

PROFESSIONAL DATA

PAUL VOUROS

Born: Thessaloniki, Greece, April 1, 1938

Degrees: B.A. Wesleyan University, 1961
Ph.D. Massachusetts Institute of Technology, 1965.

Present Position:

Professor, Department of Chemistry, Northeastern University, Boston, Massachusetts,
1980 - present.

Senior Faculty Fellow, Barnett Institute of Chemical Analysis, Northeastern
University, Boston, Massachusetts, 2000 -.present

Professional Experience:

1. Research Assistant, Massachusetts Institute of Technology, 1964 – 1965
2. Research Associate, Massachusetts Institute of Technology, 1965 -1966.
3. Project Manager, Chemistry Department, Technical Operations, Inc., 1965 - 1968.
4. Assistant Professor of Chemistry, Institute for Lipid Research and Department of Biochemistry, Baylor College of Medicine, Houston, Texas, 1968 - 1974.
5. Senior Scientist, Institute of Chemical Analysis, Applications and Forensic Science, Northeastern University, Boston, Massachusetts, 1974 - 1978.
6. Director, Graduate Affairs, Department of Chemistry, 1988-1992
7. Visiting Scientist, Central Research Division CIBA-GEIGY Corporation, Basel, Switzerland, October 1992-April 1993.
8. Raymond B. and Claire M. Bradstreet Chair in Bioanalytical Chemistry (Co-holder), 1995 - 2000
7. Visiting Scientist, R&D Center, Nestle, Ltd, Lausanne, Switzerland, January 2000-June 2000.
8. Invited Professor/Lecturer, Pierre & Marie Currie University, Paris, France June/July 2002.

Professional Activities and Society Memberships:

1. American Chemical Society (1969-present).
2. American Society for Mass Spectrometry (1969- present)
3. International Society for the Study of Xenobiotics (1993-1995)
4. Chairman, Committee on Forensic Applications, American Society for Mass Spectrometry, 1976 - 1978.
5. Subject Editor, Mass Spectrometry Reviews
6. Editorial Advisory Board, Analytical Biochemistry, 1998-2000.
7. Editorial Advisory Board, Journal of Mass Spectrometry, 1999-

8. Board of Directors, American Society for Mass Spectrometry (7/96-7/98); Director at Large for Education
9. Chairman, Scientific Advisory Board Mass Spectrometry Facility, Boston University Medical School, 1996 -
10. Served (serving) as Member of Peer Review Committees at NIH, NSF and various professional journals.

Professional Publications:

Chapters in Books:

1. Vouros, P., "Chemical Derivatization in Gas Chromatography-Mass Spectrometry," in Practical Spectroscopy Series, Vol. 3, Mass Spectrometry, Part B, McEwen, C.N., and Merritt, C., Jr., Eds., Marcel-Dekker (1981).
2. Vouros, P. and Wronka, J., "Polymer Characterization Using Mass Spectrometry", in Modern Methods of Polymer Characterization, Barth, H.B. and Mays, J.W., Eds., Wiley, 1991, pp. 495-555.
3. Rindgen, D. and Vouros, P., "The Analysis of Muscle Relaxants by Mass Spectrometric Methods", in Mass Spectrometry, Clinical and Biomedical Applications, Vol. 1, D.M. Desiderio, Ed., Plenum Press, 1992, pp. 99-129.
4. Norwood, C.N. and Vouros, P., "DNA Modifications - Investigations by Mass Spectrometry", in Mass Spectrometry, Clinical and Biomedical Applications, Vol. 2, D.M. Desiderio, Ed., Plenum Press, 1994, NY, 89-133.
5. Hauser-Fang, A. and Vouros, P., "The Use of Mass Spectrometry in Combinatorial Chemistry", in Analytical Techniques in Combinatorial Chemistry, M.E. Swartz, Ed., Marcel Dekker, Inc., NY, 2000, pp. 29-64.

Peer Reviewed Research Publications:

1. Vouros, P., Masters, J.I. and Starble, R.J., "Fabrication of Ultrathin Films," Rev. Sci. Instr., 39, 741 (1968).
2. Vouros, P., Susnar, R. and Shep, A., "Thin-Film Electrodes for Fuel Cells," J. Electrochem. Tech., 6, 462 (1968).
3. Vouros, P. and Masters, J.I., "Thin-Film Silver Halide Electrolyte Cells," J. Electrochem. Soc., 116, 880 (1969).
4. Vouros, P. and Biemann, K., "The Structural Significance of Doubly Charged Ion Spectra. Phenylenediamine Derivatives," Org. Mass. Spectrom., 2, 375 (1969).

5. Vouros, P. and Biemann, K., "Electron Impact Induced Ring Condensation. The Mass Spectra of Some Aryl-Alkyl Diethers," Org. Mass. Spectrom., 3, 1317 (1970).
6. Harvey, D.J., Horning, M.G. and Vouros, P., "The Intermolecular Transfer of Trimethylsilyl Groups Induced by Electron Impact," Chem. Commun., 898 (1970).
7. Vouros, P., Desiderio, D.M., Leferink, J.V.M. and McCloskey, J.A., "The Selective Response of Photographic Emulsions to Ion Structure," Anal. Chem., 42, 1275 (1970).
8. Harvey, D.J., Horning, M.G. and Vouros, P., "Ion-Molecule Reaction Products Found in the Mass Spectra of Trimethylsilyl Derivatives," Anal. Lett., 3, 489 (1970).
9. Briggs, P.R., Shannon, T.W. and Vouros, P., "Hydrogen Exchange in a Six-Membered Ring Transition State. Evidence for a Stepwise McLafferty Rearrangement," Org. Mass Spectrom., 5, 545 (1971).
10. Harvey, D.J., Horning, M.G. and Vouros, P., "Vapor Phase Bimolecular Reactions of Alkyl Siliconium and Other Metal Ions in Mass Spectrometry," Org. Mass Spectrom., 5, 599 (1971).
11. Sloan, S., Harvey, D.J., and Vouros, P., "Interaction and Rearrangement of Trimethylsilyloxy Functional Groups. The Structural Significance of the m/e 147 Ion in the Mass Spectra of Trimethylsilyl Steroidal Ethers," Org. Mass Spectrom., 5, 789 (1971).
12. Harvey, D.J., Horning, M.G. and Vouros, P., "Some Stereochemical Factors in the Formation of Rearrangement Ions in the Mass Spectra of Trimethylsilyl Steroidal Phosphates," Tetrahedron, 27, 4231 (1971).
13. Narasimhachari, N., and Vouros, P., "Gas-Liquid Chromatography and Mass Spectrometry of Biogenic Amines and Amphetamines as Their Isothiocyanate Derivatives," Anal. Biochem., 45, 154 (1972).
14. Vouros, P., and Harvey, D.J., "Specificity of Trimethylsilanol Elimination in the Mass Spectra of the Trimethylsilyl Derivatives of Di- and Tri-hydroxy Steroids," Chem. Commun., 1972, 765.
15. Harvey, D.J., Horning, M.G., and Vouros, P., "The Mass Spectra of the Trimethylsilyl Derivatives of Glycerophosphates. Inter- and Intramolecular Rearrangements of Siliconium Ions," J. Chem. Soc., Perkin Trans., 1972, 1074.
16. Vouros, P., and Harvey, D.J., "Factors Influencing the Formation of Some Characteristic Ions in the Mass Spectra of 16-Trimethylsilyloxy Androstanes," Org. Mass Spectrom., 6, 953 (1972).

17. Narasimhachari, N., and Vouros, P., "3- and 4-O-Methyl Ethers of Dopamine: Gas-Liquid Chromatography and Mass Spectrometric Studies of Their Isothiocyanate Derivatives," J. Chromatogr., 70, 135 (1972).
18. Vouros, P., Desiderio, D.M., Leferink, J.G., Odiorne, T. J., and McCloskey, J.A., "Ion Detection in Mass Spectrometry. The Dependence of Ion-Sensitive Plate Response on Ion Structure and Composition," Intern. J. Mass Spectrom. Ion Phys., 10, 133 (1972/73).
19. Odiorne, T.J., Harvey, D.J., and Vouros, P., "Chemical Ionization Mass Spectrometry Using Tetramethylsilane," J. Phys. Chem., 76, 3217 (1972).
20. Vouros, P., and Harvey, D.J., "A Method for Selective Introduction of Trimethylsilyl and Perdeuterotrimethylsilyl Groups in Hydroxy Steroids and its Utility in Mass Spectrometric Interpretations," Anal. Chem., 45, 7 (1973).
21. Middleditch, B.S., Vouros, P., and Brooks, C.W.J., "Mass Spectrometry in the Analysis of Steroid Drugs and Their Metabolites: Electron-Impact-Induced Fragmentation of Ring D," J. Pharm. Pharmacol. 5, 143 (1973).
22. Vouros, P. and Harvey, D.J., "Influence of 11-Trimethylsilyloxy - or 11-Hydroxy-Substituents on the Electron-Impact-Induced Fragmentation of Trimethylsilyl Derivatives of Some Androstanols," J. Chem. Soc., Perkin Trans., I, 727 (1973).
23. Brooks, C.J.W., Harvey, D.J., Middleditch, B.S., and Vouros, P., "Mass Spectra of Trimethylsilyl Ethers of Some W5-3b-hydroxy C19 Steroids," Org. Mass Spectrom., 7, 925 (1973).
24. Desiderio, D.M., Middleditch, B.S., and Vouros, P., "Chemical Ionization Mass Spectrometry of Prostaglandin Derivatives," Chim. Chron. New Ser., 2, 1 (1973).
25. Vouros, P., "Silyl Derivatives of Steroids. Evidence for Intramolecular Silylation Processes and Electron Impact Induced Reciprocal Exchange of Trimethylsilyl Groups," J. Org. Chem., 38, 3555 (1973).
26. Vouros, P., Odiorne, T.J., and Harvey, D.J., "Some Aspects of Intra- and Intermolecular Reactions of Siliconium Ions in the Vapor Phase," Spectroscopy Lett., 6, 603 (1973).
27. Odiorne, T.J., Harvey, D.J., and Vouros, P., "Reactions of Alkyl Siliconium Ions Under Chemical Ionization Conditions," J. Org. Chem., 38, 4274 (1973).
28. Vouros, P., "Electron-Impact Induced Fragmentation of Thiirene and Thiophene Dioxides," J. Heterocycl. Chem., 12, 21 (1975).
29. Vouros, P., and Carpino, L.E., "Chemical Ionization Mass Spectrometry as an Aid in the Identification of Thermally Labile Thiirene Dioxides," J. Org. Chem., 39, (1974).

30. Narasimhachari, N. and Vouros, P., "Gas-Liquid Chromatography and Mass Spectrometry of Biologically Active Primary Amines as Their Isothiocyanate Derivatives," Biomed. Mass Spectrom., 1, 367 (1974).
31. Odiorne, T.J., Desiderio, D.M., Vouros, P., and Leung, K., "Ion Energy Effects in Photographic Detection in Organic Mass Spectrometry," Spectroscopy Lett., 9, 279 (1976).
32. Petersen, B.A., Vouros, P., Parker, J.M., and Karger, B.L., "Mass Spectrometry as an Aid in the Detection and Identification of Piperidyl Benzilates and Related Glycolates," J. Forens. Sci., 21, 279 (1976).
33. Vouros, P., Petersen, B.A., Däfeldecker, W.P., and Neumeyer, J.L., "Aporphines 19. Mass Spectrometry of Nitrobenzylisoquinolines. Influence of Positional Isomerism on Fragmentation and Evidence for an Ionically-Induced Intramolecular Migration Process," J. Org. Chem., 42, 744 (1977).
34. Szafranek, J., Wisniewski, A., and Vouros, P., "Mass Spectra of Acetyl and Trimethylsilyl Derivatives of Glycols. Isotopic Labeling by Selective Introduction of Acetyl and Deuterioacetyl Groups," Carbohydrate Res., 56, 11 (1977).
35. Marshall, D.J., Petersen, B.A., and Vouros, P., "Some Considerations on Quantitative Methodology and Detection Limits in Organic Mass Spectrometry," Biomed. Mass Spectrom., 5, 1243 (1978).
36. Vouros, P., Petersen, B.A., Colwell, L., Karger, B.L., and Harris, H., "Analysis of Explosives by Liquid Chromatography and Chemical Ionization Mass Spectrometry," Anal. Chem., 49, 1039 (1977).
37. Petersen, B.A. and Vouros, P., "Analysis of Thyroid Hormones as Their Heptafluorobutyryl - Methyl Ester Derivatives by Gas Chromatography-Mass Spectrometry," Anal. Chem., 49, 1304 (1977).
38. Evans, J.V., and Vouros, P., "Selective N-Acylation-O-Trimethylsilylation of Hydroxynoraporphines," Anal. Biochem., 90, 389 (1978).
39. Vouros, P., Blotny, G., and Szafranek, J., "A Comparison of Electron Impact and Field Ionization Mass Spectra of N-Dithiocarbamic Derivatives of Amino Acids," Tetrahedron, 34, 2763 (1978).
40. Harvey, D.J., and Vouros, P., "Influence of the 6-Trimethylsilyl Groups on the Fragmentation of the Trimethylsilyl Derivatives of Some 6-Hydroxy- and 3,6-Dihydroxy- Steroids and Related Compounds," Biomed. Mass Spectrom., 6, 135 (1979).

41. Green, J.F., Evans, J.V., Neumeyer, J.L., and Vouros, P., "Gas Chromatography - Mass Spectrometry of Aporphines as Their O-Trimethylsilyl Derivatives," Biomed. Mass Spectrom., 6, 282 (1979).
42. Vouros, P., and Harvey, D.J., "The Electron-Impact-Induced Cleavage of the C-17/C-20 Bond in Trimethylsilyl Derivatives of C21 Steroids. Reciprocal Exchange of Trimethylsilyl Groups," Biomed. Mass Spectrom., 7, 217 (1980).
43. Karger, B.L., Kirby, D.P., Vouros, P., Foltz, R.L., and Hidy, B., "On-Line Reversed Phase Liquid Chromatography/Mass Spectrometry," Anal. Chem., 51, 2324 (1979).
44. Green, J.F., Jham, G.N., Neumeyer, J.L., and Vouros, P., "Aporphines 16. Trifluoroacetyl Derivatives of N-Methyl, N-Propyl, and Noraporphines, Gas Chromatographic and Mass Spectrometric Properties," J. Pharm. Sci., 69, 936 (1980).
45. Kirby, D.P., Vouros, P., Karger, B.L., Hidy, B., and Petersen, B., "On-Line Liquid Chromatography-Mass Spectrometry of Ion-Pairs," J. Chromatogr., 203, 139 (1981).
46. Kirby, D.P., Vouros, P., and Karger, B.L., "Ion-Pairing Techniques: Compatibility with On-Line Liquid Chromatography-Mass Spectrometry," Science, 209, 495 (1980).
47. Szafranek, J., Blotny, G., and Vouros, P., "The Use of N-Dithio-Alkylcarbamate Derivatives for Direct Analysis of Amino Acids by Mass Spectrometry of Positive and Negative Ions," in J.Z. Siemion and G. Kupryszinski, Eds., Peptides 1978, Wroklaw Univ. Press, Wroklaw, 1979, p. 261.
48. Jham, G.N., Hanson, R.N., Giese, R.W., and Vouros, P., "Selenium-Sulfur Analogs. Mass Spectrometric Comparison of Substituted Selenazoles and Thiazoles," J. Heterocyclic Chem., 18, 1335 (1981).
49. Duff, P.J., Conroy, C.R., Griffiths, P.R., Karger, B.L., Vouros, P., and Kirby, D.P., "Versatile High-Sensitivity High-Pressure Liquid Chromatography/Fourier Transform Infrared (HPLC/FTIR). Interface with Elimination of Organic or Aqueous Solvents," Fourier Transform Infrared Spectroscopy, SPIE, 289, 53 (1981).
50. Yu, T.J., Schwartz, H.A., Giese, R.W., Karger, B.L., and Vouros, P., "Analysis of Permethylated Derivatives of Oligopeptides by Combined HPLC-Mass Spectrometry," J. Chromatogr., 218, 519 (1981).
51. Lewis, D.A., Vouros, P., and Karger, B.L., "High Efficiency Microbore GC Columns Using Porous Layer Bead Supports," Chromatographia, 15, 117 (1982).
52. Kuttab, S., Tanglertpaibul, S., and Vouros, P., "Studies on the Metabolism of Procarbazine by Mass Spectrometry," Biomedical Mass Spectrom., 9, 78 (1982).

53. Vouros, P., Lankmayr, E.P., Hayes, M.J., Karger, B.L., and McGuire, J.M., "New Approaches to On-Line Ion-Pair Extraction and Derivatization for High-Performance Liquid Chromatography-Mass Spectrometry," Journal of Chromatography, 251, 175 (1982).
54. Sullivan, C.E., Tally, F.P., Goldin, B.R., and Vouros, P., "Synthesis of 1-(2-hydroxyethyl)-2-methyl-5-aminoimidazole: A Ring-Intact Reduction Product of Metronidazole," Biochemical Pharmacology, 31, 2689 (1982).
55. Lankmayr, E.P., Hayes, M.J., Karger, B.L., Vouros, P., and McGuire, J.M., "Band Broadening Phenomena with the Moving Belt LC-MS Interface", International J. Mass Spectrom. Ion Phys., 46, 177 (1983).
56. Schwarz, E., Abdel-Baky, S., Le Quesne, P.W., and Vouros, P., "Aromatization and Catecholization of the A-Ring of Nor-19-Methyl Steroidal 3-Keto Epoxides by Trimethylsilylation", Intern. J. Mass Spectrom. Ion Physics, 47, 511 (1983).
57. Hayes, M.J., Lankmayr, E.P., Vouros, P., Karger, B.L., and McGuire, J.M., "Moving Belt Interface with Spray Deposition for High Performance Liquid Chromatography - Mass Spectrometry," Anal. Chem., 55, 1745 (1983).
58. Yu, T.J., Karger, B.L., and Vouros, P., "HPLC-MS Examination of C-Methylation Artifacts from the Permethylation Reaction of Peptides," Biomedical Mass Spectrom., 10, 633 (1983).
59. Maksoud, H., Kuttab, S., Neumeyer, J.L., and Vouros, P., "Analysis of N-n-Propylnorapomorphine in Urine and Plasma by Capillary GC-Electron Capture Detection," J. Chromatogr., Biomedical Applications, 274, 149 (1983).
60. Hayes, M.J., Schwartz, H.E., Vouros, P., Karger, B.L., Thruston, A.D., and McGuire, J.M., "Gradient Liquid Chromatography - Mass Spectrometry Using Microbore Columns and a Moving Belt Interface", Anal. Chem., 56, 1228 (1984).
61. Mohamed, G.B., Nazareth, A., Hayes, M.J., Giese, R.W., and Vouros, P., "Gas Chromatography - Mass Spectrometry Characteristics of Methylated Perfluoroacyl Derivatives of Cytosine and 5-Methylcytosine," J. Chromatogr., 314, 211 (1984).
62. Yu, T.J., Schwartz, H.A., Cohen, S.A., Vouros, P., and Karger, B.L., "Sequence Analysis of Derivatized Peptides by HPLC-MS," J. Chromatogr., 301, 425 (1984).
63. Guziec, F.S., Luzzio, F.A., Yu, T.J., and Vouros, P., "Mass Spectrometry of Aryl-Substituted Benzoylcyclopropanes," Org. Mass Spectrom., 19, 593 (1984).
64. Davis, P.J., Abdel-Maksoud, H., Trainor, T.M., Vouros, P., and Neumeyer, J.L., "Stereospecific Microbiological 10-O-Demethylation of R(-)-10,11-Dimethoxyaporphines," Biochem. Biophys. Res. Commun., 127, 407 (1985).

65. Karger, B.L., and Vouros, P., "A Chromatographic Perspective of HPLC/Mass Spectrometry," J. Chromatography, 323, 13 (1985).
66. Vouros, P. and Karger, B.L., "Combined HPLC/Mass Spectrometry. Its Challenges, Present and Future," in New Methods of Drug Research, A. Makriyannis, Ed., Prous Publishers, Barcelona, Spain, 1, 45 (1985).
67. Abdel-Baky, S., Le Quesne, P. W., Schwarz, E. F., and Vouros, P., "Potential Intermediates in Catecholesterol Biosynthesis: Characterization of a Dienol Derivative and Related Compounds via Silylation Reactions and GC-MS Analysis," Biomedical Mass Spectrom., 12, 679 (1985).
68. Adams, J.S., Singer, F.R., Gacad, M.A., Sharma, O.P., Hayes, M.J., Vouros, P., and Holick, M.F., "Isolation and Structural Identification of 1,25-dihydroxy-vitamin D₃ Produced by Cultured Alveolar Macrophages in Sarcoidosis," J. Clinical Endocrinology and Metabolism, 60, 960 (1985).
69. Vouros, P., Sahil, A., Tsai, C.-P., and Karger, B.L., "Post Column Chemical Derivatization in HPLC/MS Using a Moving Belt Interface," Adv. Mass Spectrom., 1985, Part B, p. 633.
70. Vouros, P., and Trainor, T.M., "Selection of Derivatives for Electron Capture Negative Ion Chemical Ionization Mass Spectrometry," Adv. Mass Spectrom., 1985, Part B, p. 1405.
71. Tsai, C.-P., Sahil, A., McGuire, J.M., Karger, B.L., and Vouros, P., "High Performance Liquid Chromatographic/Mass Spectrometric Determination of Volatile Carboxylic Acids Using Ion-Pair Extraction and Thermally Induced Alkylation," Anal. Chem., 58, 2 (1986).
72. Neumeyer, J.L., Abdel-Maksoud, H., Trainor, T.M., Davis, P., and Vouros, P., "Chemical and Microbial Synthesis of R-(-)-10-Hydroxy-11-Methoxy-N-n-Propylnoraporphine. Characterization Using Gas Chromatography and Electron Impact Mass Spectrometry," Biomedical Mass Spectrom. 13, 223 (1986).
73. Abdel-Maksoud, H.M., Neumeyer, J.L., Trainor, T.M. and Vouros, P., "GC/MS Characterization of the Products from the Stereo- and Regioselective O-Demethylation of Dimethoxyaporphines with *Cunninghamella Elegans*," in New Trends in Natural Products Chemistry Studies in Organic Chemistry. A. Rohman and P.W. Le Quesne, Eds., 26, 357 (1986).
74. Chou, T.Y., David, M., Giese, R., and Vouros, P., "Replacement of Aromatic Fluorine by a Methoxy Group During Reaction with Methyl Iodide in N,N-Dimethyl Formamide Solvent," Biomed. Environm. Mass Spectrom., 14, 23 (1986).
75. Michaud J., Karger, B.L., and Vouros, P., "Synthesis of d₃-T-2-Toxin," J. Labelled Compounds and Radiopharmaceutics, 25, 345 (1988).

76. DuSorbier, B.M., Kulkarni, S., Kirby, D.P., and Vouros, P., "Mass Spectrometric Studies of Sulfonyl Esters of Diazonaphthalenones: Relationship Between Fragmentation Patterns and Photolithographic Mechanisms," J. Appl. Polym. Sci., 34, 447(1987).
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78. Kresbach, G.M., Baker, T.R., Nelson, R.J., Wronka, J., Karger, B.L., and Vouros, P., "Direct Electrically Heated Spray Device for a Moving Belt LC/MS Interface," J. Chromatogr., 394, 89 (1987).
79. Young, D.C., Vouros, P., DeCosta, B., and Holick, M.F., "Location of Conjugated Diene Position in a Chain by Mass Spectrometry of the 4-Phenyl-1,2,4-triazoline-3,5-dione Adduct," Anal. Chem., 59, 1954 (1987).
80. Gao, Y., Trainor, T.M., Vouros, P., and Neumeyer, J.L., "The Synthesis of Multiple Deuterated N-n-Propyl-Norapomorphine N-(d₇) and Derivatives. J. Labelled Compounds and Radiopharmaceutics, 25, 293 (1987).
81. Wasilchuk, B., and Vouros P., "Design of an Inexpensive On-Column Injector for Capillary Gas Chromatography" J. Chromatogr., 407, 305 (1987).
82. Kyranos, J., DuSorbier, B.M., Kirby, D.P., Wronka, J., and Vouros, P., "Reduction Processes During Fast Atom Bombardment Mass Spectrometry of Sulfonyl Esters of Diazonaphthalenones", Org. Mass Spectrom., 23, 443 (1988).
83. Trainor, T.M., Vouros, P., Lampen, P., Maksoud, H., Neumeyer, J.L., Baldessarini, R.J., and Kula, N.S., "Determination of N-n-Propyl-Norapomorphine in Serum and Brain Tissue by Gas Chromatography-Negative Ion Chemical Ionization Mass Spectrometry." J. Chromatogr., 457, 257 (1988).
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85. Wasilchuk, B.A., Feibush, P., Le Quesne, P.W., and Vouros, P., "Synthetic, Multi-Deuteriated Cholesterol as a Quantitative Probe of The Formation of Cholesterol Oxidation Products" in *New Trends in Natural Products Chemistry*, A.Rahman and P.W. Le Quesne, Eds., Springer Verlag, Vol. III, 275 (1988).
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87. Kyranos, J.N., Zukas, W. and Vouros, P., "Characterization of Epoxy Resin Reaction Intermediates by Fast Atom Bombardment Mass Spectrometry", Macromolecules, 22, 1189 (1989).
88. Saha, M., Minnetian, O., Fisher, D., Rogers, E., Annan, R., Kresbach, G., Vouros, P. and Giese, R., "Pentafluorobenzoylation of Alkyl and Related DNA Base Adducts Facilitates Their Determination by Electrophore Detection", IARC Scientific Publications, 89, 356 (1988).
89. Young, D.C., Higuchi, T. and Vouros, P., "Generation of Methylstyryl Cations for Use as Standards in The Collisional Activation Analysis of Vitamin D and its Metabolites", Proc. 11th Intern. Conf. Mass Spectrom., Bordeaux, 1988, 1058-1059.
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92. Kyranos, J. and Vouros, P., "The Role of Mass Spectrometry in The Analysis of Polymers", J. Applied Polym. Science: Appl. Polym. Symp., 42, 211 (1989).
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95. Kulkarni, S., Abdel-Baky, S., Le Quesne, P.W., and Vouros, P., "Reaction of Trimethylsilylimidazole with 5,20 β -Epoxy-3-Ketosteroids. Enolization and Aromatization of the A-ring", Steroids, 53, 131 (1989).
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Students

Over 45 Ph.D. students have been awarded Ph.D. degrees under supervision of Prof. Vouros.