

On-Line Electrochemistry/Mass Spectrometry Literature (non-volatiles)

Grouped by Ion Source/Interface and Publication Year

Patents

Cole, R. B.; Xu, X. "Apparatus and Method for Rapid On-Line Electrochemistry and Mass Spectrometry." U.S. Patent 5,879,949; Mar. 9, 1999.

Phillips, L. R.; Bartmess, J. E. "Electrochemical Sample Probe for Use in Fast Atom Bombardment Mass Spectrometry." U.S. Patent 4,719,349; Jan. 12, 1988.

Subject Reviews

Zhou, F. "Stripping Analysis Combined On-Line with Inductively Coupled Plasma-Atomic Emission Spectrometry and with Inductively Coupled Plasma-Mass Spectrometry." *Electroanalysis* **1996**, 8, 855-861.

Volk, K. J.; Yost, R. A.; Brajter-Toth, A. "Electrochemistry On Line with Mass Spectrometry: Insight into Biological Redox Reactions." *Anal. Chem.* **1992**, 64, 21A-33A

Bittins-Cattaneo, B; Cattaneo, E; Königshoven, P; Vielstich, W. "New Developments in Electrochemical Mass Spectroscopy." In *Electroanalytical Chemistry*, Vol. 17; Bard A. J., Ed.; Marcel Dekker: New York, 1991, pp. 181-220.

Chang, H.; Johnson, D.C.; Houk, R. S. "InSitu Coupling Between Electrochemistry and Mass Spectrometry - A Literature Review." *Tr. A. C.* **1989**, 8, 328-XXX.

Atmospheric Pressure Chemical Ionization (APCI)/Atmospheric Pressure Photoionization (APPI)

2001

Diehl, G.; Liesener, A.; Karst, U. "Liquid chromatography with post-column electrochemical treatment and mass spectrometric detection of non-polar compounds." *Analyst* **2001**, 126, 288-290.

Electrospray

2001

Diehl, G.; liesener, A.; Karst, U. "Liquid chromatography with post-column electrochemical treatment and mass spectrometric detection of non-polar compounds." *Analyst* **2001**, 126, 288-290.

Johnson, K. A.; Shira, B. A.; Anderson, J. L.; Amster, I. J. "Chemical and On-Line Electrochemical Reduction of Metalloproteins with High Resolution Electrospray Ionization Mass Spectrometry Detection." *Anal. Chem.* **2001**, 73, 803-808.

Kertesz, V.; Van Berkel, G. J. "Electropolymerization of Methylene Blue Investigated Using On-Line Electrochemistry/Electrospray Mass Spectrometry." *Electroanalysis*, in press.

2000

Deng, H.; Van Berkel, G. J.; Takano, H.; Gazda, D., Porter, M. D. "Electrochemically-Modulated Liquid Chromatography Coupled On-line with Electrospray Mass Spectrometry." *Anal. Chem.* **2000**, 72, 2641-2647.

Jurva, U.; Wikström, H. V.; Bruins, A. P. "In vitro mimicry of metabolic oxidation reactions by electrochemistry/mass spectrometry." *Rapid Commun. Mass Spectrom.* **2000**, 14, 529-533.

Pretty, J. R.; Deng, H.; Goeringer, D. E.; Van Berkel, G. J. "Electrochemically-Modulated Preconcentration and Matrix Elimination for Organic Analytes Coupled On-Line with Electrospray Mass Spectrometry." *Anal. Chem.* **2000**, 72, 2066-2074.

1999

Arakawa, R.; Abura, T.; Fukuo, T.; Horiguchi, H.; Matsubayashi, G. "Analysis of Electrolysis Reactions of Metal Complexes Using On-Line Electrospray Ionization Mass Spectrometry with a Compact Electrolytic Flow-Through Cell." *Bull. Chem. Soc. Jpn.* **1999**, 72, 1519-1523.

Deng, H.; Van Berkel, G. J. "Electrochemical Polymerization of Aniline Investigated using On-Line Electrochemistry/Electrospray Mass Spectrometry." *Anal. Chem.* **1999**, 71, 4284-4293.

Deng, H.; Van Berkel, G. J. "A Thin-Layer Flow Cell Coupled On-Line with Electrospray-Mass Spectrometry for the Study of Biological Redox Reactions." *Electroanalysis* **1999**, 11, 857-865.

Iwahashi, H. "3-Hydroxyanthralinic acid-derived compounds formed through electrochemical oxidation." *J. Chromatogr. B* **1999**, 736, 237-245.

1998

Pretty, J. R.; Van Berkel, G. J. "Electrochemical Sample Pretreatment Coupled On-Line with Electrospray Mass Spectrometry for Enhanced Elemental Analysis." *Rapid Commun. Mass Spectrom.* **1998**, 12, 1644-1652.

1997

Iwahashi, H.; Iishii, T. "Detection of the oxidative products of 3-hydroxykynurenine using high-performance liquid chromatography-electrochemical detection- ultraviolet absorption detection-electron spin resonance spectrometry and high-performance liquid chromatography-electrochemical detection-ultraviolet absorption detection-mass spectrometry." *J Chromatogr. A* **1997**, 773, 23-31.

Lu, W.; Xu, X.; Cole, R. B. "On-Line Linear Sweep Voltammetry-Electrospray Mass Spectrometry." *Anal. Chem.* **1997**, 69, 2478-2484.

1996

Xu, X.; Lu, W.; Cole, R. B. "On-Line Probe for Fast Electrochemistry/Electrospray Mass Spectrometry. Investigation of Polycyclic Aromatic Hydrocarbons." *Anal. Chem.* **1997**, 69, 2478-2484.

1995

Bond, A. M.; Colton, R.; D'Agnostino, A; Downard, A. J.; Traeger, J. C. "A Role for Electrospray Mass Spectrometry in Electrochemical Studies." *Anal. Chem.* **1995**, 67, 1691-1695.

Zhou, F.; Van Berkel, G. J. "Electrochemistry Combined On-Line with Electrospray Mass Spectrometry." *Anal. Chem.* **1995**, 67, 3643-3649.

FAB

Phillips, L. R.; Bartmess, J. E. "Electrochemically Assisted Fast Atom Bombardment Negative-Ion Mass-Spectrometry of Quinones." *Biomed Environ. Mass Spectrom* **1989**, 18, 878-883.

Phillips, L. R.; Bartmess, J. E. "Electrochemically Assisted Fast Atom Bombardment Mass Spectrometry." *Org Mass Spectrom.* **1989**, 24, 855-856.

Bartmess, J. E.; Phillips, L. R. "Electrochemically Assisted Fast Atom Bombardment Mass Spectrometry." *Anal. Chem.* **1987**, 59, 2012-2014.

Inductively Coupled Plasma

1998

Pretty, J. R.; Duckworth, D. C.; Van Berkel, G. J. "Electrochemical Sample Pretreatment Coupled On-Line with ICP-MS: Analysis of Uranium using an Anodically Conditioned Glassy Carbon Working Electrode." *Anal. Chem.* **1998**, 70, 1141-1148.

Pretty, J. R.; Van Berkel, G. J.; Duckworth, D. C. "Adsorptive Stripping Voltammetry as a Sample Pretreatment Method for Trace Uranium Determinations by Inductively Coupled Plasma Mass Spectrometry." *Int. J. mass Spectrom. Ion Processes* **1998**, 178, 51-63.

1997

Pretty, J. R.; Duckworth, D. C.; Van Berkel, G. J. "Anodic Stripping Voltammetry Coupled On-Line with Inductively Coupled Plasma Mass Spectrometry: Optimization of a Thin-Layer Flow Cell System for Analyte Signal Enhancement." *Anal. Chem.* **1997**, 69, 3544-3551.

1996

Hwang, T-J.; Jiang, S-J. "Determination of Copper, Cadmium, and Lead in Biological Samples by Isotope Dilution Inductively Coupled Plasma Mass Spectrometry After On-line Pre-Treatment by Anodic Stripping Voltammetry." *J. Anal. At. Spectrom* **1996**, 11, 353-357.

1995

Zhou, F., Van Berkel, G. J., Morton, S. J.; Duckworth, D. C.; Adeniyi, W. K.; Keller, J. M. "Development of On-Line Electrochemical Sample Pretreatment Methods for the Analysis of Thallium and Uranium by ICP-MS." In *Applications of Inductively Coupled Plasma-Mass Spectrometry to Radionuclide Determinations*, ASTM STP1291, Morrow, R. W.; Crains, J. S., Eds., American Society for Testing and Materials, West Conshohocken, 1995, pp. 82-98.

1994

Pretty, J. R.; Blubaugh, E. A.; Caruso, J. A.; Davidson, T. M. "Determination of Chromium (VI) and Vanadium (V) Using an On-Line Anodic Stripping Voltammetry Flow Cell with Detection by Inductively Coupled Plasma Mass Spectrometry." *Anal. Chem.* **1994**, 66, 1540-1547.

Pretty, J. R.; Blubaugh, E. A.; Caruso, J. A. "Determination of Arsenic (III) and Selenium (IV) Using an On-Line Anodic Stripping Voltammetry Flow Cell with Detection by Inductively Coupled Plasma Atomic Emission Spectrometry and Inductively Coupled Plasma Mass Spectrometry." *Anal. Chem.* **1993**, 65, 3396-3403.

Pretty, J. R.; Blubaugh, E. A.; Evans, E. H.; Caruso, J. A.; Davidson, T. M. "Determination of Copper and Cadmium Using an On-Line Anodic Stripping Voltammetry Flow Cell with Detection by Inductively Coupled Plasma Mass Spectrometry." *J. Anal. At. Spectrom.* **1992**, 7, 1131-1137.

Pretty, J. R.; Evans, E. H.; Blubaugh, E. A.; Shen, W-L.; Caruso, J. A.; Davidson, T. M. "Minimisation of Sample Matrix Effects and Signal Enhancement for Trace Analytes Using Anodic Stripping Voltammetry With Detection by Inductively Coupled Plasma Atomic Emission Spectrometry and Inductively Coupled Plasma Mass Spectrometry." *J. Anal. At. Spectrom.* **1990**, 5, 437-443.

Particle Beam

2000

Zhang, T.; Brajter-Toth, A. "On-Line Investigation of the Generation of Nonaqueous Intermediate Radical Cations by Electrochemistry/Mass Spectrometry." *Anal. Chem.* **2000**, 72, 2533-2540.

1999

Regino, M. C. S.; Brajter-Toth, A. "Real Time Characterization of Catalysis by On-line Electrochemistry Mass Spectrometry. Investigation of Quinone Electrocatalysis of Amine Oxidation." *Electroanalysis* **1999**, 11, 374-379.

1998

Regino, M. C. S.; Weston, C.; Brajter-Toth, A. "Effect of mobile phase composition on the electrochemical cell conversion efficiency in electrochemistry mass spectrometry." *Anal. Chim. Acta* **1998**, 369, 253-262.

1997

Regino, M. C. S.; Brajter-Toth, A. "An Electrochemical Cell for On-Line Electrochemistry/Mass Spectrometry." *Anal. Chem.* **1997**, 69, 5067-5072.

Thermospray

1998

Hambitzer G.; Heitbaum, J.; Stassen, I. "Electrochemical thermospray mass spectrometry-anodic oxidation of *N,N*-dialkyylanilines." *J. Electroanal. Chem.* **1998**, 447, 117-124.

Hambitzer G.; Heitbaum, J.; Stassen, I. "Electrochemical Thermospray Mass Spectrometry Instrumentation for Coupling Electrochemistry to Mass Spectrometry." *Anal. Chem.* **1998**, 70, 838-842.

1997

Stassen, I.; Hambitzer G.; "Anodic oxidation of aniline and *N*-alkyylanilines in aqueous

sulphuric acid studied by electrochemical thermospray mass spectrometry." *J. Electroanal. Chem.* **1997**, 440, 219-228.

1993

Hambitzer G.; Heinz, P.P; Stassen, I.; Heitbaum, J. "Electrochemical Thermospray Mass Spectrometry - A Method for the Investigation of the First Steps of Polymerization Reactions." *Synthetic Metals*. **1993**, 55-57, 1045-1050.

Hambitzer G.; Stassen, I. "Polymerization of Aniline in Aqueous Sulphuric Acid - Study by Electrochemical Thermospray Mass Spectrometry." *Synthetic Metals*. **1993**, 55-57, 1045-1050.

1992

Volk, K. J.; Yost, R. A.; Brajter-Toth, A.; Freeman, J. A. "A dynamic approach for studying redox reactions: electrochemistry on-line with mass spectrometry." *Analisis* **1992**, 20, 421-425.

1991

Dewald, H; Worst, S. A.; Butcher, J. A., Jr.; Saulinskas, E. F. "Separation and Identification of Isoflavones with On-line Liquid Chromatography-Electrochemistry-Thermospray Mass Spectrometry." *Electroanalysis* **1991**, 3, 777-782.

1990

Volk, K. J.; Yost, R. A.; Toth-Brajter-Toth, A. "On-Line Mass Spectrometric Insights into Electrochemical Reactions: Oxidation of Thiopurines." *J. Electrochem. Soc.* **1990**, 137, 1764-1771.

Volk, K. J.; Yost, R. A.; Brajter-Toth, A. "On-line mass spectrometric investigation of the peroxidase-catalysed oxidation of uric acid." *J. Pharm. Biomed. Anal.* **1990**, 8, 205-215.

1989

Getek, T. A.; Korfomacher, W. A.; McRae, T. A.; Hinson, J. A. "Utility of Solution Electrochemistry Mass Spectrometry for Investigating the Formation and Detection of Biologically Important Conjugates of Acetaminophen." *J. Chromatogr.* **1989**, 474, 245-256.

Volk,K. J.; Yost, R. A.; Brajter-Toth, A. "On-Line Electrochemistry/Thermospray/Tandem Mass Spectrometry as a New Approach to the Study of Redox Reactions: The

Oxidation of Uric Acid." *Anal. Chem.* **1989**, 61, 1709-1717.

Volk, K. J.; Yost, R. A.; Brajter-Toth, A. "Characterization of Solution Phase and Gas-Phase Reactions in On-Line Electrochemistry-Thermospray Tandem Mass Spectrometry." *J. Chromatogr.* **1989**, 474, 231-243.

1986

Hambitzer, G.; Heitbaum, J. "Electrochemical Thermospray Mass Spectrometry." *Anal. Chem.* **1986**, 58, 1067-1070.