

Maria T. Matyska-Pesek Research Scientist, Adjunct Professor of Chemistry

EDUCATION:

1. Medical Academy - Lublin - M.S. (1981) Pharmacy
2. Medical Academy - Lublin - Ph.D (1987 -1989) Analytical Chemistry
3. University d'Aix Marseille - Postdoctoral. (1991) Theory of Chromatography

EXPERIENCE

Medical Academy, Chemistry Department - Lublin, Poland, February 1982 - September 1993. Department Chairman: Prof. Edward Soczewinski. Subject: Theory of TLC and HPLC. From October 1983 to September 1989 worked as chemistry faculty (Assistant Professor) teaching Inorganic Chemistry for Pharmacy students. Prepared and delivered original lectures for 3rd year and senior level Inorganic and Analytical Chemistry classes. From September 1990-1993 "adjunct" Polish equivalent of Associate Professor in US.

"Leiras"- Pharmaceutical Company in Turku, Finland - Drug analysis and monitoring -1986.

Universite d'Aix-Marseille - September 1991 - January 1992 and September 1993 - June 1993, Postdoctoral Fellowship, collaboration with Prof. A.M. Siouffi: Programmed Multiple Development (PMD) Analysis of Drugs and Optimization of a Sample Clean-up Procedure: Theory of Chromatography: Solid Phase Extraction (SPE) - Computer Aided Optimization.

San José State University - Research Scientist - September 1993 – 2001. Adjunct Professor of Chemistry - 2001- Present. Development of Electrochromatography and separations media for HPLC and CEC techniques. Student Supervision:

Helena Hemphälä, visiting student from Royal Institute, Stockholm
Leena Mauskar, M.S. student, SJSU
Jayshri Ramakrishnan, M.S. student, SJSU
Shavand Kamath, M.S. student, SJSU
Urmi Parkar, M.S. student, SJSU
Pik Fong Fu, M.S. student SJSU
Sungjin Cho, M.S. student SJSU
Michelle Oliva, M.S. student SJSU
Surekha Gangakhedkar, M.S. student SJSU
Seema Prabhakaran, M.S. student SJSU
Raymond Yu, M.S. student SJSU
Chidi Obi, M.S. student SJSU
Sheela Muley, M.S. student SJSU
Sharel Menezes, M.S. student SJSU
Helen Tran, M.S. student SJSU
Huy Tu Nguyen, M.S. student SJSU
Vidhya Krishnamoorthi, M.S. student SJSU

Elham Moslehi, M.S. student SJSU
Radha Suryadevara, M.S. student SJSU
Deepika Janga, M.S. student SJSU
Lopa Dalal, M.S. student SJSU
Sunandini Velpula, M.S. student SJSU
Dipti Sukul, M.S. student SJSU
Paul Lee, M.S. student SJSU

Undergraduate research students:

Sudeep Takhar, B.S. Chemistry.
Rosalia Tranchino, B.S. chemical engineering.
Marc Evanchic, Graduate student at UC Davis.
Catherine Chen, B.S. Chemistry
Paul Marc, Chemistry
Richard Seipert, Chemistry
Thomas Blomquist, Chemistry
Gabriela Carlon, Chemistry
Adna Haliloviv, Chemistry
Ilu Chiu, Chemistry
Sanjay S. Shirke, Mechanical Engineering
Srikant Mantha, Mechanical Engineering
Deborah Behrman, Chemistry
Veronica Rocha, Chemistry
Annie Bui, Chemistry
Thuy Nguyen, Chemistry
Harrison Simon, Chemistry
Beth Zito, Chemistry
Josh Young, Chemistry
Sergio Yoc, Chemistry
Anil Azad, Chemistry
Narghes Sardaghi, Chemistry
Salvador Lopez, Chemistry
Andy Dang, Chemistry
Rosie Le, Chemistry
Alejandra Hasbun, Chemistry
Hong Nguyen, Chemistry
Zahra Mehr, Chemistry
Vy Phan, Chemistry
Andrew Jimena

Varian - Solid Phase Extraction and GC - MS analysis (1994-97).

TSP (Thermoseparation Products) - Evaluation of new HPLC program.

Testing the HPLC software and hardware (1995-97).

Lynx Therapeutics Inc. – Modification of the silica surfaces for the analysis of the biological molecules. Development of application of Isoelectric Focusing Technique in proteomics analysis.(1997- present).

Silicon Valley Separation Media – President and Chief Operating Officer (1998-present).

Supelco – Consulting (2002).

DEY L.P. – Development of fluorescence method for drug analysis (2001-present).

Microsolv, Inc. – Consulting (2000 – present)

HONORS AND ACTIVITIES

1981: Title "**Golden Esculap**" - for the best student of Medical Academy in Poland

Since 1982 member of Polish Pharmaceutical Society, since 1985 member of Polish Chemical Society.

2002: Appointed to serve on the Editorial Board of the Journal of Liquid Chromatography.

COMMUNICATIONS

1. 13th Symposium on Column Liquid Chromatography - Stockholm 25-30.VI.1989.
2. 7th Danube Symposium on Chromatography - Leipzig 21-25.VIII.1989.
3. Symposia in Poland (Kalisz, Katowice, Lublin).
4. "Chemically Modified Surfaces for Electrochromatography", HPCE '95, Wurzburg, Germany, February, 1995.
5. "New Capillary Surface Modification for OTCEC", HPCE '95, Wurzburg, Germany, February, 1995.
6. "Synthesis, Characterization and Applications of Hydride-Based Materials for HPLC, HPCE and Electrochromatography", BCEIA 95, Beijing and Dalian Chromatography Center, Dalian China, October 1995.
7. 19th International Symposium on Column Liquid Chromatography and Related Techniques - Innsbruck - Austria, 1995.
8. "Hydride-based Surface Materials for HPLC, HPCE and Electrochromatography", HPLC '96, San Francisco, CA, June, 1996.
9. "Synthesis and Characterization of C8 Bonded Phase from 1-Octyne via a Hydride Intermediate", HPLC '96, San Francisco, CA, June, 1996.
10. "Electrochromatographic Separations in Etched Fused Silica Capillaries", HPLC '96, San Francisco, CA, June, 1996.
11. "Synthesis and Characterization of Titania-Based Stationary Phase for HPLC", HPLC '96, San Francisco, CA, June, 1996.
12. "Mixed Mode Separations in Electrochromatography", HPCE '97, Anaheim, CA, Jan., 1997.
13. "Long-Chain hydrocarbon Stationary Phase Synthesis, Characterization and HPLC evaluation", HPLC'97 Birmingham, UK, June 1997.
14. "Open Tubular Capillary Electrochromatography Using Etched, Chemically Modified Fused Silica Surfaces" Symposium on Chromatography and Environmental Analysis, Torun, Poland, September, 1997.

15. "Open Tubular Capillary Electrochromatography", Beijing Conference and Exhibition on Instrumental Analysis, Shanghai, China, October, 1997.
16. "OTCEC Using Etched, Chemically Modified Fused Silica Capillaries", 1st International Symposium on Capillary Electrochromatography, San Francisco, August, 1997.
17. "Open tubular CEC Using Etched, Chemically Modified Fused Silica Surfaces", 2nd International Symposium on Capillary Electrochromatography, San Francisco, August, 24-25, 1998.
18. "An Approach to Open Tubular CEC Using Etched, Chemically Modified Fused Silica Surfaces", 22nd International Symposium on Chromatography, Rome, September, 1998.
19. "Study of Solute/Bonded Phase Interactions in Capillary Electrokinetic Chromatography Using Etched, Chemically Modified Fused Silica Surfaces", HPCE'99, Palm Springs, CA, January 1999.
20. "Etched, Chemically Modified Capillaries: Characterization and Application" University of Tuebingen, Germany, May 1999
21. "OTCEC Using Etched, Chemically Modified Silica Surfaces", Nicholas Copernicus University, Torun, Poland, May 1999.
22. "Etched Chemically Modified Fused Silica Capillaries as a Separation Medium in Electrokinetic Chromatography", 21st International Symposium on Capillary Chromatography and Electrophoresis, Park City, UT, June 1999.
23. "Recent Advances in the Open Tubular Approach to CEC", 3rd International Symposium on Capillary Electrochromatography, San Francisco, CA, August 1999.
24. "Synthesis & Evaluation of AMPS as stationary Phase for OTCEC", 3rd International Symposium on Capillary Electrochromatography, San Francisco, CA, August 1999.
25. "Open Tubular CEC", Frederick Conference on CE, Frederick, MD, October 1999.
26. "Cholesteryl Modified Capillaries for OTCEC" Frederick Conference on CE, Frederick, MD, October 1999.
27. "Capillary Electrochromatography in Open Tubes", FACSS Meeting, Vancouver, BC, October 24-29, 1999.
28. "Open Tubular Capillary Electrokinetic Chromatography, Materials Research Society Meeting, San Francisco, April 2000.
29. "How to Make CEC work for Biological and Pharmaceutical Applications: The Open Tubular Approach", 4th International Symposium on Capillary Electrochromatography, San Francisco, CA, August 13&14, 2000.
30. "Protein, Peptides and Drug Analysis by OTCEC", 4th International Symposium on Capillary Electrochromatography, San Francisco, CA, August 13&14, 2000.
31. "Separation of Biomolecules by OTCEC Using Etched, Chemically modified Capillaries" 23rd International Symposium on Chromatography, London, October 2000.

32. "Exploitation of the Silanization/Hydrosilation Bonding Process for the Synthesis of new Stationary Phases", 23rd International Symposium on Chromatography, London, October 2000.
33. "OTCEC Using Etched, Chemically Modified Capillaries For the Analysis of proteins, peptides and Pharmaceuticals" – HPCE 2001, Boston January 13-18, 2001.
34. "Characterization of Open Tubular Columns for Capillary Electrochromatography" – HPCE 2001, Boston January 13-18, 2001.
35. "Open Tubular CEC Applications for Biological and Pharmaceutical Samples" – 24th International Symposium on Capillary Chromatography & Electrophoresis, May 20-24, 2001, Las Vegas, Nevada.
36. "Characterization of Etched, Chemically Modified Capillaries for OTCEC by Temperature, Solvent Composition and Voltage Behavior of peptides" – 24th International Symposium on Capillary Chromatography & Electrophoresis, May 20-24, 2001, Las Vegas, Nevada.
37. "Silanization/hydrosilation surface modifications for HPLC and OTCEC" – The Third International Conference Chemistry of Highly – Organized Substances and Scientific Principles of Nanotechnology, June 26-29, 2001, Petergof, St. Petersburg, Russia.
38. "The Use of Hydride Modified Surfaces for Controlling Retention and Adsorption in HPLC and OTCEC" – 40th eastern Analytical Symposium & Exposition, October 1-4, 2001, Atlantic City, New Jersey.
39. "Open Tubular CEC Applications for Biological and Pharmaceutical Samples" 9th Chromatography Symposium, June 13-14, 2002, Toyohashi, Japan
40. "Separation of Proteins, peptides and Pharmaceuticals Using Etched Chemically Modified Capillaries" - CE in Biotechnology & Pharmaceutical Industries, August 17 –19, 2002, Renaissance Mayflower Hotel, Washington, DC.
41. " Electrochromatographic characterization of Etched Chemically-Modified Capillaries with Basic Drugs and Small Peptides", 8th International Symposium on Separation Sciences, 8-12 September, 2002, Torun, Poland.
42. " Characterization and Application of Novel Liquid Crystal Stationary Phases for HPLC and CEC ", 8th International Symposium on Separation Sciences, 8-12 September, 2002, Torun, Poland.
43. " Investigating proteomics by OTCEC", 8th International Symposium on Separation Sciences, 8-12 September, 2002, Torun, Poland.
44. "Open Tabular Capillary Electrochromatography of Synthesized Peptides with a Novel Liquid Crystal Stationary Phase", 16th International Symposium on Microscale Separations and Analysis, San Diego, CA, January, 2003
- 45,. "Separation of Ipratropium Bromide and Related Substances in Pharmaceutical Formulations using OT-CEC", 16th International Symposium on Microscale Separations and Analysis, San Diego, CA, January, 2003.
45. "Electrophoretic Analysis of Biological Samples using Etched Chemically Modified Capillaries", 16th International Symposium on Microscale Separations and Analysis, San Diego, CA, January, 2003.

46. "Open Tubular Capillary Electrochromatography of Milk from Bovine Somatotropin (BST) Treated Cows", 16th International Symposium on Microscale Separations and Analysis, San Diego, CA, January, 2003.
47. "Separations by Open Tubular Electrochromatography using a Novel Crystal Modified Capillary", 16th International Symposium on Microscale Separations and Analysis, San Diego, CA, January, 2003.
48. "New capillary and planar electrophoretic approaches to proteomic analysis in one and two dimensions", HPLC 2003, Nice, France, June 14-19, 2003.
49. "Capillary and Planar Electrophoretic Approaches to Proteomic Analysis in One and Two Dimensions", Beijing Conference and Exhibition on Instrumental Analysis, Beijing, China, October 12-16, 2003.
50. "Using Type-C Bidentate C-18 in Aqueous Reverse Phase and Aqueous Normal Phase: Finally a Universal HPLC Column" Pittcon 2004, Chicago, IL, March 8-12, 2004.
51. "Etched Chemically Modified Fused Silica Capillary Surfaces as Stationary Phases for CEC, 227th American Chemical Society Meeting, Anaheim, CA, March 28- April 1, 2004.
52. "One Column, Four Modes of Selectivity : Do Type C Phases Offer the Ultimate Selectivity Choice in Preparative Chromatography, PREP 2004, Baltimore, MD, May 2004.
53. "An Overview of Type C Silica: Properties and Applications", HPLC 2004, Philadelphia, PA, June 2004.
54. "Capillary and Planar Electrophoretic Analysis of Proteins, Peptides and Pharmaceuticals in One and Two Dimensions", Interact 2004, Gold Coast, Australia, July 2004.
55. "Properties and Applications of Hydride Based (Type C Silica) Stationary Phases", Interact 2004, Gold Coast, Australia, July 2004.
56. "The Use of Aqueous Normal Phase Chromatography and LC/MS on Type C (Hydride) Based HPLC Columns", Pittcon 2005, Orlando, Florida, February 2005.
57. "Analysis of Steroids and Shape Selectivity Using the Type C Silica Cholesterol Stationary Phase," Pittcon 2005, Orlando, Florida, February 2005.
58. "The Use of Hydride Based HPLC Stationary Phases for LC/MS", HPLC 2005, Stockholm, Sweden, June 2005.
59. "New Capillary Electrophoretic Approaches to Proteomic and Pharmaceutical Analysis", HPLC 2005, Stockholm, Sweden, June 2005.
60. "Analysis of Biomolecules by HPLC and Open Tubular Capillary Electrochromatography with Hydride-Based Separation Materials, DICP Symposium on Separation and Detection of Biomolecules, Dalian, China, July, 2005.
61. "Investigations of Hydride Surfaces for Chromatographic and Electrophoretic Separation Media", Eastern Analytical Symposium, Somerset, NJ, November, 2005.
62. "Aqueous Normal Phase Chromatography on Hydride Based Stationary Phases for HPLC", Pittcon 2006, Orlando, FL, March 2006.

63. "A Unique Hydrophilic/Hydrophobic/Ion-Exchange Phase Based on a Silica Hydride Support", HPLC 2006, San Francisco, CA, June 2006.
64. "Analysis of Hydrophilic Metabolites in Physiological Fluids by HPLC" and "Single Mobile Phase Method for LC/MS-TOF Analysis of Hydrophilic Metabolites in Positive and Negative Ion Modes", Pittcon, March 2010, Orlando, FL.
65. "Aqueous Normal Phase Chromatography: A New Approach to the Analysis Polar Pharmaceutical Compounds", 38th International Symposium on High Performance Liquid Phase Separations and Related Technologies HPLC 2012 Anaheim, CA United States, June 16–21 2012

COLLABORATORS

Dr. Milton Hearn, Professor of Biochemistry and Molecular Biology, Monash University, Melbourne, Australia
 Dr. Kiyokatsu Jinno, Department of Materials Science, Toyohashi, University, Toyohashi, Japan
 Dr. Antoine Siouffi, Department of Chemistry, Universite d'Aix-Marseille, Marseille, France
 Dr. Klaus Albert, Department of Chemistry, University of Tübingen, Tübingen, Germany
 Dr. Bogdan Buszewski, Department of Chemistry, Nicolas Copernicus University, Torun, Poland

BOOKS

- 1). "Chemically Modified Surfaces - Recent Developments", J.J. Pesek, M. Matyska, and R. Abuelafiya, Royal Society of Chemistry, Cambridge, 1996.

PUBLICATIONS

- 1). "Short bed- continuous development in TLC", G.Matysik, E.Soczewinski, M.Matyska, Farm.Pol.,6, (1983) 331-334.
- 2). "Analysis of pesticides from the chlorinated hydrocarbon group by thin-layer chromatography [TLC] in sandwich chamber", E.Soczewinski, G.Matysik, M.Matyska, Brom. i Chem. Toksykol.,18, (1985) 261-265.
- 3). "Analysis of hydrophilic vitamins by TLC", M.Matyska, E.Soczewinski, Farm. Pol., 7, (1985) 385-389.
- 4). "RP-TLC methods in the chromatographic analysis of tetracycline, chloramphenicol and macrolide antibiotics", E.Soczewinski, M.Matyska, Farm. Pol. 2, (1987) 73-78.
- 5). "Programmed multiple development [PMD] in TLC", M.Matyska, Farm. Pol., 8, (1987) 469-472.

- 6). "Chromatographic Analysis of 1,4-benzodiazepine derivatives and identification of their metabolites in urine by TLC", M.Matyska, M.Kuziola, *Brom.i Chem.Toksykol.*, 22,(1989) 223-229.
- 7). "Computer-Aided Optimization of Liquid-Solid Systems in TLC. 1. Retention vs.Eluent Composition Relationships", M.Matyska, E.Soczewinski, *J.Planar Chromatogr.*, 3, (1990) 144-148.
- 8). "Computer-Aided Optimization of Liquid -Solid Systems. 2.Compaprison of selectivity for various Silica-Diluent + Modifier Systems", M.Matyska, E.Soczewinski, *J.Planar Chromatogr.*, 3, (1990) 264-268.
- 9). "Computer-Aided optimization of Liquid-Solid Systems. 3. A computer program for selecting The Optimal Eluent Composition for a Given Set of Solutes from a Database", M.Matyska, M.Dabek, E.Soczewinski, *J.Planar Chromatogr.*, 3, (1990) 317-321.
- 10). "Computer-Aided Optimization of Liquid-Solid Systems. 4. Retention vs.Eluent composition. Relationships of some Drugs and Poisons", M.Matyska, E.Soczewinski, *J.Planar Chromatogr.*, 3, (1990) 417-421.
- 11). "Quantitation of Benzodiazepine Hydrolisis Produces in Urine Using Solid-Phase Extraction and HPLC", M.Matyska, W.Golkiewicz, *J.Liq.Chromatogr.*, 14, (1991) 2769-2778.
- 12). "Programmed Multiple Development [PMD] Analysis of Steroids", M.Matyska, A.M.Siouffi, E.Soczewinski, *J.Planar Chromatogr.* 4, (1991) 255-257.
- 13). "Optimization of Chromatographic Systems in Thin Layer Chromatography by Graphical Method and with a Computer Program", M.Matyska and E.Soczewinski, *Chem.Anal.*, 38, (1993) 555-563.
- 14). "Spectroscopic Studies of Butylphenyl, Mono-ol and Perfluorinated Bonded Phases", J.J. Pesek, M.T. Matyska, E. Soczewinski and P. Christensen, *Chromatographia*, 39 (1994) 520-528.
- 15). "Synthesis and Spectroscopic Characterization of a True Diol Bonded Phase", J.J. Pesek and M.T. Matyska, *J. Chromatogr.*, 687 (1994) 33-44.
- 16). "The Use of Computer Simulations for Development and Optimization of the Gradient Chromatography Method for the Analysis of some Nitrosamines", M. Matyska and T. Kossowski, *Chem. Anal.*, 39 (1994) 431-437.
- 17). "Optimization of Solid Phase Extraction Technique for a Sample Clean-up Procedure " M.T.Matyska, A.M.Siouffi and N.Volpe, *Chem. Anal.*, 40 (1995) 53-60.
- 18). "Computer-Aided Optimization of a Sample Clean-up Procedure - Application to Nitrosamines and Amines" M.Matyska, A.M.Siouffi and N.Volpe, *J.Planar Chromatography*, 8 (1995) 39-46.
- 19). "High Performance Liquid Chromatographic Characterization of Diol Bonded Phases Synthesized via a Hydride Intermediate", J.J. Pesek, M.T. Matyska, H. Hemphala and P. Christensen, *J. Liq. Chromatogr.*, 18 (1995) 2507-2526.
- 20). "Evaluation of Mono-ol and Diol Columns Prepared via Olefin Hydrosilation on a Silica Hydride Intermediate for the Separation of Tetracyclines", M.T. Matyska, J.J. Pesek and A.M. Siouffi, *Chem. Anal.*, 40 (1995) 517-530.

- 21). "Retention of Fullerenes by Octadecyl Silica. Correlation with NMR Spectra at Low Temperatures", H. Ohta, Y. Saito, K. Jinno, J.J. Pesek, M.T. Matyska, Y.L. Chen, J. Archer, J.C. Fetzer and W.R. Biggs, *Chromatographia*, 40 (1995) 507-512.
- 22). "Variable-Temperature Solid-State NMR Studies of Bonded Liquid Crystal Stationary Phases for HPLC", J.J. Pesek, M.T. Matyska, E.J. Williamsen and R. Tam, *Chromatographia*, 41 (1995) 301-310.
- 23). "Effect of Temperature on the Mechanism of Retention for Fullerenes in Liquid Chromatography Using Various Alkyl Bonded Stationary Phases", H. Ohta, K. Jinno, Y. Saito, J.C. Fetzer, W.R. Biggs, J.J. Pesek, M.T. Matyska and Y.-L. Chen, *Chromatographia*, 42 (1996) 56-62.
- 24). "Synthesis of Chemically Bonded Squalene(ane) Phases for Microcolumn Gas Chromatographic Separations of Low-Molecular Weight Hydrocarbons in Extraterrestrial Atmospheres", S.O. Akapo, J.-M. D. Dimandja, J.J. Pesek and M.T. Matyska, *Chromatographia*, 42 (1996) 141-146.
- 25). "Electrochromatography in Chemically Modified Etched Fused Silica Capillaries", J. J. Pesek and M.T. Matyska, *J. Chromatogr.*, 736 (1996) 255-264.
- 26). "Spectroscopic and Chromatographic Evaluation of Cyclic Siloxane Bonded Phases for Microcolumn Gas Chromatographic Determination of Lower Hydrocarbons", S.O. Akapo, J.-M. D. Dimandja, M.T. Matyska and J.J. Pesek, *J. Microcol. Sep.*, 8 (1996) 189-200.
- 27). "The Separation of Tetracyclines by High Performance Capillary Electrophoresis and Capillary Electrochromatography", J.J. Pesek and M.T. Matyska, *J. Chromatogr.*, 736 (1996) 313-320.
- 28). "Improvement of Gas Chromatographic Performance of Cyclic Siloxane Bonded Phases by Incorporation of n-Alkyl Groups," S.O. Akapo, J.-M. D. Dimandja, M.T. Matyska, J. J. Pesek, *Anal. Chem.*, 68 (1996) 1954-1959.
- 29). "Synthesis, Characterization and Applications of Hydride-Based Surface Materials for HPLC, HPCE and Electrochromatography," J. J. Pesek, M.T. Matyska, J.E. Sandoval, E. Williamsen, J. Liq. *Chromatogr.*, 19 (1996) 2843-2865.
- 30). "HPLC Evaluation of Mono-ol, Butylphenyl, and Perfluorinated Columns Prepared Via Olefin Hydrosilation on a Silica Hydride Intermediate," J.J. Pesek, M.T. Matyska, H. Hemphala, *Chromatographia*, 43 (1996) 10-16.
- 31). "Separation of Protein and Peptides by Capillary Electrochromatography on Diol and Octadecyl Modified Etched Capillaries," J.J. Pesek, M.T. Matyska and L. Mauskar, *J. Chromatogr. A*, 763 (1997) 307-314.
- 32). "Synthesis and Characterization of Titania Based Stationary Phases Using the Silanization/Hydrosilation Method," J.J. Pesek, M.T. Matyska and J. Ramakrishnan, *Chromatographia*, 44 (1997) 538-544.
- 33). "Retention Characteristics and Selected Applications of Cyclic Siloxane-Based Octadecylsilyl Bonded Phases in Reversed-Phase High Performance Liquid Chromatography," S.O. Akapo, M.T. Matyska and J.J. Pesek, *J. Chromatogr. A*, 773 (1997) 53-63.
- 34). "The Synthesis and Characterization of Alkyl Bonded Phases from a Silica Hydride by Hydrosilation with Free Radical Initiation," J.J. Pesek, M.T. Matyska, E.J. Williamsen, M.

Evanchic, V. Hazari, K. Konjuh, S. Takhar, and R. Tranchina, J. Chromatogr. A, 786 (1997) 219-228.

35). "The Determination of Aspartame by High Performance Capillary Electrophoresis," J. J. Pesek and M.T. Matyska, J. Chromatogr. A, 781 (1997) 423-428.

36). "Methods for the Modification and Characterization of Oxide Surfaces," J.J. Pesek and M.T. Matyska, J. Interface. Sci., 5 (1997) 103-117.

37). "Column Technology in CE and CEC," J.J. Pesek and M.T. Matyska, Electrophoresis, 18 (1997) 2228-2238.

38). "Synthesis and Characterization of a Chiral Stationary Phase on a Silica Hydride Surface," J.J. Pesek, M.T. Matyska, S. Kamath, Analusis, 25 (1997) 253-257.

39). "A New Open Tubular Approach to Capillary Electrochromatography," J.J. Pesek and M.T. Matyska, J. Cap. Elect., 4 (1997) 213-217.

40). "The Analysis of Melatonin, Tryptamine and Serotonin by HPCE and CEC," J.J. Pesek and M.T. Matyska, J. Liq. Chromatogr. & Rel. Technol., 21 (1998) 2923-2934.

41). "Synthesis and Characterization of Liquid Crystal Type Stationary Phases on a Silica Hydride Surface," J.J. Pesek, M.T. Matyska, E. Williamsen, R. Tam and Z. Wang, J. Liq. Chromatogr. & Rel. Technol., 21 (1998) 2747-2762.

42). "Polyfunctional Chemically Bonded Stationary Phase for Reversed-Phase High-Performance Liquid Chromatography," B. Buszewski, R. Gadzala-Kopciuch, R. Kaliszan, M. Markuszewski, M.T. Matyska and J.J. Pesek, Chromatographia, 48 (1998) 615-622.

43). "Synthesis and Characterization of Bonded Phases Made Via Hydrosilation of Alkynes on Silica Hydride Surfaces," J.J. Pesek, M.T. Matyska, M. Oliva and M. Evanchic, J. Chromatogr. A, 818 (1998) 145-154.

44). "Synthesis and Characterization of Long Chain Alkyl Stationary Phases on a Silica Hydride Surface," J.J. Pesek, M.T. Matyska and S. Takhar, Chromatographia, 48 (1998) 631-636.

45). "Separation of Benzodiazepines Using Cholesterol-Modified Fused Silica Capillaries in Capillary Electrochromatography," A.P. Catabay, H. Sawada, K. Jinno, J.J. Pesek and M.T. Matyska, J. Cap. Elec., 5 (1998) 89-95.

46). "Etched and Wall-Modified Silica Capillaries for Open Tubular Capillary Electrochromatography," M.T. Matyska, Chem. Anal. 43, (1998) 637-645.

47). "Spectroscopic Characterization of Chemically Modified Oxide Surfaces," J.J. Pesek and M. T. Matyska, in "Adsorption and Its Application in Industry and Environmental Protection", A. Dabrowski, ed., Elsevier, Amsterdam, 1999, Vol I, pp 117-142.

48). "Open Tubular Electrokinetic Chromatography in Etched, Chemically Modified 20 Micron I.D. Capillaries," J. J. Pesek, M.T. Matyska, and S. Cho, J. Chromatogr. A, 845 (1999) 237-246.

49). "Surface Modifications to Support Materials for HPLC, HPCE and Electrochromatography," J.J. Pesek and M.T. Matyska, in "Fundamental and Applied Aspects of Chemically Modified Surfaces, J. Blitz and C.B. Little, eds., Royal Society of Chemistry, Oxford, 1999, 97-110.

- 50). "Comparison of Octadecyl Bonded Titania Phases," A. Ellwanger, M.T. Matyska, K. Albert and J.J. Pesek, *Chromatographia*, 49 (1999) 424-430.
- 51). "Chiral Separations by Open Tubular Capillary Electrokinetic Chromatography", J.J. Pesek, M.T. Matyska and S. Menezes, *J. Chromatogr. A*, 853 (1999) 151-158.
- 52). "Proteins and Peptides Separations on High Surface Area Capillaries", J.J. Pesek, M.T. Matyska, S. Swedberg, S. Udvar, *Electrophoresis*, 20 (1999) 2343-2348.
- 53). "Open Tubular Capillary Electrochromatography Using Etched Fused Silica Tubing Modified with Chemically Bonded Liquid Crystals", M.T. Matyska, J.J. Pesek and A. Katrekar, *Anal. Chem*, 71 (1999) 5508-5514.
- 54). "Pharmaceutical Applications Using Cholesteryl-10-undecanoate Bonded Phase in Microcolumn LC", A.P. Catabay, J.J. Pesek, M.T. Matyska and K. Jinno, *J.Liq.Chromatogr.&Rel.technol.*, 22(7), 953-967 (1999)
- 55). " SPE Sorbents and Formats", J.J.Pesek, M.T.Matyska, in " Solid Phase Extraction", N.Simpson, ed., (2000) 19-38
- 56). "Characterization of Wall Modified Silica Capillaries for OTCEC and CE", M.T. Matyska, J.J. Pesek, J.E. Sandoval, U. Parkar, X. Liu, *J. Liq. Chromatogr. & Rel. Technol.*, 23 (2000) 97-111.
- 57). "Characterization by Atomic Force Microscopy of Fused Silica Capillaries Chemically Modified for Capillary Electrokinetic Chromatography", e. Pullen, J.J. Pesek, M.T. Matyska, J. Frommer, *Anal. Chem.*, 72 (2000) 2751-2757.
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