


Dr. Boris Mizaikoff

CURRICULUM VITAE

Section 1: Curriculum Vitae

Section 2: List of Publications


Boris Mizaikoff
September 2010

SECTION 1

Curriculum Vitae

BORIS MIZAIKOFF

Professor and Chair

DATA

Professional:

Institute of Analytical and Bioanalytical Chemistry
University of Ulm
Albert-Einstein-Allee 11
89081 Ulm
Germany

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Email: boris.mizaikoff@uni-ulm.de
URL: uni-ulm.de/iabc
Admin. Assist.: M. Bowman, +49-731-50-22751

Private:

Unter der Metzsig 16
89081 Ulm

Phone: +49-731-3805216
Email: boris.mizaikoff@me.com

EDUCATION

2004 Tenure, Georgia Institute of Technology (U.S.A.)
2000 Habilitation, Analytical Chemistry, Vienna University of Technology, Institute of Analytical Chemistry (Austria)
1996 Ph.D., Analytical Chemistry, Vienna University of Technology, Institute of Analytical Chemistry (Austria)
1993 Diploma, Analytical Chemistry, Vienna University of Technology, Institute of Analytical Chemistry (Austria)

Advisors:

Prof Robert Kellner († 1997), Vienna University of Technology, Institute of Analytical Chemistry (Diploma, Ph.D.)
Prof. Matthew Hall, University of Texas (Austin), Dept. of Mechanical Engineering (Postdoctoral)

PROFESSIONAL EXPERIENCE

Fall 2007-present Chaired Professor (W3) and **Director of the Institute of Analytical and Bioanalytical Chemistry** at the University of Ulm, Germany
2005-present Member of the Center for Cell and Molecular Signaling at Emory University, School of Physiology
2004-2007 Director of the Focused Ion Beam (FIB²) Center at Georgia Tech
2004-present Georgia Institute of Technology, School of Chemistry and Biochemistry, **Associate Professor (tenured)**
2000-2004 Georgia Institute of Technology, School of Chemistry and Biochemistry, **Assistant Professor** (Director Applied Sensors Laboratory)
2000 Habilitation at Vienna University of Technology, Institute of Analytical Chemistry, **Professor**
1997-2003 Coordination of 4 interdisciplinary, multinational **European Union Research Projects**
1997-1998 University of Texas, Dept. of Mechanical Engineering (Austin, TX), **Postdoctoral Fellow**
1996-2000 Vienna University of Technology, Institute of Analytical Chemistry, **Assistant Professor** (Director Chemical Sensors Laboratory)
1992-1996 Vienna University of Technology, Institute of Analytical Chemistry, **Research Assistant**

Ph.D. thesis completed in last 5 years: **19**; Diploma thesis completed in last 5 years: **8**
Master thesis completed in last 5 years: **2**; Currently in progress: **9** Ph.D., **3** Diploma/Master

Member of: GÖCH, ASAC, SPIE, AAAS, ACS, IEEE, LEOS

RESEARCH INTERESTS

Optical chemical sensors, biosensors and biomimetic sensors in the mid-infrared (3-20 μm) spectral range; quantum cascade laser based sensors; multifunctional scanning nanoprobe and nanobiosensors; system miniaturization, integration and micro-/nanofabrication; focused ion beam based nanofabrication; (bio)chemical molecular recognition layers for separation and sensing applications; molecularly templated materials; functionalized sol-gel membranes; solid phase extraction with functionalized materials; multivariate/chemometric data evaluation; hyperspectral imaging; advanced vibrational spectroscopy (SEIRA, SERS) in the far- and nearfield; integrated THz probes; environmental analytical chemistry; process analytical chemistry; biomedical diagnostics.

HONORS AND AWARDS

2010 *Craver Award* by the Coblenz Society
2009 *Robert Kellner Lecture Award* by the Division of Analytical Chemistry, EuChemS
2006 Elected *Fellow of the American Association for the Advancement of Science (AAAS)*
2005 *Class of 1934 Outstanding Interdisciplinary Activities Award* by the Georgia Institute of Technology

2005	<i>Pittsburgh Conference Achievement Award</i> by the Society for Analytical Chemists of Pittsburgh
2004	<i>Fritz Feigl Award</i> by the Austrian Society of Analytical Chemistry
2004	<i>Megggers Award</i> by the Society of Applied Spectroscopy
2003	<i>Sigma Xi Outstanding Young Faculty Award</i> by the Georgia Institute of Technology
1999	<i>Pro Analytica Award</i> by the Institute of Analytical Chemistry, Vienna University of Technology
1997	<i>Erwin Schrödinger Research Award</i> by the Austrian Science Foundation
1996	<i>Mobility Award</i> by the Academic Workingparty of the Vienna University of Technology
1993	<i>GÖCH Science Award</i> by the Austrian Chemical Society

PROFESSIONAL AND SYNERGISTIC ACTIVITIES (from 1999 on)

From 2010	Associate Editor Europe of <i>Analyst</i>
2007-present	Editorial Board member of <i>Analytical and Bioanalytical Chemistry</i>
2007	Chairman elect of the <i>IEEE Sensors Conference</i>
2005	Chairman elect of the <i>Gordon Research Conference on Chemical Sensors and Interfacial Design</i>
2005	Chairman of the <i>PRF Summer School on Chemometrics in Sensor Technology</i>
2004	Co-Chairman of the ACS ProSpectives Conference <i>Emerging Opportunities in Chemical Sensing and Biosensing</i>
2003-present	International Advisory Board member of <i>Encyclopedia of Sensors</i>
2003-present	Editorial Board member of <i>Sensor Letters</i>
2003-present	Associate Editor of <i>IEEE Sensors Journal</i>
2003	Co-Chairman of the <i>Gordon Research Conference on Chemical Sensors and Interfacial Design</i>
2002-present	Co-PI in NSF IGERT project: "Signals in the Sea" (granted; PD: Mark Hay, School of Biology)
2002-present	Program Committee member of <i>SPIE Photonics West, Biomedical Optics</i>
2002-2005	Editorial Board member of <i>Microchimica Acta</i>
2001-present	Program Committee member of <i>IEEE Sensors Conference</i>
2001-present	Permanent Committee member of <i>International Conference on Advanced Semiconductor Devices and Microsystems</i>
2001-present	Organizer <i>IEEE-ISA Workgroup on Chemical and Biological Sensors</i>
2001-present	Permanent Committee member of <i>IWA Conference on Automation in Water Quality Monitoring</i>
2000-present	Permanent Steering Committee member of the <i>Europt(r)ode Conference Series</i>
1999-2002	Editorial Board member of <i>Spectroscopy Letters</i>
1999-present	Co-chairman and co-founder of the bi-annual <i>Advanced Study Course on Optical Chemical Sensors (ASCOS-Series)</i> for graduate and postgraduate students

SHORT NARRATIVE BIOGRAPHY

Dr. Boris Mizaikoff received his Ph.D. in Analytical Chemistry at the Vienna University of Technology in 1996. Heading the Chemical Sensor Laboratory (CSL) he has been responsible for numerous research projects in the field of chemical IR sensors, including 4 multinational projects funded by the European Union. In 1997, he has been with the University of Texas, Austin/USA as a postdoctoral fellow. In October 2000 he finalized his Habilitation (Assoc. Prof. for Analytical Chemistry) at the Vienna University of Technology. Since Fall 2000 he was faculty member at the Georgia Institute of Technology, School of Chemistry and Biochemistry, heading the Applied Sensors Laboratory (ASL). Since 2004 he was Director of the Focused Ion Beam Center (FIB² Center) at Georgia Tech, and since 2005 member of the Center for Cell and Molecular Signaling at Emory University, School of Physiology. In Fall 2007, he has joined the faculty at the University of Ulm, Germany, as a Chaired Professor heading the Institute of Analytical and Bioanalytical Chemistry. Today, his research interests focus on optical sensors, biosensors, and biomimetic sensors operating in the mid-infrared spectral range, applications of novel IR light sources (e.g., quantum cascade lasers), system miniaturization and integration based on nano- and nanofabrication, multifunctional scanning nanoprobes (e.g., combination AFM-IR and AFM-SECM-IR), scanning probe tip integrated nano(bio)sensors, focused ion beam (FIB) microscopy, development of chemical recognition interfaces for separation and sensing applications (e.g., molecularly templated materials), chemometric data evaluation, advanced vibrational spectroscopic techniques (e.g., SEIRA), environmental analytical chemistry, process analytical chemistry, and biomedical diagnostics. Dr. Mizaikoff is author/co-author of over 140 peer-reviewed publications, 14 patents, and numerous invited contributions at scientific conferences.

CURRENT SUPPORT (Number of Programs in Brackets)

The research program at IABC and ASL is currently supported by the National Institutes of Health (NIH), Lawrence Livermore National Laboratory (LLNL), several industrial partners (ExxonMobil; Agilent), the German Science Foundation (DFG), and the German Federal Ministry of Education and Research (BMBF).

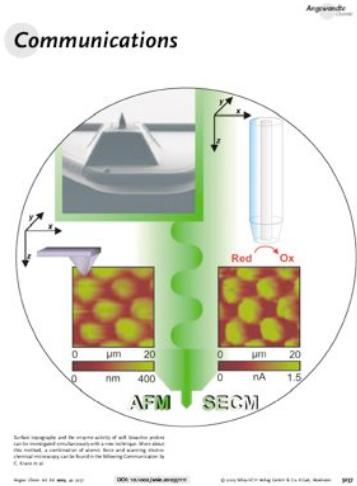
REFEREE

<u>Journals:</u>	Nature Mat., Anal. Chem., J. Phys. Chem., J. for Analyt. and Bioanalyt. Chem., Sensors & Actuators, Env. Sci. Technol., JACS, J. of Lightwave Technol., Anal. Chim. Acta, Intern. J. Environ. Anal. Chem., IEEE Sensors, J. Appl. Phys., etc.
<u>Agencies:</u>	NIH, DOE, NSF, European Union, PRF, EPA regular panels and SBIR panels; permanent member of the NIH Study Section on Instrumental and Systems Development

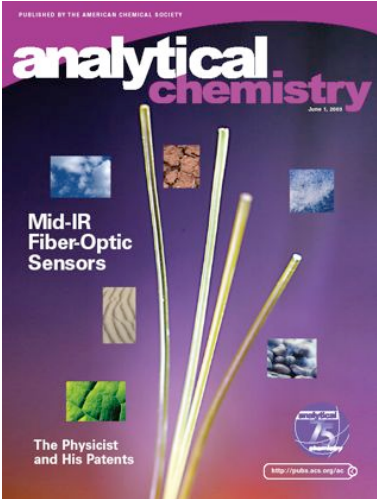
SECTION 2

List of Publications

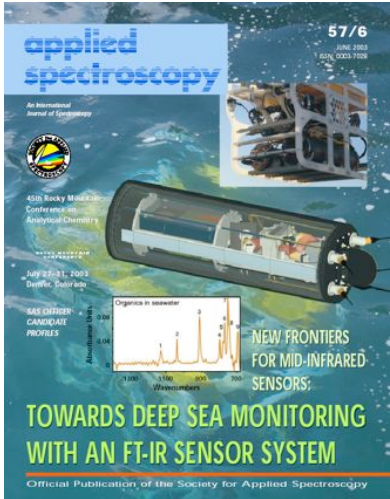
Recent Journal Covers



Angewandte Chemie Int. Ed., 2003



Analytical Chemistry, 2003



Applied Spectroscopy, 2003



Applied Spectroscopy, 2006

PUBLICATIONS

Patents

- | | | | |
|-----|---|--------------------------|-------------------|
| 14. | Author(s): G. Lamps, J. Yadav, B. Mizaikoff
Title: <i>Radiographic Contrast Media Capture Material</i>
Patent: PCT patent granted | No: WO 2008101166 | Year: 2008 |
| 13. | Author(s): B. Mizaikoff, S.-S- Kim
Title: <i>Mid-Infrared Sensors Based on Integrated Photonics</i>
Patent: U.S. and international patents submitted | No: | Year: 2008 |
| 12. | Author(s): C. Kranz, B. Mizaikoff, W. Schuhmann, K. Eckhard
Title: <i>Near Field Scanning Measurement – Alternating Current – Scanning Electrochemical Microscopy Devices and Methods of Their Use</i>
Patent: PCT patent granted | No: WO 2008066779 | Year: 2008 |
| 11. | Author(s): B. Mizaikoff, H. Shin, P. Haring, D. Surawicz
Title: <i>Integrated Sensing Probes, Methods of Fabrication Thereof, and Methods of Use Thereof</i>
Patent: U.S. patent granted | No: WO 2008105888 | Year: 2008 |
| 10. | Author(s): B. Mizaikoff, C. Charlton, M. Giovannini, J. Faist
Title: <i>Thin Film Waveguides, Methods of Fabrication Thereof, and Detection Systems</i>
Patent: PCT patent granted | No: WO 2007030737 | Year: 2007 |
| 9. | Author(s): R. Weiss, B. Mizaikoff
Title: <i>Rezeptoren für Mykotoxine (Receptors for mycotoxins)</i>
Patent: PCT patent granted | No: WO 2003101580 | Year: 2003 |
| 8. | Author(s): R. Weiss, B. Mizaikoff
Title: <i>Rezeptoren für Mykotoxine (Receptors for mycotoxins)</i>
Patent: Austrian patent granted | No: A 837/2002 | Year: 2002 |
| 7. | Author(s): C. Kranz, B. Mizaikoff, A. Lugstein, E. Bertagnolli
Title: <i>Vorrichtung für die gleichzeitige Durchführung einer elektrochemischen und einer topographischen Nahfeld-Mikroskopie (Combined Scanning Electrochemical and Topographical Nearfield Microscopy)</i>
Patent: Japan, patent pending | No: 502381/2002 | Year: 2002 |
| 6. | Author(s): A. Lugstein, E. Bertagnolli, C. Kranz, B. Mizaikoff
Title: <i>Verfahren zur Herstellung einer Vorrichtung für die gleichzeitige Durchführung einer elektrochemischen und einer topographischen Nahfeld-Mikroskopie (Fabrication of Combined Scanning Electrochemical and Topographical Nearfield Microscopy Tips)</i>
Patent: European patent granted | No: 01940013.4 | Year: 2002 |
| 5. | Author(s): C. Kranz, B. Mizaikoff, A. Lugstein, E. Bertagnolli
Title: <i>Vorrichtung für die gleichzeitige Durchführung einer elektrochemischen und einer topographischen Nahfeld-Mikroskopie (Combined Scanning Electrochemical and Topographical Nearfield Microscopy)</i>
Patent: European patent granted | No: 01944719.2 | Year: 2002 |
| 4. | Author(s): A. Lugstein, E. Bertagnolli, C. Kranz, B. Mizaikoff
Title: <i>Verfahren zur Herstellung einer Vorrichtung für die gleichzeitige Durchführung einer elektrochemischen und einer topographischen Nahfeld-Mikroskopie (Fabrication of Combined Scanning Electrochemical and Topographical Nearfield Microscopy Tips)</i>
Patent: USA patent granted | No: 10/297562 | Year: 2002 |
| 3. | Author(s): C. Kranz, B. Mizaikoff, A. Lugstein, E. Bertagnolli
Title: <i>Vorrichtung für die gleichzeitige Durchführung einer elektrochemischen und einer topographischen Nahfeld-Mikroskopie (Combined Scanning Electrochemical and Topographical Nearfield Microscopy)</i>
Patent: USA patent granted | No: 10/297627 | Year: 2002 |

2. **Author(s):** A. Lugstein, E. Bertagnolli, C. Kranz, B. Mizaikoff
Title: *Verfahren zur Herstellung einer Vorrichtung für die gleichzeitige Durchführung einer elektrochemischen und einer topographischen Nahfeld-Mikroskopie*
(Fabrication of Combined Scanning Electrochemical and Topographical Nearfield Microscopy Tips)
Patent: Austrian patent granted **No:** AT 410.032 **Year:** 2001
1. **Author(s):** C. Kranz, B. Mizaikoff, A. Lugstein, E. Bertagnolli
Title: *Vorrichtung für die gleichzeitige Durchführung einer elektrochemischen und einer topographischen Nahfeld-Mikroskopie*
(Combined Scanning Electrochemical and Topographical Nearfield Microscopy)
Patent: Austrian patent granted **No:** AT 410.845 **Year:** 2001

Peer-reviewed Publications**2010 accepted or in press (10 manuscripts currently in review)**

145. **Author(s):** S. G. Patterson, C. W. Bayer, R. J. Hendry, N. Sellers, K. S. Lee, B. Vidakovic, B. Mizaikoff, S. G. A. Gabram-Mendola
Title: *Breath Analysis by Mass Spectrometry: A new Tool for Breast Cancer (BC) Detection?*
Journal: American Surgeon **Vol.:** Accepted **Page:** **Year:** 2010
144. **Author(s):** A. Z. Simões, E. C. Aguiar, C. S. Riccardi, E. Longo, J. A. Varela, B. Mizaikoff
Title: *Effect of Oxidizing Atmosphere on Ferroelectric and Piezoelectric Response of $\text{CaBi}_2\text{Nb}_2\text{O}_9$ Thin Films*
Journal: Mat. Chem. Phys. **Vol.:** Accepted **Page:** **Year:** 2010
143. **Author(s):** E. Hecht, O. H. Wittekindt, S. M. Usmani, S. Albrecht, P. Dietl, B. Mizaikoff, C. Kranz
Title: *Atomic Force Microscopy of Microvillous Cell Surface Dynamics at Fixed and Living Alveolar Type II Cells*
Journal: Anal. and Bioanal. Chem. **Vol.:** Accepted **Page:** **Year:** 2010
142. **Author(s):** N. Menegazzo, M. Kahn, R. Berghauser, W. Waldhauser, B. Mizaikoff
Title: *Nitrogen-doped Diamond-like Carbon as Optically Transparent Electrode for Infrared Attenuated Total Reflection Spectroelectrochemistry*
Journal: Analyst **Vol.:** Accepted **Page:** **Year:** 2010
141. **Author(s):** F. Meier, B. Mizaikoff
Title: *Molecularly imprinted polymers as artificial receptors*
Book: Artificial Receptors for Chemical Sensors, Wiley-VCH Verlag; Ed. V. Mirsky, A. Yatsimirsky
Invited book chapter **Vol.:** Accepted **Page:** **Year:** 2010
140. **Author(s):** S.-S. Kim, B. Mizaikoff
Title: *Miniaturized Optical Sensors for Medical Diagnostics*
Book: Handbook of Spectroscopy. Section XIV: Applications 7: Nanooptics, Wiley-VCH Verlag; Ed. J. Wilkinson
Invited book chapter **Vol.:** In press **Page:** **Year:** 2010

2010

139. **Author(s):** L. A. Beardslee, K. S. Demirci, Y. Luzinova, B. Mizaikoff, S. M. Heinrich, F. Josse, O. Brand
Title: *Liquid-Phase Chemical Sensing Using Lateral Mode Resonant Cantilevers*
Journal: Anal. Chem. **Vol.:** 82 **Page:** 7542-7549 **Year:** 2010
138. **Author(s):** J. Wiedemair, N. Menegazzo, J. Pikarsky, K. S. Booksh, B. Mizaikoff, C. Kranz
Title: *Novel Electrode Materials Based on Ion Beam Induced Deposition of Platinum Carbon Composites*
Journal: Electrochim. Acta **Vol.:** 55 **Page:** 5725-5732 **Year:** 2010
137. **Author(s):** J. Wiedemair, J.-S. Moon, F. Reinauer, B. Mizaikoff, C. Kranz
Title: *Ion Beam Induced Deposition of Platinum Carbon Composite Electrodes for Combined Atomic Force Microscopy-Scanning Electrochemical Microscopy*
Journal: Electrochem. Comm. **Vol.:** 12 **Page:** 989-991 **Year:** 2010
136. **Author(s):** L. Wang, C. Kranz, B. Mizaikoff
Title: *Monitoring Scanning Electrochemical Microscopy Approach Curves with Mid-Infrared Spectroscopy – Towards a Novel Current-Independent Positioning Mode*
Journal: Anal. Chem. **Vol.:** 82 **Page:** 3132-3138 **Year:** 2010
135. **Author(s):** L. Wang, J. Kowalik, B. Mizaikoff, C. Kranz
Title: *Combining Scanning Electrochemical Microscopy with Infrared Attenuated Total Reflection Spectroscopy for In-situ Studies of Electrochemically Induced Processes*
Journal: Anal. Chem. **Vol.:** 82 **Page:** 3139-3145 **Year:** 2010
134. **Author(s):** S.-S. Kim, C. Young, B. Vidakovic, S. G. A. Gabram-Mendola, C. W. Bayer, B. Mizaikoff
Title: *Potential and Challenges for Mid-Infrared Sensors in Breath Diagnostics*
Journal: IEEE Sensors **Vol.:** 10 **Page:** 145-158 **Year:** 2010

133. **Author(s):** C. Davis, M. Frank, H. Osner, B. Mizaikoff
Title: *Sensors for Breath Analysis*
Journal: IEEE Sensors **Vol.:** 10 **Page:** 3-6 **Year:** 2010

2009

132. **Author(s):** K. S. Lee, M. F. Abouelnasr, C. W. Bayer, S. G. A. Gabram, B. Mizaikoff, A. Rogatko, B. Vidakovic
Title: *Mining Exhaled Volatile Organic Compounds for Breast Cancer Detection*
Journal: Advances and Applications in Statistical Sciences **Vol.:** 2 **Page:** 1-16 **Year:** 2009
131. **Author(s):** L. Wang, B. Mizaikoff, C. Kranz
Title: *Quantification of Sugar Mixtures with Near-Infrared Raman Spectroscopy and Multivariate Data Analysis*
Journal: J. Chem. Education **Vol.:** 86 **Page:** 1322-1325 **Year:** 2009
130. **Author(s):** C. Weber, E. Gauda, B. Mizaikoff, C. Kranz
Title: *Developmental Aspects of Amperometric ATP-Biosensors based on Entrapped Enzymes*
Journal: Anal. and Bioanal. Chem. **Vol.:** 395 **Page:** 1729-1735 **Year:** 2009
129. **Author(s):** A. Wilk, S.-S. Kim, B. Mizaikoff
Title: *An Approach to the Spectral Simulation of Infrared Hollow Waveguide Gas Sensors*
Journal: Anal. and Bioanal. Chem. **Vol.:** 395 **Page:** 1661-1671 **Year:** 2009
128. **Author(s):** Y. Luzinova, G. T. Dobbs, R. Sassen, B. Mizaikoff
Title: *Quantification of Adamantane in Organic Media via Infrared Attenuated Total Reflection Spectroscopy*
Journal: Org. Geochemistry **Vol.:** 40 **Page:** 1143-1150 **Year:** 2009
127. **Author(s):** C. Young, S.-S. Kim, Y. Luzinova, M. Weida, D. Arnone, E. Takeuchi, T. Day, B. Mizaikoff
Title: *External Cavity Widely Tunable Quantum Cascade Laser Based Hollow Waveguide Gas Sensors for Multianalyte Detection*
Journal: Sens. & Act. B **Vol.:** 140 **Page:** 24-28 **Year:** 2009
126. **Author(s):** S.-S. Kim, N. Menegazzo, C. Young, J. Chan, C. Carter, B. Mizaikoff
Title: *Mid-Infrared Trace Gas Analysis with Single-Pass FT-IR Hollow Waveguide Gas Sensors*
Journal: Appl. Spectrosc. **Vol.:** 63 **Page:** 331-337 **Year:** 2009
125. **Author(s):** S-H. Park, S. Wei, B. Mizaikoff, A. E. Taylor, C. Favero, C-H. Huang
Title: *Degradation of Amine-Based Water Treatment Polymers during Chloramination as N-Nitrosodimethylamine (NDMA) Precursors*
Journal: Environ. Sci. Technol. **Vol.:** 43 **Page:** 1360-1366 **Year:** 2009
124. **Author(s):** C. Young, R. Cendejas, S. S. Howard, W. Sanchez-Vaynshteyn, A. J. Hoffman, K. J. Franz, Y. Yao, B. Mizaikoff, X. Wang, J. Fan, C. F. Gmachl
Title: *Wavelength Selection for Quantum Cascade Lasers by Cavity Length*
Journal: Appl. Phys. Lett. **Vol.:** 94 **Page:** 0911091-3 **Year:** 2009

2008

123. **Author(s):** H. Shin, P. J. Hesketh, B. Mizaikoff, C. Kranz
Title: *Development of Wafer-Level Batch Fabrication for Combined Atomic Force - Scanning Electrochemical Microscopy (AFM-SECM) Probes*
Journal: Sens. & Act. B **Vol.:** 134 **Page:** 488-495 **Year:** 2008
122. **Author(s):** J. Wiedemair, B. Balu, J.-S. Moon, D. Hess, B. Mizaikoff, C. Kranz
Title: *Plasma-Deposited Fluorocarbon Films: Insulation Material for Microelectrodes and Combined Atomic Force Microscopy - Scanning Electrochemical Microscopy Probes*
Journal: Anal. Chem. **Vol.:** 80 **Page:** 5260-5265 **Year:** 2008
121. **Author(s):** L. Wang, B. Mizaikoff
Title: *Application of Multivariate Data Analysis Techniques to Biomedical Diagnostics based on Mid-Infrared Spectroscopy*
Journal: Anal. and Bioanal. Chem. **Vol.:** 391 **Page:** 1641-1654 **Year:** 2008

120. **Author(s):** P. A. Kottke, C. Kranz, Y. K. Kwon, J.-F. Masson, B. Mizaikoff, A. G. Fedorov
Title: *Theory of Polymer Entrapped Enzyme Ultramicroelectrodes: Application to Glucose and Adenosine Triphosphate Detection*
Journal: J. Electroanalyt. Chem. **Vol.:** 618 **Page:** 74-82 **Year:** 2008
119. **Author(s):** J.-F. Masson, C. Kranz, B. Mizaikoff, E. Gauda
Title: *Amperometric ATP Microbiosensors for the Analysis of Chemosensitivity at the Carotid Bodies of Rats*
Journal: Anal. Chem. **Vol.:** 80 **Page:** 3991-3998 **Year:** 2008
118. **Author(s):** J.-F. Masson, E. Gauda, C. Kranz, B. Mizaikoff
Title: *The Interference of HEPES Buffer during Amperometric Detection of ATP in Clinical Applications*
Journal: Anal. and Bioanal. Chem. **Vol.:** 390 **Page:** 2067-2071 **Year:** 2008
117. **Author(s):** P. A. Kottke, C. Kranz, Y. K. Kwon, J.-F. Masson, B. Mizaikoff, A. G. Fedorov
Title: *Theory of Polymer Entrapped Enzyme Ultramicroelectrodes: Fundamentals*
Journal: J. Electroanalyt. Chem. **Vol.:** 612 **Page:** 208-218 **Year:** 2008
116. **Author(s):** S.-S. Kim, C. Young, B. Mizaikoff
Title: *Miniaturized Mid-Infrared Sensor Technologies*
Journal: Anal. and Bioanal. Chem. **Vol.:** 390 **Page:** 231-237 **Year:** 2008
115. **Author(s):** C. dos Santos Riccardi, C. Kranz, J. Kowalik, H. Yamanaka, B. Mizaikoff, M. Josowicz
Title: *Label-free DNA Detection of Hepatitis C Virus Based on Modified Conducting Polypyrrole Films at Microelectrodes and AFM-tip Integrated Electrodes*
Journal: Anal. Chem. **Vol.:** 80 **Page:** 237-245 **Year:** 2008

2007

114. **Author(s):** G. T. Dobbs, B. Balu, C. Young, C. Kranz, D. W. Hess, B. Mizaikoff
Title: *Mid-Infrared Chemical Sensors Utilizing Plasma-Deposited Fluorocarbon Membranes*
Journal: Anal. Chem. **Vol.:** 79 **Page:** 9566-9571 **Year:** 2007
113. **Author(s):** J.-F. Masson, C. Kranz, B. Mizaikoff
Title: *Modeling the Response Function of Dual-Enzyme Microbiosensors*
Journal: Anal. Chem. **Vol.:** 79 **Page:** 8531-8538 **Year:** 2007
112. **Author(s):** M. Brucherseifer, C. Kranz, B. Mizaikoff
Title: *Combined In-Situ AFM-IR-ATR Spectroscopy*
Journal: Anal. Chem. **Vol.:** 79 **Page:** 8803-8806 **Year:** 2007
111. **Author(s):** J. O'Mahony, B. C. G. Karlsson, B. Mizaikoff, I. A. Nicholls
Title: *Mechanisms Underlying a Non-Covalent Imprinted Polymer System: New Detail from Correlated Theoretical, Spectroscopic and X-ray Crystallographic Studies of Pre-polymerisation Events*
Journal: Analyst **Vol.:** 132 **Page:** 1161-1168 **Year:** 2007
110. **Author(s):** J.-F. Masson, C. Kranz, K. S. Booksh, B. Mizaikoff
Title: *Improved Sensitivity and Stability of Amperometric Enzyme Microbiosensors by Covalent Attachment to Gold Electrodes*
Journal: Biosens. & Bioelectr. **Vol.:** 23 **Page:** 355-361 **Year:** 2007
109. **Author(s):** J.-S. Moon, H. Shin, B. Mizaikoff, C. Kranz
Title: *Bitmap-Assisted Focused Ion Beam Fabrication of Combined Atomic Force Scanning Electrochemical Microscopy Probes*
Journal: J. Korean Phys. Soc. **Vol.:** 51 **Page:** 920-924 **Year:** 2007
108. **Author(s):** S. Wei, M. Jakusch, B. Mizaikoff
Title: *Investigating the Mechanisms of 17 β -Estradiol Imprinting by Computational Prediction and Spectroscopic Analysis*
Journal: Anal. and Bioanal. Chem. **Vol.:** 389 **Page:** 423-431 **Year:** 2007
107. **Author(s):** S. Wei, B. Mizaikoff
Title: *Binding Site Characteristics of 17 β -Estradiol Imprinted Polymers*
Journal: Biosens. & Bioelectr. **Vol.:** 23 **Page:** 201-209 **Year:** 2007

106. **Author(s):** S. Wei, B. Mizaikoff
Title: *Recent Advances on Non-covalent Molecular Imprints for Affinity Separations*
Journal: J. Separation Sci. **Vol.:** 30 **Page:** 1794-1805 **Year:** 2007
105. **Author(s):** A. Z. Simões, C. S. Riccardi, L. S. Cavalcante, E. Longo, J. A. Varela, B. Mizaikoff
Title: *Impact of Oxygen Ambient On Piezoelectric Properties of CaBi₂Nb₂O₉ Thin Films*
Journal: Acta Materialia **Vol.:** 55 **Page:** 4707-4712 **Year:** 2007
104. **Author(s):** K. Eckhard, C. Kranz, H. Shin, B. Mizaikoff, W. Schuhmann
Title: *Frequency Dependence of the Electrochemical Activity Contrast in AC-Scanning Electrochemical Microscopy and Atomic Force Microscopy-AC-Scanning Electrochemical Microscopy Imaging*
Journal: Anal. Chem. **Vol.:** 79 **Page:** 5435-5438 **Year:** 2007
103. **Author(s):** G. Kos, H. Lohninger, B. Mizaikoff, R. Krska
Title: *Optimisation of a Sample Preparation Procedure for the Screening of Fungal Infection and Assessment of Deoxynivalenol Content on Maize using Mid-Infrared Attenuated Total Reflection Spectroscopy*
Journal: Food Addit. and Contamin. **Vol.:** 24 **Page:** 721-729 **Year:** 2007
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Interfacing Chemistry with Microdevices - Potential and Challenges of Chemical Microsensors
Invited Presentation, ASDAM 2002, Smolenice/Slovakia., October 14-16 (2002).
- (24) B. Mizaikoff
Optical Sensors for Process Analytical Measurements
Invited Presentation, ISA 2002, Chicago/U.S.A., October 21-24 (2002).
- (25) B. Mizaikoff
Hollow Waveguide Infrared Gas Sensing for Biomedical Applications
Invited Presentation, Photonics West 2003, San Jose/U.S.A., January 25-31, 2003.
- (26) B. Mizaikoff, N. Pennington, F. Vogt
Mid-Infrared Spectroscopic Sensors for In-Situ Monitoring of Methane Dissolved in Sea Water
Invited Presentation, Ocean Technology Conference (OTC) 2003, Houston, TX/U.S.A., May 5-8, 2003.
- (27) C. Kranz, A. Kueng, A. Lugstein, E. Bertagnolli, B. Mizaikoff
Simultaneous Electrochemical and AFM Imaging in Tapping Mode of Soft Samples with Bifunctional Scanning Probe Tips
Invited Presentation, ACS Fall National Meeting 2003, New York/NY, September 7-11, 2003.
- (28) B. Mizaikoff
Mid-Infrared Sensor Technology - Potential and Perspectives for Process Monitoring
Invited Presentation, ACS Fall National Meeting 2003, New York/NY, September 7-11, 2003.
- (29) B. Mizaikoff
Molecularly Imprinted Polymers - Potential and Challenges in Analytical Chemistry
Invited Presentation, FACSS 2003, Ft. Lauderdale, FL/U.S.A., October 19-23, 2003.
- (30) C. Kranz, A. Kueng, A. Lugstein, E. Bertagnolli, B. Mizaikoff
AFM Tip Integrated Electrochemical Biosensors for Simultaneous Topographical and Activity Mapping of Soft Samples
Invited Presentation, VI. Annual Linz Winter Workshop on Scanning Probe Microscopy, Linz, Austria, Jan. 31-Feb. 2, 2004.
- (31) B. Mizaikoff, C. Kranz
Multifunctional Scanning Probes and Tip-Integrated (Bio)sensors - A New Route to Chemical Imaging with High Lateral Resolution
Invited Presentation, 3rd Microsensors Workshop, Scottsdale/AZ, April 19-22, 2004.
- (32) C. Kranz, A. Kueng, A. Lugstein, E. Bertagnolli, B. Mizaikoff
AFM Tip Integrated Electrochemical Sensors – Simultaneous Electrochemical and AFM Imaging in Dynamic Mode Operation
Invited Presentation, 205th ECS Meeting, San Antonio/TX, May 9-13, 2004.
- (33) A. Kueng, C. Kranz, A. Lugstein, E. Bertagnolli, B.-J. Duke, D. Eaton, B. Mizaikoff
AFM Tip-Integrated Amperometric Micro- and Nanobiosensors: Spatially Resolved Detection of ATP Release at Cell Surfaces
Invited Keynote, 8th World Congress on Biosensors, Granada, Spain, May 24-26, 2004
- (34) B. Mizaikoff
Mid-Infrared Sensor Technology – From the Lab into the Field?
Invited Presentation, ACS ProSpective Conference on Emerging Opportunities in Chemical Sensing and Biosensing, Santa Fe/NM, May 16-19, 2004.

- (35) B. Mizaikoff
The Closer We Look, The More We See - New Strategies in Nanobioanalytics
Invited Presentation, SystemsX Symposium, Basel/Switzerland, June 29-30, 2004.
- (36) B. Mizaikoff, C. Kranz
Development and Fabrication of Multifunctional Scanning Probes and Sensors with Focused Ion Beam Techniques
Invited Presentation, Microscopy and Microanalysis, Savannah/GA, August 1-5, 2004.
- (37) B. Mizaikoff, C. Kranz
Multifunctional Scanning Probes with Tip-Integrated Electrochemical (Bio)sensors for Chemical Imaging at a Nanoscale
Invited Presentation, Detector/Sensor Research and Technology for Homeland and National Security Workshop, Gatlinburg/TN, September 14-16, 2004.
- (38) B. Mizaikoff
Mid-Infrared Chemical Sensors - From the Bench into the Deep Sea
Invited Presentation as Recipient of the Meggers Award, FACSS, Portland/OR, October 3-7, 2004.
- (39) C. Kranz, B. Mizaikoff
Amperometric Biosensors and Potentiometric pH-Microsensors Integrated into AFM Tips
Invited Presentation, IEEE Sensors, Vienna/Austria, October 24-27, 2004.
- (40) B. Mizaikoff
Spectral Techniques In Optical Chemical Sensing
Invited Presentation, IEEE Sensors, Vienna/Austria, October 24-27, 2004.
- (41) B. Mizaikoff
Mid-Infrared Chemical Sensors – Quo Vadis?
Invited Presentation, SERMACS, Research Triangle Park, NC, November 10-13, 2004.
- (42) B. Mizaikoff
From Chemical Sensors to Multifunctional Analytical Platforms
Invited Presentation as Recipient of the Pittsburgh Conference Achievement Award, PITTCON, Orlando, FL, February 27-March 4, 2005.
- (43) B. Mizaikoff
Focused Ion Beam Microfabrication of Multifunctional Scanning Probes and Biosensors
Invited Presentation, AVS/MSA/Applied Surface Analysis, Orlando, FL, March 13-16, 2005.
- (44) B. Mizaikoff
Fiberoptic Infrared Chemical Sensors based on Quantum Cascade Lasers
Invited Presentation, TDLS-2005, Florence/Italy, July 11-15, 2005.
- (45) B. Mizaikoff
Spectroscopic Sensors in Marine Environments
Invited Presentation, MarTech 2005, Bremen, Germany, October 9-12, 2005.
- (46) B. Mizaikoff
Multifunctional Analytics at a Micro- and Nanoscale - Seeing more by looking at less!
Invited Presentation as Recipient of the Fritz Feigl Award, ASAC Meeting, Linz/Austria, November, 2005.
- (47) B. Mizaikoff
Capturing Molecules with Templated Membranes – Analysis and Rational Design of Molecularly Imprinted Polymers
Invited Presentation, Pacificchem 2005, Honolulu/HI, December 15-20, 2005.
- (48) C. Kranz, J. Wiedemair, J.-F. Masson, C. dos Santos Riccardi, B. Mizaikoff
Micro- and Nanoelectrochemistry at the AFM-tip
Invited Presentation, VI. Annual Linz Winter Workshop on Scanning Probe Microscopy, Linz/Austria, February 3-6, 2006.
- (49) B. Mizaikoff
Introduction: This is Not Your Father's AFM
Invited Presentation, The American Physiological Society, Experimental Biology 2006, San Francisco/CA, April 1-5, 2006.
- (50) B. Mizaikoff
Environmental Analysis with Optical Sensors - Quo Vadis?
Invited Presentation, Europt(r)ode VIII, Tuebingen/Germany, April 2-5, 2006.
- (51) B. Mizaikoff
Sensing of small molecules - Seeing more by looking at less
Invited Presentation, Symposium on Signal Detection in Life Sciences, Ulm/Germany, June 30, 2006.
- (52) B. Mizaikoff
Next-Generation Mid-Infrared Sensors in Harsh Environments
Invited Presentation, ACS Fall Meeting, San Francisco/CA, September 10-14, 2006.

- (53) B. Mizaikoff and C. Kranz
Nanofabrication of Multifunctional Scanning Probes and Nanobiosensors with Focused Ion Beam Techniques
Invited Presentation, IUUVSTA ECM-100, Seoul/South Korea, September 18-22, 2006.
- (54) B. Mizaikoff
Trace Gas Analysis with Miniaturized Mid-Infrared Sensors: From FT-IR to Quantum Cascade Lasers
Invited Presentation, FACSS, Orlando/FL, September 24-28, 2006.
- (55) B. Mizaikoff
A New Frontier: Mid-Infrared Chemical Sensors Based on Single-Mode Waveguides
Invited Presentation, SPIE Optics East, Boston/MA, October 1-4, 2006.
- (56) B. Mizaikoff
New Trends in Infrared Chemical Sensors
Invited Presentation, Eastern Analytical Symposium, Somerset/NJ, November 13-16, 2006.
- (57) B. Mizaikoff, C. Kranz
Focused Ion Beam Techniques for Fabricating Biosensors
Invited Presentation, MRS Fall Meeting, Boston/MA, November 28-30, 2006.
- (58) B. Mizaikoff, J.-F. Masson, J. Wiedemair, C. Kranz, E. Gauda, B.-J. Duke, D. Eaton
Sensing ATP at Live Biological Specimen - From the Micro- to the Nanoscale
Invited Presentation, 46. Tutzing-Symposium: Sensorsysteme - Praxisanforderungen und Forschungstrends, Tutzing/Germany, February 25-28, 2007.
- (59) J.-F. Masson, J. Wiedemair, B. Mizaikoff, C. Kranz
Zeit- und Ortsaufgelöste Bestimmung von ATP mit Hilfe von Miniaturisierten Amperometrischen Biosensoren
Invited Presentation, 5. Deutsches BioSensor Symposium, Bochum/Germany, March 18-21 2007.
- (60) B. Mizaikoff
Good Vibrations - Infrared Spectroscopy and Sensing in Extreme Environments
Invited Presentation, ANAKON 2007, Jena/Germany, March 27-30, 2007.
- (61) B. Mizaikoff, C. Kranz
From Infrared Chemical Sensors to Multifunctional Scanning Probes - Research at the Applied Sensors Laboratory
Friedrich Schiller Universität Jena, Jena/Germany, March 29, 2007.
- (62) C. Kranz, J. Wiedemair, J.-S. Moon, H. Shin, B. Mizaikoff
Hyphenated Scanning Probe Techniques: Combined Atomic Force Scanning Electrochemical Microscopy (AFM-SECM)
AFM Workshop, Agnes Scott College, Atlanta/GA April 24, 2007.
- (63) C. Kranz, B. Mizaikoff
Focused Ion Beam Technology for the Fabrication of Multifunctional Scanning Probes and Nearfield THz Emitters
AAMU/Huntsville Nanotechnology Meeting, Huntsville/AL, May 21-22, 2007.
- (64) C. Kranz, J.-F. Masson, J. Wiedemair, B. Mizaikoff, E. Gauda, B.-J. Duke, D. Eaton
Micro- and nanosensing at live biological specimen using combined scanning probe techniques
Invited keynote lecture, Euroanalysis XIV, Antwerpen/Belgium, September 9-14, 2007.
- (65) J.-S. Moon, J. Wiedemair, J.-F. Masson, B. Mizaikoff, C. Kranz
Atomic Force Scanning Electrochemical Microscopy (AFM-SECM) for Electrochemical Imaging at the Nanoscale
Invited presentation, Microscopy & Microanalysis 2007, Fort Lauderdale/FL, August 5-9, 2007.
- (66) B. Mizaikoff, C. Kranz
From Systems Biology to Systems Analytics - Seeing More by Looking at Less
Invited presentation, Distinguished Lecture Series of the Center for the Study of Systems Biology, Georgia Institute of Technology, Atlanta, GA, October 9, 2007.
- (67) B. Mizaikoff
Next-Generation Mid-Infrared Chemical Sensors – Challenges and Opportunities
Invited, American Physical Society (APS) Spring Meeting 2008, New Orleans/LA, March 10-14, 2008.
- (68) B. Mizaikoff
Next-Generation Mid-Infrared Sensors based on Advanced Waveguide Technology
Invited, Workshop on Advanced Materials at UNESP C.P., Campinas, Brazil, May 5-7, 2008.
- (69) B. Mizaikoff
Liquid Sensing in the Mid-Infrared
Invited, International Quantum Cascade Lasers School & Workshop (IQCLSW) 2008, Monte Verita, Switzerland, September 14-19, 2008.
- (70) B. Mizaikoff, C. Kranz
Multifunctional Analytical Platforms for Nanomedicine
Invited, ESF Nanomedicine Conference 2008, Sant Feliu de Guixols, Spain, September 19-24, 2008.

- (71) B. Mizaikoff
Toward on-chip mid-infrared sensor technology for liquid phase analysis
Invited, SPIE Photonics West 2009, San Jose/CA, U.S.A., January 24-29, 2009.
- (72) B. Mizaikoff
Miniaturized Mid-Infrared Sensors Based on Semiconductor Waveguides
Invited, 2009 CMOS Emerging Technologies Workshop, Banff, Canada, February 18-20, 2009.
- (73) B. Mizaikoff, C. Kranz
Combining Infrared and THz Spectroscopy with Scanning Probe Platforms: Can we See More by Looking at Less?
Invited, Linz Winter Workshop, Linz, Austria, February 6-9, 2009.
- (74) B. Mizaikoff
Infrared Sensing in Extreme Environments
Invited, PITTCON 2009, Chicago/IL, March 8-13, 2009.
- (75) X. Wang, C. Kranz, B. Mizaikoff
Use of Miniaturized IR Sensor Techniques – Sensor Research at the Institute of Analytical and Bioanalytical Chemistry
Invited, EADS-Astrium Workshop on In-Situ Continuous Biochemical Analysers, Friedrichshafen, Germany, March 11-12, 2009.
- (76) B. Mizaikoff
Capturing Molecules with Biomimetic Materials – Potential and Perspectives for Molecularly Imprinted Polymers in Nanobiotechnology
Invited, 6. Deutsches BioSensor Symposium, Freiburg, Germany, March 29-April 1, 2009.
- (77) F. Meier, B. Mizaikoff
Designing Synthetic Receptors for Capturing Biomolecules and Pathogens
Invited, 215th ECS Spring Meeting, San Francisco/CA, May 24-29, 2009.
- (78) B. Mizaikoff
Plus Lucis: Advanced Waveguides for Enhanced Infrared Diagnostics
Invited, EUROANALYSIS 2009, Innsbruck, Austria, September 6-10, 2009.

Contributed Talks ASL Team

- (1) B. Mizaikoff, K. Taga, R. Kellner, W. Theiß, P. Grosse
Below the Limits of Conventional FTIR-Microspectroscopy
EUROANALYSIS VIII, Edinburgh/Scotland/UK, September 5-11, 1993.
- (2) B. Mizaikoff, K. Taga, R. Kellner
Fiber Optic Evanescent Field Sensors for Gaseous Species based on MIR Transparent Fibers
PITTCON '94, Chicago/Illinois/USA, February 27-March 4, 1994.
- (3) K. Taga, B. Mizaikoff, R. Kellner
High-Sensitivity-FTIR Microspectroscopy of Dried Sample Droplets on Chalcogenide Fiber Supports
PITTCON '94, Chicago/Illinois/USA, February 27-March 4, 1994.
- (4) B. Mizaikoff, R. Göbel, R. Krska, K. Taga, R. Kellner, M. Tacke, A. Katzir
Gas Monitoring with Fiber Optic Evanescent Field Sensors
PITTCON '95, New Orleans/Louisiana/USA, March 6-9, 1995.
- (5) B. Mizaikoff, R. Götz, R. Kellner
IR Fiber Optic Evanescent Field Sensors for Gas Monitoring
Optics for Environmental and Public Safety, München/Germany, June 19-23, 1995.
- (6) B. Mizaikoff, M. Sengeis, R. Kellner, W. Theiß, P. Grosse
Numerical Simulation in FTIR-Microspectroscopy
EUROSIM Congress '95, Wien/Austria, September 11-15, 1995.
- (7) B. Mizaikoff, M. Sengeis, R. Kellner, W. Theiß, P. Grosse
Numerical Simulation for IR-Fiber Optic Sensor Development
3rd International Austro-Tunisian Meeting on Analytical Chemistry, Wien/Austria, October 8-10, 1995.
- (8) B. Mizaikoff, M. Jakusch, R. Göbel, R. Kellner, A. Katzir
A Portable IR Fiber Optic Sensor System for the Determination of Chlorinated Hydrocarbons in Water
3rd European Conference on Optical Chemical Sensors and Biosensors, Zurich/Switzerland, March 31-April 3, 1996.

- (9) B. Mizaikoff, M. Jakusch, R. Kellner, J. Kastner, M. Tacke, A. Katzir
A Portable IR Fiberoptic Sensor for Monitoring Organic Contaminants in Water
PITTCON '97, Atlanta/Georgia/USA, March 15-22, 1997.
- (10) B. Mizaikoff, M. Jakusch, H. Wanzenboeck, R. Kellner, A. Katzir
IR Fiber Optic Sensors for Water Monitoring - Recent Developments and New Directions
EnviroSense '97, Munich/Germany, June 16-20, 1997.
- (11) M. Jakusch, B. Mizaikoff, R. Kellner, A. Katzir
Optimized Sensitive Coatings for MIR Fiber Optic Sensors
EnviroSense '97, Munich/Germany, June 16-20, 1997.
- (12) B. Mizaikoff, M. Jakusch, R. Kellner, A. Katzir
Infrared Fiber Optic Sensors – A Good Compromise for Field Screening and Environmental Purposes
Field Screening Europe, Karlsruhe/Germany, September 29-October 1, 1997.
- (13) B. Mizaikoff, P. Fuss, M. Hall
Fast-Spec: an Infrared Spectroscopic Diagnostic to Measure Time-Resolved Exhaust Hydrocarbon Emissions from SI Engines
27th International Symposium on Combustion, Boulder/Colorado/USA, August 2-7, 1998.
- (14) M. Jakusch, B. Mizaikoff
Status Quo in Infrared Evanescent Wave Sensing
EUROANALYSIS X, Basel/Switzerland, September 6-10, 1998.
- (15) B. Mizaikoff, M. Jakusch, M. Kraft
Water Monitoring Using Infrared Fiberoptic Sensors
OCEANS '98 Conference, Nice/France, September 28 - October 1, 1998.
- (16) H.-D. Kronfeldt, H. Schmidt, H. Amann, B. Mac Craith, M. Lehaitre, M. Leclercq, E. Bernabeu, B. Mizaikoff, D. Grant
Technical Elements and Potential Application of Spectroscopy for Ocean Monitoring
OCEANS '98 Conference, Nice/France, September 28 - October 1, 1998.
- (17) B. Mizaikoff, M. Jakusch, M. Kraft
Environmental Monitoring Using MID-Infrared Fiberoptic Sensors
InCom '99 Conference, Düsseldorf/Germany, March 22-25, 1999.
- (18) M. Kraft, M. Jakusch, B. Mizaikoff
Optimised Configurations for mid-Infrared Fibre Optic Sensors in the Marine Environment
SPIE Conference Photonics East, Boston/USA, September 19-22, 1999.
- (19) B. Mizaikoff, Ch. S. S. S. Murthy, M. Kraft, V. Pustogow, D. Hofstetter, A. Mueller, J. Faist, N. Croitoru
Novel Mid-Infrared Gas Sensors Based on Hollow Waveguides and Quantum Cascade Lasers
PITTCON 2000, New Orleans/USA, March 12-17, 2000.
- (20) M. Kraft, M. Karlowatz, B. Mizaikoff
Optical Sensors for Marine Monitoring
5th International Austro-Tunisian Meeting on Analytical Chemistry of the Environment,
Graz/Austria, March 23-24, 2000.
- (21) V. Pustogow, Ch. S. S. S. Murthy, M. Kraft, B. Mizaikoff, L. Hvozdar, E. Gornik, G. Strasser, A. Mueller, J. Faist
Quantum Cascade Lasers – A Novel Lightsource for Mid-Infrared Sensors
5th International Austro-Tunisian Meeting on Analytical Chemistry of the Environment,
Graz/Austria, March 23-24, 2000.
- (22) M. Jakusch, M. Janotta, B. Mizaikoff
Molecularly Imprinted Polymers as Recognition Layers for Infrared Evanescent Wave Chemical Sensors
EUROPT(R)ODE V - OPT(R)ODE 2000 – 5th European Conference on Optical Chemical Sensors and Biosensors, Lyon/France, April 16-19,
2000.
- (23) M. Kraft, B. Mizaikoff
Mid-Infrared Fiberoptic Sensors for the Detection of Priority Pollutants in the Marine Ecosystem
EUROPT(R)ODE V - OPT(R)ODE 2000 – 5th European Conference on Optical Chemical Sensors and Biosensors, Lyon/France, April 16-19,
2000.
- (24) M. Karlowatz, M. Kraft, B. Mizaikoff
Application of Tapered Silver Halide Fibers for Mid-IR Optical Sensors in the Marine Environment
Euroanalysis XI, Lisbon, Portugal, September 3-9, 2000.
- (25) M. Kraft, M. Karlowatz, B. Mizaikoff
Application of Tapered Silver Halide Fibers for Mid-IR Optical Sensors in the Marine Environment
4th Euroconference on Environmental Analytical Chemistry, Budapest, Hungary, September 10-14, 2000.

- (26) C. Kranz, B. Mizaikoff, G. Friedbacher, A. Lugstein, J. Smoliner, E. Bertagnolli
Combining SECM and AFM - Integration of an Ultramicroelectrode in an AFM-Tip
SXM4 - 4th International Conference on the Development and Technological Application of Scanning Probe Methods, Münster, Germany, September 25-27, 2000.
- (27) A. Lugstein, E. Bertagnolli, C. Kranz, B. Mizaikoff
FIB-Based Modification Technique for a Novel Type of SECM Probes
EFUG - European FIB User Group Meeting, Dresden, Germany, October 1-4, 2000.
- (28) B. Mizaikoff
Mid-Infrared Sensors for Marine Monitoring
SPIE Conference Photonics East, Boston/USA, November 3-8, 2000.
- (29) M. Jakusch, B. Mizaikoff
Selective Polymer Materials: Absolute Determination of Their Sorption Properties
SPIE Conference Photonics East, Boston/USA, November 3-8, 2000.
- (30) L. Hvozdar, S. Gianordoli, G. Strasser, W. Schrenk, K. Unterrainer and E. Gornik, V. V. Pustogov, Ch. S.S.S. Murthy, B. Mizaikoff, A. Inberg, N. Croitoru
Gas Absorption Spectroscopy using GaAs/AlGaAs Quantum Cascade Lasers and a Hollow Waveguide Absorption Cell
SPIE Conference Photonics East, Boston/USA, November 3-8, 2000.
- (31) B. Mizaikoff, M. Karlowatz, M. Kraft
Mid-Infrared Evanescent Field Sensors - A Novel Tool for Pollution Monitoring in the Marine Environment
PITTCO 2001, New Orleans, USA, March 4-9, 2001.
- (32) C. Kranz, E. L. Huang, B. Mizaikoff, A. Lugstein, E. Bertagnolli
Integration of an Ultramicroelectrode in an AFM Cantilever - A Novel Approach for Combining AFM and SECM
2nd International Workshop on Scanning Electrochemical Microscopy, Southampton, UK, June 29 - July 2, 2001.
- (33) M. Janotta, B. Mizaikoff
Organically Modified Sol-Gels – Novel Recognition Layers for Infrared Optical Sensors
5th Euroconference on Environmental Analytical Chemistry – The Impact of (Bio-)Sensors and Bioanalytical Techniques on Environmental Monitoring, Blarney, Ireland, September 8-12, 2001.
- (34) H. Steiner, M. Karlowatz, M. Jakusch, M. Kraft, B. Mizaikoff
In-Situ Sensing of Volatile Organic Compounds in Groundwater. First Field Tests of a Mid-Infrared Fiberoptic Sensing System.
5th Euroconference on Environmental Analytical Chemistry – The Impact of (Bio-)Sensors and Bioanalytical Techniques on Environmental Monitoring, Blarney, Ireland, September 8-12, 2001.
- (35) F. de Melas, V. V. Pustogov, B. Mizaikoff, D. C. Olson, D. K. Wolcott
Combination of a Mid-Infrared Hollow Waveguide Gas Sensor with a Supported Capillary Membrane Sampler for Detection of Organic Compounds in Water
5th Euroconference on Environmental Analytical Chemistry – The Impact of (Bio-)Sensors and Bioanalytical Techniques on Environmental Monitoring, Blarney, Ireland, September 8-12, 2001.
- (36) C. Kranz, E. L. Huang, B. Mizaikoff, H.-S. Noh, P. Hesketh, A. Lugstein, E. Bertagnolli
Electrochemical Imaging with Submicro- and Nanoelectrodes Integrated in AFM-Tips
2nd Georgia Tech Conference on Nanoscience and Nanotechnology, Atlanta, GA/U.S.A., September 19-21, 2001.
- (37) F. de Melas, V. V. Pustogov, B. Mizaikoff, D. C. Olson, D. K. Wolcott, A. Inberg, N. Croitoru B. Mizaikoff
Combination of a Mid-Infrared Hollow Waveguide Gas Sensor with a Supported Capillary Membrane Sampler. A Novel Sensing Approach for the Detection of Volatile Organic Compounds in Water.
SPIE Conference Photonics East, Boston/USA, October 28 - November 2, 2001. (CANCELLED)
- (38) F. Vogt, B. Mizaikoff, M. Tacke
Accelerating the PCA of Large Data Sets applied to Hyperspectral Imaging
SPIE Conference Photonics East, Boston/USA, October 28 - November 2, 2001.
- (39) C. Kranz, E. L. Huang, B. Mizaikoff, A. Lugstein, E. Bertagnolli
Towards Electrochemical Imaging on a Nanometer Scale with Submicro- and Nanoelectrodes Integrated in AFM-Tips
IEEE-NANO 2001, Maui/Hawaii, October 28-30, 2001.
- (40) F. Vogt, M. Kraft, M. Karlowatz, L. Hvozdar, B. Mizaikoff
Chemometric Data Evaluation for Improved Seawater Monitoring of Chlorinated Hydrocarbons by Mid-Infrared Evanescent Wave Sensors
PITTCO 2002, New Orleans/U.S.A., March 17-22, 2002.
- (41) C. Kranz, A. Kueng, B. Mizaikoff, A. Lugstein, E. Bertagnolli
Simultaneous Surface Modification and Imaging with Integrated Scanning Electrochemical/Atomic Force Microscopy
PITTCO 2002, New Orleans/U.S.A., March 17-22, 2002.

- (42) B. Mizaikoff, M. Janotta, N. Menegazzo, A. Molinelli, R. Weiss
Molecularly Imprinted Polymers – Versatile Applications for Sensing and Separation Techniques
PITTCON 2002, New Orleans/U.S.A., March 17-22, 2002.
- (43) B. Mizaikoff, L. Hvozدارa, N. Pennington, F. Vogt
Mid-Infrared Sensing Systems for Methane Monitoring in a Deep Sea Environment - Challenges and First Results
PITTCON 2002, New Orleans/U.S.A., March 17-22, 2002.
- (44) M. Thomson, P. Melling, M. Karlowatz, B. Mizaikoff
Reaction Monitoring in Small Reactors Using Fiber-Optic ATR Probes
PITTCON 2002, New Orleans/U.S.A., March 17-22, 2002.
- (45) H. S. Voraberger, A. Bizzarri, W. Trettnak, V. Ribitsch, M. Janotta, B. Mizaikoff
Novel Optical Techniques for Measuring Hydrogen Peroxide in Industrial Sample Media
Europt(r)ode Conference 2002, Manchester/UK, April 7-11, 2002.
- (46) A. Kueng, C. Kranz, B. Mizaikoff, A. Lugstein, E. Bertagnolli
Integrating an Ultramicroelectrode in an AFM Cantilever for In-Situ Imaging of Enzyme Activities
ECS 2002, Philadelphia/U.S.A., May 12-17, 2002.
- (47) H. Steiner, B. Mizaikoff, T. Baumann, R. Niessner, Y. Reichlin, A. Katzir, N. Fleischmann, K. Staubmann, R. Allabashi
Online Sensing of Volatile Organic Compounds in Ground Water using Mid-Infrared Fibre Optic Evanescent Wave Spectroscopy: A Pilot Scale Test
AUTMONET 2002, Automation in Water Monitoring, Vienna/Austria, May 21-22, 2002.
- (48) A. Kueng, C. Kranz, B. Mizaikoff, A. Lugstein, E. Bertagnolli
Integrated AFM-SECM for In-Situ Imaging of Enzyme Activities
Scanning Probe Microscopy, Sensors and Nanostructures 2002, Las Vegas/U.S.A., May 26-29, 2002.
- (49) R. Weiss, B. Mizaikoff
Towards Analysis of Mycotoxins in Beverages with Molecularly Imprinted Polymers for Deoxynivalenol and Zearalenone
24th Mycotoxin Workshop, Berlin/Germany, June 3-5, 2002.
- (50) M. Karlowatz, F. Vogt, B. Mizaikoff
An Automated Sample Preparation System for Volatile Compounds Applied for Infrared Evanescent Wave Sensor Calibration
SERMACS 2002, Charleston/U.S.A., November 13-16, 2002.
- (51) C. Charlton, L. Hvozدارa, F. DeMelas, B. Mizaikoff
Mid-Infrared Gas Sensing Using Quantum Cascade Lasers Combined with Hollow Waveguides
SERMACS 2002, Charleston/U.S.A., November 13-16, 2002.
- (52) A. Molinelli, R. Weiss, B. Mizaikoff
Molecularly Imprinted Polymers for the Determination of Flavonoids in Red Wine
SERMACS 2002, Charleston/U.S.A., November 13-16, 2002.
- (53) N. Pennington, F. Vogt, B. Mizaikoff
Development Of Infrared Chemical Sensors For Dissolved Methane In The Marine Environment: First Results
SERMACS 2002, Charleston/U.S.A., November 13-16, 2002.
- (54) M. Janotta, B. Mizaikoff
Novel Recognition Layers for Mid-Infrared Evanescent Wave Sensors based on Organically Modified Sol-gels
SERMACS 2002, Charleston/U.S.A., November 13-16, 2002.
- (55) M. Janotta, B. Mizaikoff
Sol-gel Based Mid-Infrared Evanescent Wave Sensors for Detection of Nitro-Compounds in Aqueous Solution
PITTCON 2003, Orlando, FL/U.S.A., March 9-14, 2003.
- (56) M. Karlowatz, F. Vogt, B. Mizaikoff
An Automated Sample Preparation System for Volatile Organic Compounds applied for IR Evanescent Wave Sensor Calibration
PITTCON 2003, Orlando, FL/U.S.A., March 9-14, 2003.
- (57) C. Kranz, A. Kueng, A. Lugstein, E. Bertagnolli, B. Mizaikoff
Simultaneous Tapping Mode Topographical and Electrochemical Imaging of Enzyme Activity with AFM-Tip Integrated Nanoelectrodes
PITTCON 2003, Orlando, FL/U.S.A., March 9-14, 2003.
- (58) N. Menegazzo, M. Janotta, B. Mizaikoff
Development of a New Approach Towards Formation of Electrosynthesized Molecularly Imprinted Polymers
PITTCON 2003, Orlando, FL/U.S.A., March 9-14, 2003.
- (59) A. Molinelli, R. Weiss, B. Mizaikoff
Molecularly Imprinted Polymers as Synthetic Receptors for Mykotoxin Analysis in Beverages
PITTCON 2003, Orlando, FL/U.S.A., March 9-14, 2003.

- (60) F. Vogt, M. Kraft, B. Mizaikoff
Mid-Infrared Attenuated Total Reflection (ATR) Spectroscopy for Quantitative Analysis of Salt Ions in Seawater
PITTCON 2003, Orlando, FL/U.S.A., March 9-14, 2003.
- (61) J. M. Cathcart, R. Campbell, R. Bock, M. Karlowatz, B. Mizaikoff, T. Orlando
Impact of Shallow Buried Objects on the Spectral Properties of Terrain Features
AeroSense 2003, Orlando, FL/U.S.A., April 22, 2003.
- (62) C. Kranz, A. Kueng, A. Lugstein, E. Bertagnolli, B. Mizaikoff
Simultaneous Electrochemical and Tapping Mode Imaging of Soft Biological Samples with Nanoelectrodes Integrated into AFM Tips
Scanning Probe Microscopy, Sensors and Nanostructures 2003, Oxford, England, May 23-26, 2003.
- (63) B. T. Thompson, B. Mizaikoff
Application of Partial Least Squares Methods to FT-IR Gas Phase Analysis of Sidestream Cigarette Smoke
FACSS 2003, Ft. Lauderdale, FL/U.S.A., October 19-23, 2003.
- (64) A. Kueng, C. Kranz, A. Lugstein, E. Bertagnolli, B. Mizaikoff
Simultaneous Electrochemical and Tapping Mode Imaging of Soft Biological Samples with AFM Tip Integrated Nanoelectrodes and Nanobiosensors
50th International Symposium of the American Vacuum Society, Baltimore/MD, November 3-7, 2003.
- (65) A. Molinelli, J. O'Mahony, K. Nolan, M. R. Smyth, B. Mizaikoff
Spectroscopic Studies of Pre-Polymerization Mixtures in Molecular Imprinting: Towards a Rational Approach for Optimized Imprinting Conditions
SERMACS 2003, Atlanta/U.S.A., November 16-19, 2003.
- (66) S. Wei, A. Molinelli, B. Mizaikoff
Synthesis and Characterization of Molecularly Imprinted Polymers for 17 β -Estradiol
SERMACS 2003, Atlanta/U.S.A., November 16-19, 2003.
- (67) G. T. Dobbs, N. Pennington, F. Vogt, B. Mizaikoff
Investigating the Influence of Pressure on IR-ATR Spectroscopy for Underwater Spectroscopic Sensing Applications
SERMACS 2003, Atlanta/U.S.A., November 16-19, 2003.
- (68) J. O'Mahony, A. Molinelli, K. Nolan, M. R. Smyth, B. Mizaikoff
Molecular Imprinting Technology: Designing Molecule-Specific Materials for Analytical Chemistry
SERMACS 2003, Atlanta/U.S.A., November 16-19, 2003.
- (69) M. Karlowatz, A. Aleksandrov, T. Orlando, B. Mizaikoff
The Influence of Wetting and Drying on Attenuated Total Reflectance Studies of Quartz in the Mid-Infrared
SERMACS 2003, Atlanta/U.S.A., November 16-19, 2003.
- (70) C. Charlton, A. Katzir, B. Mizaikoff
Quantum Cascade Lasers for Mid-Infrared Evanescent Wave Sensing and Hollow Waveguide Gas Sensing
SERMACS 2003, Atlanta/U.S.A., November 16-19, 2003.
- (71) N. Menegazzo, M. Janotta, C. Kranz, B. Mizaikoff
Study on the Electropolymerization Conditions of 4-Vinylpyridine in Acetonitrile
SERMACS 2003, Atlanta/U.S.A., November 16-19, 2003.
- (72) M. Karlowatz, A. Aleksandrov, T. Orlando, J. M. Cathcart, B. Mizaikoff
The Influence of Wetting and Drying Cycles on Mid-Infrared Attenuated Total Reflection Spectra of Quartz: Understanding Spectroscopy of Disturbed Soil
SPIE Defense and Security Symposium 2004, Orlando, FL/U.S.A., April 13-15, 2004.
- (73) D. Rudolph, M. Janotta, C. Kranz, S. Neuhuber, M. Taillefert, B. Miza ikoff
Scanning Electrochemical Microscopy: Dissolution and Corrosion Studies Using Au/Hg Amalgam Electrodes
205th ECS Meeting, San Antonio/TX, May 9-13, 2004.
- (74) J. Coe, P. Hesketh, C. Kranz, B. Mizaikoff
Batch Fabrication of AFM-SECM Microprobe Tip Arrays
205th ECS Meeting, San Antonio/TX, May 9-13, 2004.
- (75) N. Menegazzo, M. Janotta, C. Kranz, B. Mizaikoff
IR-ATR Spectroscopic Characterization of Molecularly Imprinted Poly(4-Vinylpyridin) Electropolymerized onto an Optically Transparent Electrode
205th ECS Meeting, San Antonio/TX, May 9-13, 2004.
- (76) C. Kranz, A. Kueng, J. Wiedemair, B. Mizaikoff
AFM-Tip Integrated Electrochemical Sensors – From Integrated Amperometric Biosensor to Potentiometric pH-Nanosensors
3rd Workshop on Scanning Electrochemical Microscopy (SECM), Dublin, Ireland, June 11-12, 2004.

- (77) C. Charlton, C. Anastassiou, O. Weisberg, Boris Mizaikoff
Mid-Infrared Gas Sensors Combining Quantum Cascade Lasers with Photonic Bandgap Fibers
MIOMD VI, St. Petersburg, Russia, June 28-July 1, 2004.
- (78) C. Charlton, R. Kribich, B. MacCraith, A. Katzir, B. Mizaikoff
Integrated planar silver halide waveguides and quantum cascade lasers for liquid phase chemical sensing
LEOS 2005, Rio Grande, Puerto Rico, November 7-11, 2004.
- (79) C. dos Santos Riccardi, C. Kranz, M. Josowicz, H. Yamanaka, B. Mizaikoff
Label-free DNA Detection based on Conducting Polypyrrole modified Films using Microelectrodes
ECS Meeting Georgia Section, Atlanta/GA, March 10, 2005.
- (80) N. Menegazzo, D. Rudolph, C. Kranz, B. Mizaikoff
Microstructured Deposition and Investigation of Poly(4-vinylpyridine) using Scanning Electrochemical Microscopy
ECS Meeting Georgia Section, Atlanta/GA, March 10, 2005.
- (81) M. Brucherseifer, C. Kranz, B. Mizaikoff
Combination of AFM with IR-ATR Spectroscopy for Measurements in Liquid Environments
CLEO/QELS 2005, Baltimore/ML, May 23-26, 2005.
- (82) C. Kranz, D. Rudolph, B. Mizaikoff
FIB-Fabricated Bifunctional AFM-SECM Probes: Towards AFM-Tip Integrated Amalgam Nano-Disk Electrodes
ECS 207th Meeting, Quebec/Canada, May 15-20, 2005.
- (83) D. Rudolph, D. Bates, T. DiChristina, C. Kranz, B. Mizaikoff
Scanning Electrochemical Microscopy with Amalgam Microelectrodes: Lifetime and Microbial Metal Respiration Studies at Pt/Hg Amalgam Electrodes
ECS 207th Meeting, Quebec/Canada, May 15-20, 2005.
- (84) N. Menegazzo, W. Waldhauser, B. Mizaikoff
Spectroelectrochemical Characterization and Application of Multireflection IR-ATR Waveguides coated with IR-transparent Doped DLC Electrodes
ECS 207th Meeting, Quebec/Canada, May 15-20, 2005.
- (85) D. Rudolph, D. Bates, T. DiChristina, B. Mizaikoff, C. Kranz
Scanning Electrochemical Microscopy (SECM) Studies on Microbial Metal Respiration Using Pt/Hg Amalgam Microelectrodes
15th Annual Goldschmidt Conference, Moscow/ID, May 20-25, 2005.
- (86) D. Bates, D. Rudolph, B. Mizaikoff, C. Kranz, M. Taillefert, T. DiChristina
A novel method for identification of multi-protein Fe(III) reductase complexes in the genus Shewanella
American Society for Microbiology (ASM) 105th Annual National Meeting, Atlanta, GA.
- (87) D. Bates, D. Rudolph, B. Mizaikoff, C. Kranz, M. Taillefert, T. DiChristina
A novel method for identification of multi-protein Fe(III) reductase complexes in the genus Shewanella
International Union of Microbiological Societies Meeting, San Francisco, CA.
- (88) C. Kranz, J. Wiedemair, B. Mizaikoff
From AFM-SECM to Tip-Integrated Sensors for Biological Applications
1st ECHEMS Meeting on Electrochemistry in Nanosciences, Venice, Italy, June 30-July 3, 2005.
- (89) C. Charlton, M. Giovannini, J. Faist, B. Mizaikoff
Quantum Cascade Lasers Coupled to GaAs Thin Film Waveguides - Toward Integrated Mid-Infrared Sensing Systems
MIOMD-VII, Lancaster/England, September 12-14, 2005.
- (90) S. Wei, M. Jakusch, B. Mizaikoff
Understand the mechanism of selectivity in molecular imprinted polymers by molecular dynamic simulation
231st ACS National Meeting, Atlanta/GA, March 26-30, 2006.
- (91) C. dos Santos Riccardi, M. Josowicz, J. Kowalik, H. Yamanaka, B. Mizaikoff, C. Kranz
Label-free DNA detection based on conducting polypyrrole modified films and microelectrodes
231st ACS National Meeting, Atlanta/GA, March 26-30, 2006.
- (92) J.-F. Masson, J. Wiedemair, C. Kranz, E. Gauda, B. Mizaikoff
Optimization of amperometric biosensors for ATP measurement at the carotid body
231st ACS National Meeting, Atlanta/GA, March 26-30, 2006.
- (93) J. Wiedemair, B. J. Duke, D. C. Eaton, B. Mizaikoff, C. Kranz
Miniaturization of ATP biosensors for the measurement of ATP release at epithelia
231st ACS National Meeting, Atlanta/GA, March 26-30, 2006.
- (94) C. Charlton, M. Giovannini, J. Faist, B. Mizaikoff
Evanescent field trace sensing in the mid-infrared with quantum cascade lasers and novel planar single-mode waveguides
231st ACS National Meeting, Atlanta/GA, March 26-30, 2006.

- (95) N. Menegazzo, W. Waldhauser, C. Jin, R. J. Narayan, B. Mizaikoff
Characterization of doped diamond-like Carbon Layers as optically transparent electrodes for mid-infrared spectroscopy and sensing
231st ACS National Meeting, Atlanta/GA, March 26-30, 2006.
- (96) L. Wang, J. Chapman, R. Palmer, O. v. Ramm, B. Mizaikoff
Classification of atherosclerotic rabbit aorta samples with mid-infrared spectroscopic techniques and multivariate data analysis
231st ACS National Meeting, Atlanta/GA, March 26-30, 2006.
- (97) G. Dobbs, B. Mizaikoff
In-situ monitoring of gas hydrate formation/dissociation with mid-IR fiber-optic evanescent field spectroscopy
Europt(r)ode VIII, Tuebingen/Germany, April 2-5, 2006.
- (98) B. Mizaikoff
Mid-Infrared Chemical Sensors based on Quantum Cascade Lasers: The Next Generation
2006 International Symposium on Spectral Sensing Research, Bar Harbor/ME, May 29-June 2, 2006.
- (99) D. Surawicz, P. Haring Bolivar, H. Shin, B. Mizaikoff
New Concepts for Near-Field Sensors Operating in the THz Frequency Range
2006 International Symposium on Spectral Sensing Research, Bar Harbor/ME, May 29-June 2, 2006.
- (100) J. Wiedemair, B. J. Duke, D. C. Eaton, B. Mizaikoff, C. Kranz
AFM Tip-Integrated Biosensors for In-Situ Investigation of Epithelial Cell Monolayers
Scanning Probe Microscopy, Sensors and Nanostructures, Montpellier/France, June 3-6, 2006.
- (101) J.-F. Masson, C. Kranz, E. Gauda, B. Mizaikoff
Study of the Carotid Body Maturation by Monitoring Local ATP Release
The 4th Workshop on Scanning Electrochemical Microscopy (SECM), Falcade/Italy, September 3-6, 2006.
- (102) B. Mizaikoff, S. Wei, M. Jakusch
Capturing Biomolecules with Templated Membranes: Toward Rational Design of Molecularly Imprinted Polymers
210th Meeting of the Electrochemical Society, Cancun/Mexico, October 29-November 3, 2006.
- (103) J.-F. Masson, J. Wiedemair, E. Gauda, D. E. Eaton, B. Mizaikoff, C. Kranz
Laterally Resolved Detection of Biomedically and Biologically Relevant Analytes
210th Meeting of the Electrochemical Society, Cancun/Mexico, October 29-November 3, 2006.
- (104) C. dos Santos Riccardi, J. Kowalik, M. Josowicz, H. Yamanaka, B. Mizaikoff, C. Kranz
Label-free DNA Detection of Hepatitis C Virus (HCV-1)
210th Meeting of the Electrochemical Society, Cancun/Mexico, October 29-November 3, 2006.
- (105) M.M. Disko, A.E. Riley, D.C. Calabro, A.M. Schilowitz, D.G. Yablon, C.H. Brons, M.G. Bird, J.L. Martin, C. Young, B. Mizaikoff
Advances in Molecular Recognition Sensing of Aromatics
SERMACS 2006, Augusta/GA, November 1-4, 2006.
- (106) C. Young, C.H. Brons, A.E. Riley, J.L. Martin, M.M. Disko, B. Mizaikoff
Multivariate Calibration of Mid-Infrared Hollow Waveguide Gas Sensors using Automated Gas Mixing
SERMACS 2006, Augusta/GA, November 1-4, 2006.
- (107) R. Zhang, S. Wei, B. Mizaikoff
Molecularly Imprinted Sol-Gel Materials for Selective Recognition of Bile Acid
SERMACS 2006, Augusta/GA, November 1-4, 2006.
- (108) M. M. Disko, A. E. Riley, D. C. Calabro, A. M. Schilowitz, D. G. Yablon, C. H. Brons, M. G. Bird, J. L. Martin, C. Young, B. Mizaikoff
Aromatics Sensing -- Emerging Methods for Recognition and Rapid Testing
IFPAC (International Forum for Process Analytical Chemistry) Annual Meeting, Baltimore/MA, January 28-31, 2007.
- (109) J.-F. Masson, C. Kranz, E. Gauda, B. Mizaikoff
Investigation of carotid body maturation by locally measuring ATP using amperometric micro-biosensors
PITTCO 2007, Chicago/IL, February 25 - March 2, 2007.
- (110) S.-H. Park, S. Wei, B. Mizaikoff, A. E. Taylor, M. Aral, C.-H. Huang
Mechanistic Insight for the N-nitrosodimethylamine (NDMA) Formation Potential of Amine-based Water Treatment Polymers
233rd ACS National Meeting, Chicago/IL, March 25-29, 2007.
- (111) J.-F. Masson, C. Kranz, B. Mizaikoff, E. Gauda
Zeit- und Ortsaufgelöste Bestimmung von ATP mit Hilfe von Miniaturisierten Amperometrischen Biosensoren
Experimental Biology Annual Meeting, Washington DC/VA, April 28-May 2 2007.
- (112) K. Eckhard, W. Schuhmann, H. Shin, B. Mizaikoff, C. Kranz
Alternating Current (AC) Impedance Imaging with Combined Atomic Force Scanning Electrochemical Microscopy (AFM-SECM)
211th ECS Spring Meeting, Chicago/IL, May 6-11, 2007.

- (113) J.-S. Moon, J. Wiedemair, B. Mizaikoff, C. Kranz
Combined Atomic Force Scanning Electrochemical Microscopy (AFM-SECM) for High-Resolution Imaging
IV LASPM (Latin American Scanning Probe Meeting), Mar del Plata/Argentina, May 2-5, 2007.
- (114) Dustin Surawicz, Peter Haring Bolivar, Heungjoo Shin, B. Mizaikoff
Surface Plasmon Polariton-based Coaxial Probe for Terahertz Near-field Microscopy
CLEO/QELS 2007, Baltimore/ML, May 6-11, 2007.
- (115) S.-Y. Cho, G. Dobbs, N. M. Jokerst, B. Mizaikoff, T. Cooper
Optical Microring Resonator Sensors with Selective Membrane Surface Customization
CLEO/QELS 2007, Baltimore/ML, May 6-11 2007.
- (116) J.-H. Seo, A. Byun, G. T. Dobbs, Y. Luzinova, S. T. Duerson, K. S. Demirci, B. Mizaikoff, O. Brand
Mass-sensitive Microsensor Platform for Liquid-phase Environmental Sensing
234th ACS National Meeting, Boston/MA, August 19-23, 2007.
- (117) J.-F. Masson, C. Kranz, B. Mizaikoff, E. Gauda
Study of the Carotid Body with Amperometric Microbiosensors for ATP
The 8th Workshop on Biosensors and Bioanalytical μ -Techniques, Goa, India, October 3-6, 2007.
- (118) J. Wiedemair, J.-S. Moon, H. Shin, B. Mizaikoff, C. Kranz
Ion beam induced deposition of platinum-carbon composite electrodes for bifunctional AFM-SECM probes
212th ECS Fall Meeting, Washington DC/VA October 7-12, 2007.
- (119) C. Young, C. H. Brons, A. E. Riley, J. L. Martin, M. M. Disko, B. Mizaikoff
FT-IR Hollow Waveguide Gas Sensors for BTX Monitoring in Field Environments
Invited, FACSS 2007, Memphis/TN, October 14-18, 2007.
- (120) G. T. Dobbs, A. Nguyen, Y. Luzinova, Y. Raichlin, C. Kranz, A. Katzir, R. Sassen, B. Mizaikoff
Infrared Spectroscopy for Exploring Complex Oceanic Gas Hydrate Ecosystems
Invited, FACSS 2007, Memphis/TN, October 14-18, 2007.
- (121) R. Zhang, S. Wei, B. Mizaikoff
Selective Recognition of Bile Acids by Molecular Imprints
6th IEEE Sensors Conference 2007, Atlanta/GA, October 28-31, 2007.
- (122) S.-S. Kim, C. Young, J. Chan, C. Carter, B. Mizaikoff
Hollow Waveguide Gas Sensors for Mid-Infrared Trace Gas Analysis
6th IEEE Sensors Conference 2007, Atlanta/GA, October 28-31, 2007.
- (123) S.-Y. Cho, G. Dobbs, N. M. Jokerst, B. Mizaikoff
Surface Customized Optical Microresonator Sensors for Integrated Chip-Scale Portable Sensing Applications
6th IEEE Sensors Conference 2007, Atlanta/GA, October 28-31, 2007.
- (124) C. Young, S. Hartwig, A. Lambrecht, S.-S. Kim, B. Mizaikoff
Optimizing Gas Sensors based on Quantum Cascade Lasers and Photonic Bandgap Hollow Waveguides
6th IEEE Sensors Conference 2007, Atlanta/GA, October 28-31, 2007.
- (125) C. Young, S.-S. Kim, M. Weida, D. Arnone, E. Takeuchi, T. Day, B. Mizaikoff
Widely Tunable Quantum Cascade Laser based Hollow Waveguide Gas Sensors for Multianalyte Detection
PITTCON 2008, New Orleans/LA, March 2-6, 2008.
- (126) S.-S. Kim, C. Young, Y. Luzinova, J.-H. Ryou, Y. Huang, R. Dupuis, S. R. Ralph, M. Weida, D. Arnone, E. Takeuchi, T. Day, B. Mizaikoff
Toward Integrated Mid-Infrared Photonic Sensors
PITTCON 2008, New Orleans/LA, March 2-6, 2008.
- (127) J.-S. Moon, J.-F. Masson, B. Mizaikoff, C. Kranz
AFM Tip-integrated Solid-state pH Microsensors
PITTCON 2008, New Orleans/LA, March 2-6, 2008.
- (128) L. Wang, B. Mizaikoff, C. Kranz
Combination of Attenuated Total Reflection Infrared Spectroscopy with Scanning Electrochemical Microscopy
PITTCON 2008, New Orleans/LA, March 2-6, 2008.
- (129) Y. Luzinova, S. T. Duerson, G. T. Dobbs, J.-H. Seo, O. Brand, B. Mizaikoff
Chemically Modified Micro-Resonator Sensors
PITTCON 2008, New Orleans/LA, March 2-6, 2008.
- (130) C. Young, S.-S. Kim, Y. Luzinova, M. Weida, D. Arnone, E. Takeuchi, T. Day, B. Mizaikoff
From FT-IR to Quantum Cascade Lasers: Hollow Waveguide Based Gas Sensors - Representations in Laboratory and Field
EUROPTRODE IX 2008, Dublin/Ireland, March 30 - April 2, 2008.

- (131) G. T. Dobbs, Y. Luzinova, Y. Raichlin, A. Katzir, B. Mizaikoff
Infrared Spectroscopy for Monitoring Gas Hydrates in Aqueous Environments
6th International Conference on Gas Hydrates 2008, Vancouver, BC, Canada, July 6-10, 2008.
- (132) X. Wang, C. Kranz, B. Mizaikoff
Use of Miniaturized Mid-Infrared Sensor Techniques
Workshop on In-situ, Continuous Biochemical Analyser, Astrium – EADS, Friedrichshaven, Germany, March 11-12, 2009.
- (133) Y. Luzinova, G. T. Dobbs, R. Sassen, B. Mizaikoff
Quantification of Adamantane with Infrared Attenuated Total Reflection Spectroscopy
238th ACS National Meeting, Washington/DC, August 16-20, 2009.
- (134) C. Weber, E. Hecht, E. Gauda, B. Mizaikoff, C. Kranz
Amperometric Microbiosensors based on PQQ-dependent Glucose Dehydrogenase: Towards the Development of an ATP Biosensor for in vitro Analysis
Medical Physics and Biomedical Engineering World Congress 2009, Munich, Germany, September 7-12, 2009.

Forthcoming Talks

- (1) F. Meier, M. Soliman El-Hamshary, R. Mohamed El-Nasher, B. Mizaikoff
Molecular Imprinting of Oxybutynin
216th ECS Meeting, Vienna, Austria, October 4-9, 2009.
- (2) C. Young, N. Menegazzo, B. Mizaikoff
Trace Level Detection of Benzene using FT-IR Hollow Waveguide Gas Sensors
FACSS 2009, Louisville/KT, October 18-22, 2009.
- (3) B. Mizaikoff
Toward Near-Field Microscopy with Monolithic MIR and THz Chips
Invited, TERA-MIR 2010, Turunç-Marmaris, Turkey, November 3-6, 2009.
- (4) B. Mizaikoff
Molecularly Imprinted Stationary Phases
Invited, PITTCON 2010, Orlando/FL, USA, February 28-March 5, 2010.
- (5) B. Mizaikoff
Miniaturized Mid-Infrared Gas Sensors
Invited, Europt(r)ode X, Prague, Czech Republic, March 28-31, 2010.

Invited Seminars

- (1) B. Mizaikoff
Infrared Fiber Optic Sensors - Recent Developments and New Directions
Joint Research Center of the European Union - IRMM, Geel/Belgium, June 20, 1997.
- (2) B. Mizaikoff
Infrared Fiber Optic Sensors
Bruker FTIR Benutzertreffen 1997, Karlsruhe/Germany, November 6-7, 1997.
- (3) B. Mizaikoff
MIR Fiber Optic Sensors – Developments and Applications
Siemens GmbH, Munich/Germany, February 10, 1998.
- (4) B. Mizaikoff
Infrarot-Mikroskopie – Anwendung in der industriellen Analytik
Felten&Guilleaume AG, Schrems/Austria, March 8, 1998.
- (5) B. Mizaikoff
Infrared Fiber Optic Sensors – A New Tool in Analytical Chemistry?
University of Hamburg, Hamburg/Germany, June 9-10, 1998.
- (6) B. Mizaikoff
Fast-Spec – Schadstoffmonitoring (HC, CO) von Autoabgasen mittels zeitaufgelöster IR-Spektroskopie
University of Vienna, Vienna/Austria, November 19, 1998.
- (7) B. Mizaikoff
Mid-Infrared Fiberoptic Sensors – Potential and Application
Georgia Institute of Technology, Atlanta/USA, January 13, 1999.

- (8) B. Mizaikoff
New Technologies for Mid-Infrared Optical Sensors
University of Neuchâtel, Neuchâtel/Switzerland, December 2, 1999.
- (9) B. Mizaikoff
Molecular Recognition Strategies for Chemical Sensor Technology
IFA Tulln, Tulln/Austria, December 9, 1999.
- (10) B. Mizaikoff
The Potential of Mid-Infrared Optical Sensors for Environmental and Industrial Applications
Merck KGaA, Darmstadt/Germany, December 13, 1999.
- (11) B. Mizaikoff
Novel Mid-Infrared Optical Sensors and Their Application
University of California, Davis/USA, January 18, 2000.
- (12) B. Mizaikoff
Latest Technologies for Mid-Infrared Optical Sensors
Lawrence Berkeley National Laboratory, San Francisco/USA, January 20, 2000.
- (13) B. Mizaikoff
MIR-Sensing and Molecular Recognition Schemes
Lehrstuhls für Hydrogeologie, Hydrochemie und Umweltanalytik der TU München, Munich/Germany, June 9, 2000.
- (14) B. Mizaikoff
Mid-Infrared Optical Sensors – Technology and Applications
Joanneum Research, Graz/Austria, June, 2000.
- (15) B. Mizaikoff
Optische Sensorik im mittleren Infrarot – Rückblick und Zukunft
Bruker Analytische Messtechnik GmbH, Ettlingen/Germany, July, 2000.
- (16) B. Mizaikoff
Novel Applications of Mid-Infrared Sensors
Bruker Optics, Billerica/U.S.A., November, 2000.
- (17) B. Mizaikoff
Novel Applications of Mid-Infrared Sensors
Alpes Lasers, Neuchâtel/Switzerland, November, 2000.
- (18) B. Mizaikoff
Mid-Infrared Sensors for Environmental Applications – From the Lab to the Field
CEE, Georgia Institute of Technology, Atlanta/GA, U.S.A., February, 2001.
- (19) B. Mizaikoff
Miniaturization - The Future of Infrared Sensing?
Microphotonics Seminar Series, MIT, Boston/MA, U.S.A., April, 2001.
- (20) B. Mizaikoff
Future Aspects of Mid-Infrared Sensors – Miniaturization, QCLs, Integrated Waveguides and Chemical Functionality
Drägerwerk AG, Lübeck/Germany, June, 2001.
- (21) B. Mizaikoff
The Future of Mid-Infrared Sensors
Grabner Instrumentelle Messtechnik, Wien/Austria, June, 2001.
- (22) B. Mizaikoff
Biomimetic Recognition Based on Molecularly Imprinted Polymers – Potential and Perspectives for Industrial Analysis
B&W Tobacco Corp., Macon/GA, U.S.A., October, 2001.
- (23) B. Mizaikoff
New Perspectives for Mid-Infrared Sensor Technology and Integrated Scanning Probe Sensors
University of Georgia, Athens/GA, U.S.A., January, 2002.
- (24) B. Mizaikoff
Optical Sensor Technology and Biomimetic Recognition for Food and Beverage Industries
Coca-Cola Corp., Atlanta/GA, U.S.A., March, 2002.
- (25) C. Kranz, A. Kueng, B. Mizaikoff
Is there a Need for Scanning Electrochemical Microscopy in Biomedical Applications?
Emory University, School of Medicine, Atlanta/GA, U.S.A., April, 2002.

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- (26) B. Mizaikoff, C. Kranz
From Infrared Chemical Sensors to Multifunctional Scanning Probes
University of Tuebingen, Tuebingen, Germany, May, 2002.
- (27) B. Mizaikoff
The Role of Synthetic Receptors in Advanced Food and Beverage Analysis: Biomimetic Molecular Imprints for Mycotoxins
FDA Southeast Regional Laboratory, Atlanta/GA, U.S.A., June, 2002.
- (28) B. Mizaikoff, C. Kranz
Chemical Sensor Technology and Multifunctional Scanning Probes
Oak Ridge National Laboratory (ORNL), Life Sciences Division, Oak Ridge, TN, January, 2003.
- (29) B. Mizaikoff
Infrared Chemical Sensor Technology
Stevens Institute of Technology, Physics Colloquia Series, Hoboken, NJ, April, 2003.
- (30) B. Mizaikoff
Mid-Infrared Sensors and Multifunctional Scanning Probes - Where is the connection?
Rice University, Dept. of Electrical and Computer Engineering Houston, TX, May, 2003.
- (31) B. Mizaikoff
Von chemischen Infrarot Sensoren zu multifunktionellen Rasternahfeldtechniken - Quo vadis?
University of Muenster, Dept. of Chemistry, Muenster, Germany, May, 2003.
- (32) B. Mizaikoff
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- RWTH Aachen, GE
- Univ. of Windsor, CA
- Univ. of Texas at Austin, U.S.A.
- Fraunhofer IPM Freiburg, GE
- TU Berlin, GE
- Tel Aviv Univ., IL
- Lund Univ., SE
- Ruhr Univ. Bochum, GE
- Inst. of Solid State Electronics, TU Wien, A
- IWGA-BOKU, A
- Emory Univ., School of Medicine, U.S.A.
- Univ. Tübingen, GE
- Duke University, U.S.A.
- Univ. of Linz, A
- Lawrence Livermore National Laboratory, U.S.A.
- Univ. of Veszprém, HUN
- Univ. Complutense de Madrid, ES
- IFREMER Brest, FR
- TU München, GE
- IFA Tulln, A
- Hydrovision, UK
- Dublin City Univ., IE
- University of Leipzig, GE
- Univ. of Rennes, FR
- Univ. of Neuchâtel, CH
- Univ. Hamburg, GE
- Univ. of Washington, U.S.A.
- ARCS Seibersdorf, A
- Johns Hopkins Medical Institutions, U.S.A.
- Arizona State Univ., U.S.A.

Recent Industrial/Commercial Collaborators:

- Bruker Analytische Messtechnik, GE
- Alpes Lasers, CH
- Vigo Ltd., PL
- Bruker Optics, U.S.A.
- Remspec, U.S.A.
- Grabner Instruments, A
- ExxonMobil, U.S.A.
- Laser Components, GE
- Moeller Gebäudeschutztechnik AG, A
- Agrolinz Melamin GmbH, A
- Infrared Associates, U.S.A.
- GlobalFIA, U.S.A.
- Cognis Deutschland GmbH, GE
- Agilent, U.S.A.
- OmniGuide Corporation, U.S.A.
- Daylight Solutions, U.S.A.