 2014 Volume 86 Number 15



Pixel-based analysis of
comprehensive two-dimensional
gas chromatograms (color plots)
of petroleum – A Tutorial



ON THE COVER: Comprehensive two-dimensional gas chromatograms can be analyzed with multivariate data analysis after correcting for retention time shifts and other artifacts. This allows for extraction of process information. Graphic created by Dr. Søren Furbo.

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So You Want to Be a Principal Investigator?

Jonathan V. Sweedler

[dx.doi.org/10.1021/ac502543w](https://doi.org/10.1021/ac502543w)

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**Pixel-Based Analysis of Comprehensive Two-Dimensional Gas Chromatograms (Color Plots) of Petroleum: A Tutorial**

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[dx.doi.org/10.1021/ac500185w](https://doi.org/10.1021/ac500185w)

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[dx.doi.org/10.1021/ac5017387](https://doi.org/10.1021/ac5017387)**Thin Layer Chromatography Coupled with Surface-Enhanced Raman Scattering as a Facile Method for On-Site Quantitative Monitoring of Chemical Reactions**

Zong-Mian Zhang, Jing-Fu Liu,* Rui Liu, Jie-Fang Sun, and Guo-Hua Wei

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[dx.doi.org/10.1021/ac501789e](https://doi.org/10.1021/ac501789e)**Approach to Characterization of the Higher Order Structure of Disulfide-Containing Proteins Using Hydrogen/Deuterium Exchange and Top-Down Mass Spectrometry**

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[dx.doi.org/10.1021/ac502137z](https://doi.org/10.1021/ac502137z)**Integrating Biochemiluminescence Detection on Smartphones: Mobile Chemistry Platform for Point-of-Need Analysis**

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[dx.doi.org/10.1021/ac501358z](https://doi.org/10.1021/ac501358z)**Automated LC-HRMS/MS Approach for the Annotation of Fragment Ions Derived from Stable Isotope Labeling-Assisted Untargeted Metabolomics**

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Picking Vanished Proteins from the Void: How to Collect and Ship/Share Extremely Dilute Proteins in a Reproducible and Highly Efficient Manner

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7436  [dx.doi.org/10.1021/ac501085d](https://doi.org/10.1021/ac501085d)

One-Pot Green Synthesis of High Quantum Yield Oxygen-Doped, Nitrogen-Rich, Photoluminescent Polymer Carbon Nanoribbons as an Effective Fluorescent Sensing Platform for Sensitive and Selective Detection of Silver(I) and Mercury(II) Ions

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7446  [dx.doi.org/10.1021/ac501094m](https://doi.org/10.1021/ac501094m)

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7455  [dx.doi.org/10.1021/ac502185v](https://doi.org/10.1021/ac502185v)

Detecting Kinase Activities from Single Cell Lysate Using Concentration-Enhanced Mobility Shift Assay

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- 7508  [dx.doi.org/10.1021/ac501263d](https://doi.org/10.1021/ac501263d)
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7688  [dx.doi.org/10.1021/ac501722r](https://doi.org/10.1021/ac501722r)

Characterization of Size, Anisotropy, and Density Heterogeneity of Nanoparticles by Sedimentation Velocity

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Using Procedural Blanks to Generate Analyte-Specific Limits of Detection for Persistent Organic Pollutants Based on GC-MS Analysis

Jared M. Ragland,* Daniel Liebert, and Edward Wirth

7705  [dx.doi.org/10.1021/ac501636u](https://doi.org/10.1021/ac501636u)

Electrochemical Arsine Generators for Arsenic Determination

Hong Shen and Purnendu K. Dasgupta*

7712 [dx.doi.org/10.1021/ac5016408](https://doi.org/10.1021/ac5016408)

Paper Spray and Extraction Spray Mass Spectrometry for the Direct and Simultaneous Quantification of Eight Drugs of Abuse in Whole Blood

Ryan D. Espy, Sebastiaan Frans Teunissen, Nicholas E. Manicke, Yue Ren, Zheng Ouyang, Arian van Asten,* and R. Graham Cooks*

7719  [dx.doi.org/10.1021/ac5016563](https://doi.org/10.1021/ac5016563)

Poly(*m*-phenylenediamine)-Based Fluorescent Nanoprobe for Ultrasensitive Detection of Matrix Metalloproteinase 2

Zhe Wang, Xiaohua Li,* Duan Feng, Lihong Li, Wen Shi, and Huimin Ma*

7726  [dx.doi.org/10.1021/ac501660a](https://doi.org/10.1021/ac501660a)

Unique Ion Filter: A Data Reduction Tool for GC/MS Data Preprocessing Prior to Chemometric Analysis

L. A. Adutwum and J. J. Harynuk*

7734  [dx.doi.org/10.1021/ac5016672](https://doi.org/10.1021/ac5016672)

Hydrogen Sulfide Detection Based on Reflection: From a Poison Test Approach of Ancient China to Single-Cell Accurate Localization

Hao Kong, Zhuoran Ma, Song Wang, Xiaoyun Gong, Sichun Zhang, and Xinrong Zhang*

7740  [dx.doi.org/10.1021/ac501679m](https://doi.org/10.1021/ac501679m)

Measurement of Metals Using DGT: Impact of Ionic Strength and Kinetics of Dissociation of Complexes in the Resin Domain

Jaume Puy,* Josep Galceran, Sara Cruz-González, Calin A. David, Ramiro Uribe, Chun Lin, Hao Zhang, and William Davison

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