CURRICULUM VITAE

PHOTIS DAIS

Marital Status : Married, one child

Current Address : NMR Laboratory, Department of Chemistry

University of Crete, P.O. Box 2208, Voutes Campus,

71003 Heraklion, Crete, Greece

 Telephone
 : 2810.545037

 Fax
 : 2810.545166

 e-mail
 : ntaisf@uoc.gr

Internet : www.chemistry.uoc.gr/nmr/dais

History and philosophy of acience

Graduate studies at the Department of History and Philosophy of the University of Athens

EDUCATION

1971 First degree in Chemistry, Aristotle University of Thessalonica, Department of Chemistry,

Thessalonica, Greece.

1976 Master of Science, University of Toronto, Department of Chemistry, Toronto, Canada.

1980 Ph.D in Physical Chemistry, University of Toronto, Department of Chemistry, Toronto, Canada

EMPLOYMENT AND EXPERIENCE

1980-1981	Postdoctoral fellow, McGill University, Department of Chemistry, Montreal, Canada.
1981-1982	Lecturer, University of Patras, Department of Chemistry, Patra, Greece.
1983-1986	Research associate, McGill University, Department of Chemistry, Montreal, Canada.
1987-1991	Assistant professor, University of Crete, Department of Chemistry, Crete, Greece.
1991-1995	Associate professor, University of Crete, Department of Chemistry, Crete, Greece.
1995- 2013	Professor, University of Crete, Department of Chemistry, Crete, Greece.
2013-today	Emeritus Professor, University of Crete, Department of Chemistry, Crete, Greece.

ADMINISTRATIVE ACTIVITIES

1987-1993	Graduate Admission Committee of the Department
1988-1989	Vice-president of the Department
1992-1994	Vice-president of the Department
1994-1996	Re-elected Vice president of the Department
1992-1996	Member of the Senate of the University of Crete
1993-1997	Member of the Research Committee of the University of Crete.
2000- 2004	Chairman of the chemistry Department of the University of Crete.

TEACHING

The following courses were taught in the Chemistry Department:

Undergraduate courses:

- 1. General Chemistry
- 2. Physical Chemistry I (Thermodynamics)
- 3. Physical Chemistry II (Electrochemistry, Phase equilibria, Chemical equilibrium)
- 4. Physical chemistry III (molecular spectroscopy)
- 5. Theory and applications of NMR spectroscopy
- 6. Analytical techniques in food science

Graduate courses:

- 1. NMR Spectroscopy. Theory and Applications
- 2. 2D NMR Spectroscopy
- 3. Determination of Polymer Microstructure by ¹³C NMR Spectroscopy
- 4. Multi-dimensional NMR
- 5. Practical NMR
- 6. Topics in NMR Spectroscopy
- 7. Nuclear magnetic relaxation. Theory and applications.
- 8. Polymer Chemistry
- 9 Spectroscopic methods in food analysis
- 10. Food hygiene and food safety

OTHER ACTIVITIES

- 1. Author of the notes of General Chemistry (in Greek), University of Crete, 1995.
- 2. Author of the *notes of NMR Spectroscopy (in Greek)*, University of Crete, 2000.
- 3. Author of the *notes of Molecular Spectroscopy (in Greek)*, University of Crete, 2003.
- 4. Member of the organising committee of the NATO Advanced Institute Study *NMR in Biological Macromolecules*, Aug. 23 -Sept. 2, 1993, Kolymbari, Crete, Greece.
- 5. Chairman of the organizing committee of the 19th Pan-hellenic Confernce on Chemistry, *The many faces of Chemistry and its Applications*, November 6-10 2002, Iraklion, Crete, Greece.
- 6. Member of the scientific committee of the 2nd conference of the Greek Lipid Forum, *Fats, oils, Lipids: Present and Future*, June 7-8, 2007, Athens, Greece.
- 7. Member of the scientific committee of the EurpFed Lipid Congress, *Oils, Fats and Lipids in the 3rd Millennium*, September 7-10, 2008, Athens, Greece.
- 8. Member of the scientific committee of the 4rth panhelenic Conference of Greek Lipid Forum, *Modern trends in lipids*, June 6-7, 2011, Thessaloniki, Greece.
- 9. Member of the scientific committee of the 5rth panhelenic Conference of Greek Lipid Forum, *Modern trends in lipids*, March, 29-30, Athens, Greece.
- 10. Member of examination committees for a large number of master and doctoral dissertations performed in several Greek Universities.

Member of the editorial board of scientific journals

The Open Magnetic Resonance Journal (Editorial Advisory Board)

Mediterranean Journal of Chemistry

Journal of Food Chemistry and Nutrition

Chemical and Biological Technologies in Agriculture (Associate Editor)

Consulting

Karatzis Co. Heraklion, Crete

MINERVA olive oil company. Attiki,

Lyrarakis Quality Wines, Heraklion, Crete

State General Laboratory, Nicosia, Cyprus

Medical School, University of Crete Σχολή

FORTH, Heraklion, Crete

Hellenic petroleum Refineries, Aspropyrgos

Motor Oil Hellas refineries, Korinth

OLEON NV (Belgium)

Visiting Professor

June-Sept.	1987	
June-Oct.	1988	Visiting Professor, McGill University, Department of Chemistry,
June-Sept.	1990	Montreal, Canada.
FebrOct.	1991	

February 1993 Visiting Professor, IMAG, Institute of Polymer Science, Geneva, Italy.

January	1994	Visiting Professor, University of Manchester, Department of Chemistry, Manchester
1996-1997		Visiting Professor, University of Cyprus, Nicosia, Cyprus.
December	1997	Visiting Professor, University of Manchester, Department of Chemistry, Manchester
June	1998	Visiting Professor, CERMAV, Grenoble, France.
January	2000	Visiting Professor, University of Manchester, Department of Chemistry, Manchester
August	2000	Visiting Professor, CERMAV, Grenoble, France.
Sept-Dec.	2005	Visiting Professor, Department of Chemistry, University of Cyprus, Nicosia, Cyprus.
Jan-May	2009	Visiting Professor, Department of Chemistry, University of Cyprus, Nicosia, Cyprus.
Sept-Dec.	2010	Visiting Professor, Department of Chemistry, University of Cyprus, Nicosia, Cyprus
Sept-Dec.	2011	Visiting Professor, Department of Chemistry, University of Cyprus, Nicosia, Cyprus

Ph.D. THESES SUPERVISED

- 1. Study of microstructure and nuclear magnetic relaxation of poly(β-hydroxyalkanoate)s. M. E. Nedea, Department of Chemistry, McGill University, Montreal, Canada, Completed in 1991.
- 2. Rotational dynamic behaviour of hydrocarbon chains attached to a heavy anchor. D. Pissas, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 1994.
- 3. 13C spin-lattice relaxation and chain local motions in dissolved poly (naphthylalkyl acrylate)s. A. Spyros, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 1996.
- 4. *Molecular dynamics of synthetic and biological polymers in dilute solutions. An NMR study in combination with theoretical calculations.* E. Tylianakis, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 1997.
- 5. Concentrations of Ochratoxin A in domestic wines and dried vine fruits. Conformational Analysis of Ochratoxin A by NMR Spectroscopy and Computational Molecular Modeling. Irine Stephanaki, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 2003.
- 6. Development and a lication of novel analytical techniques for the detection and quantification of phenolic compounds in virgin olive oil. S. Christoforidou, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 2005.
- 7. Conformational analysis of mycotoxins employing NMR spectroscopy and molecular modelling. Determination of structure-activity relationship. G. Fragaki, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 2007.
- 8. Development of novel analytical techniques based on ³¹P NMR spectroscopy for food analysis. Determination of moisture and phospholipids in olive oil, glycerol in wine and olive oil. E. Xatzakis, NMR Laboratory, Department of Chemistry, University of Crete, Completed in 2007.
- 9. Novel NMR analytical techniques for the determination of cis and trans monounsaturated fatty acids in fats and oils and triterpenic acids with pharmacological properties in plant extracts. Alexia Agiomyrgianaki, NMR Laboratory, Department of Chemistry, University of Crete, completed in 2011.
- 10. Analysis and optimization of the wine aging process by NMR spectroscopy. Maria Amargianitaki, NMR Laboratory, Department of Chemistry, University of Crete, 2012-2015.

MASTER THESES SUPERVISED

- 1. *Structure and dynamics of poly*(1-naphthyl acrylate) in solution by ¹³C NMR spectroscopy. A. Spyros, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 1991.
- 2. Structure determination of 3-fluorenecarboxylate methyl ester by employing two-dimensional NMR spectroscopy. D. Pissas, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 1991.

- 3. ¹³C NMR relaxation and motional dynamics of polysaccharides in dilute solutions, Emmanuel Tylianakis, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 1994.
- 4. Structure and motional dynamics of the natural polymers scleroglucan and pullulan in solution studied by one and two dimensional NMR. S. Vlachou, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 2000.
- 5. Structure and molecular dynamics of industrial polymers with photoconductive properties. A. Karali, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 2000.
- 6. Detection and quantification of polyphenol-containing olive oil model compounds by employing ³¹P NMR sprctrocopy. S. Christophoridou, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 2000.
- 7. Classification of edible oils and fats by using NMR spectroscopy. P. Fronimaki, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 2001.
- 8. Classification of edible oils by using NMR spectroscopy and multivariate statistical analysis. Georgia Vigli, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 2003.
- 9. Geographical and botanical classification of Greek virgin olive oils by using NMR spectroscopy and multivariate statistical analysis. A. Philipidis, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 2003.
- 10. *Detection and quantification of diglyceride content in milkfats by using NMR spectroscopy*. F. Michalopoulou, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 2003.
- 11. Study of virgin olive oil adulteration with olive oils of lower quality by employing NMR spectroscopy and multivariate statistical analysis. Georgia Fragaki, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 2004.
- 12. Detection and quantification of phenolic compounds in Table olives oil by employing ³¹P-NMR spectroscopy. Vagia Tsironi, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 2005.
- 13. Geographical and botanical classification of Greek virgin olive oils by using NMR spectroscopy and multivariate statistical analysis. Alexia Agiomyrgianaki, NMR Laboratory, Department of Chemistry, University of Crete. Completed in 2008.
- 14. A new methodology for the determination of free and esterified sterols in virgin olive oil. George Dagounakis, NMR Laboratory, Department of Chemistry, University of Crete. Completed 2008.
- 15. Quantitative determination of the polyglycerol esters of polycondensed fatty acids (PGPR) in chocolat and confectionary products. Andrew Orfanakis, NMR Laboratory, Department of Chemistry, University of Crete. Completed 2009.
- 16. Sugars determination in Greek honey using ¹³C NMR spectroscopy, Aristea Kazalaki, NMR Laboratory, Department of Chemistry, University of Crete. Completed 2012.

DIPLOMA THESES SUPERVISED

- 1. Synthesis of cis-trans 1,4 and trans 1,4-polybutadienes, 1991.
- 2. Synthesis of n-alkyl and alkenyl esters of fluorene-3-carboxylic acid, 1992.
- 3. Hydrodynamic description of the overall molecular motion of poly (1-naphthylalkyl acrylates) by employing viscosity measurements, 1992.
- 4. Synthesis of isotactic poly (1-naphthyl acrylate) and heterotactic poly (1-naphthylmethyl acrylate) and poly(1-naphthylethyl acrylate), 1993.

- 5. Viscosity measurements of hexachloropropene and 1,2-dichlorobenzenesolvents as a function of temperature, 1993.
- 6. Measurements of intrinsic viscosities of poly(1-naphthylmethyl acrylate) in Chloroform and pentachloroethane solutions, 1994.
- 7. Measurements of intrinsic viscosities of the polysaccharide Dextran in dimethylsulfoxide and water solutions, 1996.
- 8. Measurements of intrinsic viscosities of the polysaccharides alpha- and beta-1,3-D-glucans in dimethylsulfoxide solutions, 1997.
- 9. Assignment of the ¹H and ¹³C NMR spectra of the polysaccharide schleroglucan by using 2D NMR techniques, 1997.
- 10. Viscosity measurements of poly(N-vinylcarbazole) in toluene solutions, 1998.
- 11. Qualitative determination of UV-stabilizers in high density polyethylene, 1998.
- 12. In Vitro inactivation of mycotoxins absorbed in polymeric materials and activated carbon, 1999.
- 13. Hydrodynamic description of the overall molecular motion of the linear polysaccharide schleroglucan in water and dimethylsulfoxide solutions by employing viscosity measurements, 1999.
- 14. Molecular imprinting of polymers with the pesticides pyrazophos, penthion, and carbaryl, 2000.
- 15. Spectroscopic determination of the polyphenols content in Cretan virgin oils, 2001.
- 16. Determination of total polyphenols in Greek virgin olive oils by employing UV-VIS, 2002.
- 17. Total polyphenols in Greek virgin olive oils determined by the Folin-Ciocaltau method, 2003.
- 18. Spectroscopic determination of the polyphenols content in Cretan virgin oils, 2003.
- 19. Determination of total polyphenols in Greek virgin olive oils by employing UV-VIS, 2004.
- 20. Titrimetric determination of the iodine number in virgin olive oil samples. 2004.
- 21. Determination of total polyphenols with spectroscopy UV-VIS and iodine number with the titrimetric analytical method Wijs in Greek virgin olive oils. 2005.
- 22. Determination of total polyphenols in Greek virgin olive oils by employing UV-VIS, 2005.
- 23. Determination of total polyphenols in Greek virgin olive oils by employing UV-VIS, 2005.
- 24. Antioxidant activity of polyphenols in virgin olive oil. 2005
- 25. Determination of total polyphenols in Greek virgin olive oils by employing UV-VIS, 2005.
- 26. Quantitative determination of phenolic compounds in the polar part of virgin olive oils by using the Folin-Ciocalteu method. 2005.
- 27. Iodine number determination in virgin olive oils. 2005
- 28. Discrimination of refined olive oil and refined hazelnut oil by using ³¹P NMR spectroscopy and multivariate statistical analysis. 2007.
- 29. Quantification of polyphenols in commercial extra virgin olive oil samples by ³¹P NMR spectroscopy. 2008.

- 30. Determination of phenolic compounds in virgin olive oils by using the Folin-Ciocalteu method. 2008.
- 31. Detection and quantification of phenolic compounds in Cretan virgin olive oils by³¹P NMR spectroscopy. 2008.
- 32. Extraction of polyphenols from virgin olive oil samples and their quatitative and quantitative determination by employing ³¹P NMR spectroscopy. 2009.
- 33. Determination of total polyphenols in Greek virgin olive oils by employing ³¹P NMR. 2009.
- 34. Detection and quantification of phenolic compounds in Greek and Cypriot virgin olive oil samples by ³¹P NMR spectroscopy. 2009.
- 35. ³¹P NMR assignment of phosphitylated polyphenols-containing model compounds in oregano. 2010.
- 36. ¹³C NMR spectral assignment of sugar-containing honey model compounds. 2011.

RESEARCH GRANTS (in euro)

- 1. Research Committee of the University of Crete, 8.200,00, 1988-1992
- 2. Greek Ministry of Research and Technology, 10.200,00, 1991-1993
- 3. NATO Collaborative Research Grants(CRG.910406), 3.500,00, 1992-1993
- 4. Joint Research and Technology Program Greece-Britain, 3.000,00, 1992-1993
- 5. NATO Advanced Study Institute, 51.357,30,1993-1994
- 6. British Council, 4.500,00, 1994-1996
- 7. NATO Science for Stability, 46.955,25, 1992-1996.
- 8. Greek Ministry of Research and Technology, 23.477,62, 1995-1997.
- 9. NATO Collaborative Research Grants (CRG.960593), 4.108,58, 1996-1998
- 10. Joint Research and Technology Program Greece-Britain, 8.804,11, 1998-2000
- 11. PABE 1997 (Cooperation with the Industry), 55.465,88, 1997-1999.
- 12. Scientifique Exchange programme CNRS-NHRF, 3.000,00, 1998-1999.
- 12. Joint Research and Technology Program Greece-France, 9.684,52, 1999-2001
- 13. Greek Ministry of Research and Technology, 52.824,65, 1999-2001
- 15. TMR (Marie Curie Fellowships), 34.923,00, 2000-2001.
- 16. MINERVA A.E., 30.500, 2003-2005.
- 17. Hraklitos, Greek Ministry of Education, 33.421,00, 2004-2006.
- 18. Industrial Competitiveness (EPAN), 192.000,00, 2004-2006
- 19. Regional Pole of Innovation for Value Creation, 385.000,00, 2006-2008.
- **20**. State General Laboratory (Cyprus), 4.325,00, 2008-2009.
- 21. Hellenic Petroleum refineries, 8.000,00, 2010-2012
- **22.** Motor Oil refineries, 7.000,00, 2010-2012
- 23. THALES-ESPA (EU-GREECE program), 600.000, 2012-2015

RESEARCH INTERESTS

NMR spectroscopy

- Rotational dynamics of small and medium sized molecules.
- Relaxation studies on the conformational dynamics of naturally occurring oligo- and polysaccharide molecules in dilute solutions.
- Liquid and solid state relaxation studies on the microstructure, morphology, and chain local motions of industrial synthetic polymers.
- Multi-nuclear and multi-dimensional NMR techniques for the structure elucidation and the conformational dynamics of natural products
- Food analysis, quality control and authentication (e.g. olive oil, wine, honey).
- Development of new analytical NMR methods (e.g. ³¹P NMR spectroscopy).
- NMR based metabonomics and chemometrics

History and philosophy of science

- History of Physical Sciences, 18th-20th centuries.
- Philosophy of Physical Science

REVIEWER

General Secretariat for Science and Technology of Greece, Greek Ministry of Education, Carbohydrate Research, Journal Polymer Science Polymer Physics Edition, Macromolecules, Biomacromolecules, Langmuir, International Journal of Biology, Journal of Colloid and Interface Science, Journal of Agricultural and Food Chemistry, Food Additives and Contaminants, Magnetic Resonance in Chemistry, Analytical Chemistry, Analytica Chimica Acta, Italian Journal of Food Science, Food Chemistry, Nutrient, Molecules, European Journal of Lipid Science and Technology, Journal of the American Oil Chemists' Society, Journal of AOAC International, Talanta, Analytical Methods, Chemometrics and Intelligent Laboratory Systems, Journal of Oleo Science, Analytical Letters, Agricultural Journal, Food Biophysics, Analyst, Journal of Pharmaceutical and Biomedical Analysis, Comprehensive Reviews in Food Science and Food Safety, Food Research International, Fuel, Journal of AOAC International, Phytochemical Analysis. Food Control, Grasas y Aceites, LWT-Food Science and Technology, Phytochemical Analysis. Substanti, Studies in History and Philosophy of Science.

.

BIBLIOMETRIC REPORT

Research articles: 118

Review articles and book chapters: 14

h-Index : 30 Citations : 2992

Without self citations: 2662 Average citation per item: 23,75 Journal average impact factor: 4.33

PUBLICATIONS

Dissertations

- 1. Photis Dais. Carbon-13 spin-lattice relaxation and dynamic behaviour of p-benzophenone carboxylate esters, Master thesis.
- 2. Photis Dais Rotational dynamics of molecules containing hydrocarbon chains and/or phenyl groups. Ph.D. thesis.

Books

Spectroscopy (in Greek), Hellenic Open University, 1999. NMRSpectroscopy in Food analysis, RSC Publishing, 2013.

Papers in refereed journals

- 1. Photis Dais and G.A. Gregoriou. Salt effects in solvolysis.1. Some salt effects in the solvolysis of 2-octyl methanesulfonate in 30% aqueous dioxane. *Tetrahedron Lett.* 1974, 3827-3830.
- 2. W.F. Reynolds, Photis Dais, A. Mar, and M.A. Winnik. Viscosity effects on the internal motion of alkane chains. *JCS Chem. Commun.* 1976, 757-759.
- 3. C.M. Paleos and Photis Dais. *Ready reduction of some nitroxide free radicals with ascorbic acid.*, *JCS Chem. Commun.* 1976, 345-346.
- 4. C.M. Paleos and Photis Dais. Polymerization of oriented monomers. II. Polymerization of 4-Vinylpyridine perchlorate in micellar aggregates. *J. Polym. Sci.*, *Polym. Chem. Ed.* 1978, 16, 1495-1503.

- 5. M.A. Winnik, A. Mar, W.F. Reynolds, Photis Dais, B.Clin, and B. Causade. The NMR spectra of normal alkane and the conformation of linear hydrocarbons in aromatic solvents. *Macromolecules* 1979, 12, 257-260.
- 6. C.M. Paleos, Photis Dais, and G.P. Evagelatos. Polymerization of Vinylpyridinium salts. III. Further studies on the interfacial and isotropic polymerization of 4-Vinyl-N-pyridinium methylsulfate. *J. Polym. Sci. Polym. Chem. Ed.* 1979, 17, 1611-1618.
- 7. G.A. Gregoriou, H. Kakouri, Photis Dais, and A. Matinopoulos. The question of the measure of electrolytes in organic reactions. Calculation of activity coefficients of electrolytes in solvolytic media. *JCS Perkin II* 1979, 1552-1557.
- 8. Photis Dais, V. Gibbs, G.A. Kenny-Wallace, W.F. Reynolds Molecular relaxation processes in very dilute fluids: A carbon-13 NMR study of alcohols in alkanes. *Chem. Phys.* 1980, 47, 407-415.
- 9. C.M. Paleos, S. Voliotis, G. Margomenou-Leonidopoulou, and Photis Dais. Polymerization of oriented monomers. V. Radiation-induced polymerization of 3N-dodecyl-1-vinyl imidazolium iodide in micellar aggregates. *J. Polym. Sci. Polym. Chem. Ed.* 1980, 18, 3463-3468.
- 10. W.F. Reynolds, Photis Dais, D.W. McIntyre, G.K. Hamer, and I.R. Peat. Concerning the relative merits of single and dual substituent parameter scales for the interpretation of substituent-induced-chemical shifts in styrene derivatives. *J. Magn. Reson.* 1981, 43, 81-89.
- 11. W.F. Reynolds, Photis Dais, R.W. Taft, and R.S. Topson. The response of substituents to pi-electron demand. *Tetrahedron Lett.* 1981, 22, 1795-1798.
- 12. Photis Dais and A.S. Perlin. High field carbon-13 NMR spectroscopic observation on β-D-Glucans amylopectine and glycogen. *Carbohydr. Res.* 1982, 100, 103-116.
- 13. Photis Dais and A.S. Perlin. Orientation of hydroxyl groups. Conformational studies on 2,3:5,6-di-O-Isopropyledene-a-D-mannofuranose by NMR spectroscopy. *Can. J. Chem.* 1982, 60, 1648-1656.
- 14. C.M. Paleos, G. Margomenou-Leonidopoulou, S.E. Philipakis A. Malliaris, and Photis Dais. Thermotropic liquid crystalline polymers. II. Further examples on their synthesis by the interaction of poly(acryloyl chloride) with mesogenic compounds. *J. Polym. Sci.*, *Polym. Chem. Ed.* 1982, 20, 2267-2275.
- 15. Photis Dais and A.S. Perlin. An examination of carbon-13 and proton-chemical shifts in relation to the conformational stabilities of D-glucopyranose disaccharides and polysaccharides. *Carbohydr. Res.* 1982, 107, 263-269.
- 16. C.M. Paleos, C. Christias, G.P. Evagelatos, and Photis Dais. Polymerization of oriented monomers. VI. Polymerization of monomeric Di(undecyl) phosphate vesicles to stable polymeric vesicles. *J. Polym. Sci. Polym. Chem. Ed.* 1982, 20, 2565-2573.
- 17. W.F. Reynolds, Photis Dais, D.W. McIntyre, R.D. Topson, S. Marriot, E. von Nagy-Felsobuki, and R.W. Taft. Nature of π -electron-transfer effects in organic system with varying π -electron demand. *J. Am. Chem. Soc.* 1983, 105, 378-384.
- 18. Photis Dais and A.S. Perlin. Motional behaviour of 2,3:5,6-di-O-isopropyledene-a-D-mannofuranose in solution. A 13 C spin-lattice relaxation study. *Can. J. Chem.* 1983, 61, 1542-1548.
- 19. Photis Dais, W.F. Reynolds and M.A. Winnik Aggregation of the n-alkyl esters of benzo phenone-4-carboxylic acid in acetonitrile. A ¹³C NMR study. *J. Colloid. Interf. Sci.* 1983, 94, 336-342.
- 20. Photis Dais, T.K. Shing, and A.S. Perlin. Proton spin-lattice relaxation rates and Nuclear Overhauser Enhancement, in relation to the stereochemistry of β -D-mannopyranose-1, 2-ortho acetates. *Carbohydr. Res.* 1983, 122, 305-313.

- 21. Photis Dais, T.K. Shing, and A.S. Perlin. A study of disaccharide conformation by measurements of nuclear Overhauser enhancement, relaxation rates and carbon-proton coupling constants.1, 6-anhydro-β-cellobiosane hexaacetate. *J. Am. Chem. Soc.* 1984, 106, 3082-3089.
- 22. C.M. Paleos and Photis Dais. Polymerization of allyldimethyldodecylammonium bromide crystalline monomer to its liquid crystalline monomer. *Recent Advances in Liquid Crystalline Polymers*, Applied Science, Polymer Publishers 1984, 89-90.
- 23. C.M. Paleos, Photis Dais and A. Malliaris. Polymerization of allyldimethyldodecyl ammonium bromide in micellar and isotropic media. *J. Polym. Sci. Polym. Chem. Ed.* 1984, 22, 3383-3391.
- 24. Photis Dais and A.S. Perlin. Stabilization of the β -furanose form, and kinetics of the tautomerization of D-fructose in dimethylsulfoxide. *Carbohydr. Res.* 1985, 136, 215-223.
- 25. D. Babilis, Photis Dais, L. H. Margaritis, and C.M. Paleos. Polymerization of oriented monomers. VIII. Polymerization of allyl and diallyl vesicle forming quaternary ammonium salts. *J. Polym. Sci. Polym. Chem. Ed.* 1985, 23, 1089-1098.
- 26. Photis Dais and A.S. Perlin. Relaxation and related proton NMR studies on asperlin. Configuration and conformation of the epoxypropyl side-chain. *Can. J. Chem.* 1985, 63, 1009-1012.
- 27. Photis Dais. A Carbon-13 NMR relaxation study on amylose in dimethylsulfoxide. *Macromolecules* 1985, 18, 1351-1354.
- 28. D. Babilis, C.M. Paleos, and Photis Dais. Polymerization of allyl and diallyl vesicles forming quaternary ammonium salts. *ACS Polym. Prepr.* 1985, 26, 206-208.
- 29. Photis Dais and A.S. Perlin. Chemical shifts of the methyl groups in di-O-isopropylidene furanoses, and their relationship to molecular conformation and site of ring fusion. Spin-lattice relaxation measurements, and motional characteristics. *Carbohydr. Res.* 1986, 146, 177-191.
- 30. Photis Dais and G. Fainos. Motional behaviour of asperlin in solution. A Carbon-13 spin-lattice relaxation study. *Can. J. Chem.* 1986, 64, 560-565.
- 31. Photis Dais. Rotational dynamics of molecules containing phenyl groups. A Carbon-13 spin-lattice relaxation study. *Magn. Reson. Chem.* 1987, 25, 141-146.
- 32. Photis Dais. Carbon-13 magnetic relaxation and local chain motion of amylose in dimethylsulfoxide. *Carbohydr. Res.* 1987, 160, 73-93.
- 33. Photis Dais, Q.J. Peng, and A.S. Perlin. A relationship between ¹³C chemical shift displacement and counterion condensation theory in the binding of calcium ion by heparin. *Carbohydr. Res.* 1987, 168, 163-179.
- 34. Photis Dais, Q.J. Peng, and A.S. Perlin. Binding of magnesium and lanthanum ions to heparin in the presence of sodium ions. A relationship between ¹³C chemical shift displacements and counterion condensation theory. *Can. J. Chem.* 1987, 65, 1739-1745.
- 35. A. Malliaris, C.M. Paleos and Photis Dais. Effects of fictionalisation on aggregational and organizational characteristics of the sodium salts of N-dodecylsuccinamic and N-dodecylmaleamic acids. *J. Phys. Chem.* 1987, 91, 1149-1152.
- 36. C.M. Paleos, A. Malliaris, and Photis Dais. Effects of the position of the double bond on the polymerisation of micelle forming quaternary ammonium salts. *ACS Polymer Preprints* 1987, 28, 434-435.
- 37. Photis Dais and A. S. Perlin. Intramolecular hydrogen bonding and solvation contributions to the relative stability of the β -furanose form of D-fructose in dimethylsulfoxide. *Carbohydr. Res.* 1987, 169, 159-169.
- 38. Photis Dais and A.S. Perlin. Study of disaccharide conformation by one- and two-dimensional NMR spectroscopy. 1,6-anhydromaltose-hexaacetate. *Magn. Reson. Chem.* 1988, 26, 373-379.

- 39. Photis Dais and A.S. Perlin. Assignment of the O-acetyl carbonyl carbons of cellulose triacetate via 2D long-range proton-carbon chemical shift correlation data. *Carbohydr. Res.* 1988, 181, 233-235.
- 40. D. Babilis, C.M. Paleos, and Photis Dais. Polymerisation of oriented monomers. IX. Further studies on the polymerisation and vesicular properties of allyl and diallyl based monomeric and polymerized quaternary ammonium salts. *J. Polym. Chem. Polym. Chem. Ed.* 1988, 26, 2141-2156.
- 41. Photis Dais, K.R. Holme, and A.S. Perlin. A carbon-13 NMR study of selectivity in the binding of univalent counterions by heparin. *Can. J. Chem.* 1988, 66, 2601-2604.
- 42. A. Kokkinia, C.M. Paleos, and Photis Dais. Liquid crystalline character of novel main chain oligophosphates bearing lipophilic and/or mesogenic moieties. *ACS Polym. Preprints* 1989, 30, 448-449.
- 43. Photis Dais. Rotational dynamics of flexible-chain molecules. ¹³C NMR relaxation study of hydrocarbon chains attached to a heavy anchor. *Magn. Reson. Chem.* 1989, 27, 61-67.
- 44. D. Tsiourvas, C.M. Paleos, and Photis Dais. Functionalized polymers derived from the reaction of polymaleic anhydride with amines and alcohols. *J. Appl. Polym. Sci.* 1989, 38, 257-264.
- 45. Photis Dais and A. S. Perlin. Carbon-13 spin-lattice relaxation study of solvent effects on the rotational dynamics of methyl glucosides. *Carbohydr. Res.* 1989, 194, 288-295.
- 46. Photis Dais, M.H. Nedea, F.G. Morin, and R.H. Marchessault. ¹³C spin lattice relaxation and chain local motions in dissolved poly(β-hydroxybutyrate). *Macromolecules* 1989, 22, 4208-4212.
- 47. J. Michas, C.M. Paleos, and Photis Dais. Polymerisation of head and tail methacrylate micelle forming surfactants and thermotropic liquid crystalline character of these monomers and their polymers. *Liquid Cryst*. 1989, 5, 1737-1745.
- 48. C.M. Paleos, D. Tsourvas, and Photis Dais. Mesomorphic-like character of long-chain amine salts formed by template neutralization on polyacids. *Liquid Cryst*. 1989, 5, 1747-1755.
- 49. M. Jaseja, A.S. Perlin, and Photis Dais. A 2D NMR spectral study of the tautomeric equilibria of D-fructose and related compounds. *Magn. Reson. Chem.* 1990, 28, 283-289.
- 50. A. Tsatsakis and Photis Dais. ¹H NMR structural studies of some naphtalene hydroxy methyl and mercaptomethyl acetic acid compounds and derivatives. *Magn. Reson. Chem.* 1990, 28, 375-377.
- 51. A. Kokkinia, C.M. Paleos, and Photis Dais. Liquid crystal character of novel main chain oligophosphates bearing lipophilic and/or mesogenic moieties. *ACS Symposium Series*. 1990, 93-101.
- 52. D. Tsiourvas, C.M. Paleos, and Photis Dais. Further studies on homopolymers and copolymers resulting from the reaction of polymaleic anhydride with alcohols and amines. *J. Polym. Sci., Polym. Chem. Ed.* 1990, 28, 1263-1271
- 53. A. Kokkinia, C.M. Paleos, and Photis Dais. Liquid crystalline behaviour of some bipolar quaternary and phosphate amphiphiles. *Mol. Cryst. Liquid Cryst.* 1990, 186, 239-250.
- 54. Photis Dais. Carbon-13 spectra of polybutadienes in the presence of binuclear shift reagents. *Makromol. Chem. Rapid Commun.* 1990, 11, 299-302.
- 55. Photis Dais, M.H. Nedea, F.G. Morin, and R.H. Marchessault. Effects of internal librational motions on the 13 C nuclear magnetic resonance relaxation times of poly(β -hydroxybutyrate) in tetrachloroethane solution. *Macromolecules* 1990, 23, 3387-3388.
- 56. Photis Dais. Conformational properties of para monosubstituted benzophenones. ¹³C NMR and molecular modelling studies. *Z. Phys. Chem. Neue Folge Bd. 1* 1990, 168, 43-53.

- 57. Photis Dais and R.H. Marchessault. ¹³C nuclear magnetic relaxation of amylose and dynamic behaviour of hydroxymethyl group of polysaccharides. *Macromolecules* 1991, 24, 4611-4614.
- 58. D. Pissas, Photis Dais, and F. Sauriol. Two-Dimensional NMR and ¹³C spin-lattice relaxation study of 3-fluorenecarboxylate methyl ester. *Magn. Reson. Chem.* 1991, 29, 1181-1190.
- 59. A. Spyros and Photis Dais. Structure and dynamics of poly(1-naphthyl acrylate) in solution by ¹³C NMR spectroscopy. *Macromolecules* 1992, 25, 1062-1067.
- 60. M.E. Nedea, R.H. Marchessault, and Photis Dais. ¹³C nuclear magnetic relaxation and dynamic behaviour of poly(β-hydroxybutyrate) in chloroform solution. *Polymer* 1992, 33, 1831-1835.
- 61. C.M. Paleos, G. Nika, A. Malliaris, and Photis Dais. Aggregational behaviour of polymeric micelles of methacrylate functionalized quaternary ammonium salts. *Progr. Coll. & Polym. Sci.* 1992, 89, 122-125.
- 62. Photis Dais, M.E. Nedea, and R.H. Marchessault. Chain segmental motion of poly(β-hydroxybutyrate-co-β-hydroxyvalerate) in chloroform solution. *Polymer* 1992, 33, 4288-4291.
- 63. Photis Dais, C.M. Paleos, G. Nika, and A. Malliaris. Positional effects of the methacrylate group on polymerisation and microstructure of micelle-forming quaternary ammonium salts studied by NMR spectroscopy. *Makromol. Chem.* 1993, 194, 445-450.
- 64. T. Radiotis, A. Spyros, and Photis Dais. Microstructure determination of poly(1-naphthylalkyl methacrylates) by NMR spectroscopy. *Polymer* 1993, 34, 1846-1849.
- 65. T. Radiotis, G.R. Brown, and Photis Dais. ¹³C nuclear magnetic relaxation and chain local motions of poly(vinyl chloride) in dibutylphthalate and tetrachloroethane solutions. *Macromolecules* 1993, 26, 1445-1452.
- 66. Photis Dais. ¹³C nuclear magnetic relaxation and motional behaviour of polysaccharide molecules in solution. *5th European Conference on Spectroscopy of Biological molecules*, Kluwer Academic Publishers, 1993, 217-221.
- 67. D. Pissas, Photis Dais, and E. Mikros. Quantitative treatment of the rotational dynamics of flexible-chain molecules. ¹³C NMR relaxation study of hydrocarbon chains attached to the fluorine anchor. *Magn. Reson. Chem.* 1994, 32, 263-275.
- 68. A. Spyros, Photis Dais, and F. Heatley. Assignment of the ¹H and ¹³C NMR spectra and stereochemical analysis of radical-initiated poly(1-naphthylmethyl acrylate) and poly(2-(1-naphthyl)ethyl acrylate). *Makromol. Chem. Phys.* 1994, 195, 3271-3279.
- 69. Photis Dais A quantitative approach to describe the overall motion of monosaccharide molecules in solution. 13 C NMR relaxation study of 1,6-anhydro- β -D-glucopyranose in dimethyl sulfoxide. *Carbohydr. Res.* 1994, 263, 13-24.
- 70. A. Spyros, Photis Dais, and F. Heatley. Chain segmental motion and side chain internal rotations of poly (1-naphthylalkyl acrylate)s in solution studied by ¹³C nuclear magnetic relaxation. *Macromolecules* 1994, 27, 5845-5857.
- 71. A. Spyros, Photis Dais, and F. Heatley. Viscosity dependence of chain segmental motion and side chain internal rotation of poly(1-naphthylmethyl acrylate) in dilute solution. ¹³C nuclear magnetic relaxation study. *Macromolecules* 1994, 27, 6207-6215.
- 72. A. Spyros and Photis Dais. Composite spectral density functions for the interpretation of the ¹³C NMR relaxation behaviour of polymers containing hydrocarbon side chains. Free and restricted side chain motion. *J. Polym. Sci. Polym. Phys. Ed.* 1995, 33, 353-365.
- 73. A. Spyros, Photis Dais, and R.H. Marchessault. Local chain motions of poly(β -hydroxy octanoate) in the bulk. ¹³C NMR relaxation study. *J. Polym. Sci. Polym. Phys. Ed.* 1995, 33, 367-378.

- 74. E. Tylianakis, Photis Dais, I. Andre, and F. Taravel. Rotational dynamics of linear polysaccharides in solution. ¹³C Relaxation study on amylose and inulin. *Macromolecules* 1995, 28, 7962-7966.
- 75. E. Mikros, Photis Dais, and F. Sauriol. Conformation analysis of asperlin by NMR spectroscopy and molecular modeling. *Carbohydr. Res.* 1996, 294, 1-13.
- 76. E. Tylianakis, Photis Dais, F. Heatley. Non-Kramers behavior of PVC in dilute solutions as detected by ¹³C NMR relaxation experiments. *J Polym. Sci.: Part B: Polym. Phys.* 1997, 35, 317-329.
- 77. E. Tylianakis, A. Spyros, Photis Dais, F. Taravel, and A. Perico NMR study of the rotational dynamics of linear homopolysaccharides in dilute solutions as a function of linkage position and stereochemistry. *Carbohydr. Res.* 1999, 315, 16-34.
- 78. A. Perico, M. Mormino, R. Urbani, A. Cesaro, E. Tylianakis, Photis Dais, and D. Brant. Local dynamics of carbohydrates: I. Dynamics of simple glucans with different chain linkages as a function of temperature and magnetic field. *J. Phys. Chem. B* 1999, 103, 8162-8171.
- 33333379. A. Spyros and Photis Dais. Application of ³¹P-NMR spectroscopy in food analysis. Quantitative determination of the mono and diglycerides composition of olive oils. *J. Agric. Food Chem.* 2000, 48, 802-805.
- 80. T. Kupka, G. Pasterna, M. Jaworska, A. Karali, and Photis Dais. Molecular Orbital GIAO NMR calculations for carbazole and is N-methyl and ethyl derivatives. Comparson of theoretical and experimental ¹³C chemical shifts. *Magn. Reson. Chem.* 2000, 38, 149-155.
- 81. A. Karali, G. Frudakis, Photis Dais, and F. Heatley. Complete assignment of ¹H- and ¹³C-NMR spectra of Poly(N-vinylcarbazole). *Macromolecules* 2000, 33, 3180-3183.
- 82. A. Karali, Photis Dais, and F. Heatley. Carbon-13 Nuclear Magnetic Relaxation Study of Solvent Effects on Chain Local Dynamics of Poly(N-vinylcarbazole) in Dilute Solution. *Macromolecules* 2000, 33, 5524-5531.
- 83. S. Christophoridou, A. Spyros, and Photis Dais. ³¹P-Nuclear Magnetic Resonance Spectroscopy of polyphenol-containing olive oil model compounds. *Phosphorous, Sulfur and Silicon & the Related Elements* 2001, 170, 139-157.
- 84. S. Vlachou, A. Politou, Photis Dais, and F. Taravel. Structure and dynamics of the branched polysaccharide schleroglucan in dilute solutions studied by 1D and 2D NMR spectroscopy. *Carbohydr. Polym.* 2001, 46, 349-363.
- 85. A. Karali, Photis Dais, E. Mikros, and F. Heatley. Conformational Analysis of Poly (N-vinylcarbazole) by NMR Spectroscopy and Molecular Modeling. *Macromolecules* 2001, 34, 5547-5554.
- 86. F. Heatley A. Karali, and Photis Dais. An investigation of ¹H and ¹³C longitudinal relaxation and relaxation in the rotating frame in solid poly(N-vinylcarbazole). *Polym. Int.* 2001, 50, 1004-1009.
- 87. I. Kanetakis and Photis Dais. Critical comparison of two models describing segmental dynamics of polymer chains in dilute solutions. *Macromol. Theory Simul.* 2001, 10, 789-794.
- 88. S. Vlachou, Photis Dais, and F. Taravel. Segmental Dynamics of Pullulan. ¹³C Nuclear Magnetic Relaxation study in dilute solutions. *Biomacromolecules* 2001, 2, 1137-1147.
- 89. P. Fronimaki, A. Spyros, S. Christophoridou, and Photis Dais. Determination of the diglycerides Content in Greek virgin olive oils, and some commercial olive oils employing ³¹P NMR spectroscopy. *J. Agric. Food Chem.* 2002, 50, 2207-2213.
- 90. I. Stefanaki, E. Foufa, A. Tsatsou-Dritsa, and Photis Dais. Ochratoxin A concentrations in Greek domestic wines and dried vine fruits determined by immunoaffinity clean-up and high performance liquid chromatography. *Food Additives and Contaminants* 2003, 20, 74-83.

- 91. G. Vigli, A. Philippidis, A. Spyros, and Photis Dais. Classification of edible oils by employing ³¹P and ¹H NMR Spectroscopy in combination with multivariate statistical analysis. A proposal for detection of seed oils adulteration in virgin olive oils. *J. Agric. Food Chem.* 2003, 51, 5715-5722.
- 92. A. Spyros, A. Philippidis, and Photis Dais. Kinetics of diglyceride formation and isomerization in virgin olive oils by employing ³¹P NMR spectroscopy. Formulation of a quantitative measure to assess olive oil Storage history. *J. Agric. Food Chem.* 2004, 52, 157-164.
- 93. Photis Dais, E. Tylianakis, J. Kanetakis, and F. Taravel. ¹³C Nuclear magnetic relaxation study of segmental dynamics of hyalorunan in aqueous solutions. *Biomacromolecules* 2005, 6, 1397-1404.
- 94. G. Fragaki, A. Spyros, G. Siragakis, E. Salivaras, and Photis Dais. Detection of extra virgin olive oil adulteration with lampante olive oil and refined olive using NMR spectroscopy and multivariate statistical analysis. *J. Agric. Food Chem.* 2005, 53, 2810-2816.
- 95. S. Christoforidou, Photis Dais, Li-Hong Tseng, and M. Spraul. Separation and identification of phenolic compounds in olive oil by coupling high performance liquid chromatography with post-column solid phase extraction to nuclear magnetic resonance spectroscopy (LC-SPE- NMR). *J. Agric. Food Chem.* 2005, 53, 4667-4679.
- 96. I. Stefanaki, E. Mikros, G. Fragaki, and Photis Dais. Conformational analysis of ochratoxin A by NMR spectroscopy and molecular modeling. *J. Phys. Chem. B* 2005, 109, 16926-16936.
- 97. S. Christoforidou, and Photis Dais. A Novel Approach for Detection and Quantification of Phenolic Compounds in Olive Oil Based on ³¹P NMR spectroscopy. *J. Agric. Food Chem.* 2006, 54, 656-664.
- 98. Photis Dais, A. Spyros, S. Christophoridou, E, Hatzakis, G. Fragaki, A. Agiomyrgianaki, E. Salivaras, G. Siragakis, D. Daskalaki, M. Tasioula-Margari, M. Brenes. Comparison of quantitative ¹H and ³¹P NMR spectroscopy with conventional methods of analysis for the determination of some olive oil constituents. *J. Agric. Food Chem.* 2007, 55, 577-584.
- 99. E. Hatzakis and Photis Dais. Determination of glycerol in wine using ³¹P NMR spectroscopy. *JAOCS* 2007, 84, 615-619.
- 100. E. Hatzakis, and Photis Dais. Moisture determination in olive oil by ³¹P NMR spectroscopy. *J. Agric. Food Chem.* 2008, 56, 1866-1862.
- 101. P. Petrakis, A. Agiomyrgianaki, S. Christophoridou, A. Spyros, P. Dais. Geographical characterization of Greek virgin olive oils (*Cv*. Koroneiki) using ¹H and ³¹P NMR fingerprinting with canonical discriminant analysis and classification binary trees. *J. Agric. Food Chem.* 2008, 56, 3200–3207.
- 102. E. Hatzakis, A. Koidis, D. Boskou, and Photis Dais. Determination of Phospholipids in Olive Oil by ³¹P NMR Spectroscopy. *J. Agric. Food Chem.* 2008, 56, 6232-6240.
- 103. G. Fragaki, I. Stephanaki, E. Mikros, and P. Dais. Conformational analysis of the mycotoxin verrucarin A in solution by NMR spectroscopy and computational methods. *Magn. Reson. Chem.* 2008, 46, 1102-1111.
- 104. S. Christophoridou and Photis Dais. Detection and Quantification of Phenolic Compounds in Olive Oil by High Resolution ¹H Nuclear Magnetic Resonance Spectroscopy. *Anal. Chim. Acta* 2009, 633, 283-292.
- 105. A. Agiomyrianaki, P.V. Petrakis and P. Dais. Detection of refined hazelnut oil in refined olive oil by employing NMR spectroscopy and multivariate statistical analysis. *Talanta* 2010, 80, 2165-2171.
- 106. G. Dagounakis, E. Hatzakis and Photis Dais. A Facile NMR Method for the Quantification of Total Free and Esterified Sterols in Virgin Olive Oil. *Food Chem.* 2010, 122, 346-352.
- 107. E. Hatzakis, A. Agiomyrgianaki, and Photis Dais. Detection and quantification of free glycerol in virgin olive oil by ³¹P NMR spectroscopy. *J. Am. Oil Chem. Soc.* 2010, 87, 29–34.

- 108. E. Hatzakis, A. Agiomyrgianaki, S. Kostidis and Photis Dais. High-resolution NMR spectroscopy: An alternative fast tool for qualitative and quantitative analysis of diacylglycerol (DAG) oil. *J. Am. Oil Chem. Soc.* 2011, 88, 1695-1708.
- 109. A. Agiomyrgianaki, P. Petrakis and Photis Dais. Influence of harvest year, cultivar and geographical origin on Greek extra virgin olive oils composition: a study by NMR spectroscopy and biometric analysis. *Food Chem.*. 2012, 135, 2561–2568.
- 110. A. Agiomyrgianaki and Photis Dais Simultaneous determination of phenolic compounds and triterpenic acids in oregano growing wild in Greece by ³¹P NMR spectroscopy. *Magn. Reson. Chem.* 2012, 50, 739-748.
- 111. A. Agiomyrgianaki, J. Sedman, F.R. van de Voort, and Photis Dais. *Cis* and *trans* components of lipids. Analysis by ¹H NMR and silver shift reagents. *Eur. J. of Lipid Sci. Technol.* 2012, 114, 504-509.
- 112. E. Manolopoulou, A. Spinella, E. Caponetti, P. Dais, and A. Spyros. High resolution-magic angle spinning NMR study of olive leaves. In: *Magnetic Resonance in Food Science. Food for Thought*. J. van Duynhoven, P. S. Belton, G. A. Webb (Eds), Royal Society of Chemistry, 2013, pp. 164-170.
- 113. A. Orfanakis, E. Hatzakis, .K. Kanaki, S.A. Pergantis, A.K. Rizos, and Photis Dais. Characterization of Polyglycerol Polyricinolate Formulations by Using a Combination of NMR Spectroscopy, Electrospray Mass Spectrometry, and Dynamic Light Scattering. *J. Am. Oil Chem. Soc.* 2013, 90, 39–51.
- 114. Photis Dais, M. Misiak, and E. Hatzakis. Analysis of marine dietary supplement using NMR Spectroscopy. *Analytical Methods* 2015, 7, 5226-5238.
- 115. A. Kazalaki, M. Misiak, A. Spyros and Photis Dais. Identification and quantitative determination of carbohydrate molecules in Greek honey by employing ¹³C NMR spectroscopy. *Analytical Methods* 2015, , 7, 5962-5972.
- 116. E. Ralli, M. Amargianitaki, E. Manolopoulou, M. Misiak, G. Markakis, S. Tachtalidou, A. Kolesnikova, P. Dais and **A. Spyros**, NMR spectroscopy protocols for food metabolomics applications. *Springer Protocols: Metabolic profiling*, **2017**, in press.

History and Philosophy of Science

- 117. Photis Dais, The Stern-Gerlach experiment: the precursor of the electron spin? (in Greek) *Nefsis* 2017, 25, 71-101.
- 118. The double transfer of thermodynamics: from physics to chemistry and from Europe to America. *Studies in History and Philosophy of Science*, in Press.

REVIEW ARTICLES / BOOK CHAPTERS

- 119. Photis Dais and A.S. Perlin. Proton spin-lattice relaxation rates in the structural analysis of carbohydrates molecules in solution. *Adv. Carbohydr. Chem. Biochem.* 1987, 45, 125-168. (Invited)
- 120. Photis Dais. Dynamic modeling of polysaccharides in solution. NATO ASI Ser. 1994, 87, 279-292.
- 121. Photis Dais. ¹³C nuclear magnetic relaxation of carbohydrate molecules in solution. *NATO ASI Ser.* 1994, 87, 263-278.
- 122. Photis Dais and A. Spyros. ¹³C relaxation and local chain dynamics of synthetic polymers in solution and in the bulk. *Progr. NMR Spectrosc.* 1995, 27, 555-633. (Πρόσκληση)
- 123. Photis Dais. Carbon-13 nuclear magnetic relaxation and motional behaviour of carbohydrate molecules in solution. *Adv. Carbohydrate Chem. Biochem.* 1995, 51, 63-131. (Πρόσκληση)

- 124. Photis Dais and A. Spyros. ³¹P NMR spectroscopy in the quality control and authentication of virgin olive oil. An Account of recent results. *Magn. Reson. Chem.* 2007, 45, 367-377.
- 125. Photis Dais and D. Boskou. Detection and quantification of phenolic compounds in olive oil, olives and biological fluids. In *Olive oil minor constituents and health*. D Boskou (ed.), CRC Press/Taylor & Francis group, Boca Raton, Chapter 5, 2008. (Πρόσκληση)
- 126. A. Spyros and Photis Dais. ³¹P NMR Spectroscopy in food analysis. *Progr. NMR Spectrosc.* 2009, 54, 195-207. (Πρόσκληση)
- 127. Photis Dais. ³¹P NMR spectroscopy on olive oil quality control and authentication. *INFORM* 2009, 20, 725-728. (Πρόσκληση)
- 128. Photis Dais. NMR measurements of free and esterified sterols. *Lipid Technology* 2010, 22, 274-276. (Πρόσκληση)
- 129. Photis Dais. Nuclear Magnetic Resonance: methodologies and applications. In: *Handbook of Olive oil: Analysis and Properties*. R. Aparicio, J. Hardwood (eds.), AOCS Press, Chapter 11, 2012.. (Πρόσκληση
- 130. Photis Dais and A. Spyros. Nuclear Magnetic Resonance. In: *Chemical Analysis of Food: Techniques and Applications*. Y. Picó (ed.), Elsevier, Chapter 4, 2012. (Πρόσκληση)
- 131. Photis Dais and E. Hatzakis. Quality assessment and authentication of virgin olive oil by NMR spectroscopy: a critical review. *Anal. Chim. Acta.* 2013, 765, 1-27. (Πρόσκληση).
- 132. P. Dais, E. Hatzakis, Analysis of Bioactive microconstituents in olives, olive oil, and olive leaves by NMR spectroscopy. An overview of the last decade. In: *Analysis and Characterization of Bioactives in Olea Europaea*. *A challenge for Analytical Chemistry*, D. Boskou (ed.), AOCS Press, Chapter 10, 2015. (Πρόσκληση).

PARTICIPATION IN CONFERENCES

1. Photis Dais, W.F. Reynolds, M.A. Winnik, and A. Mar

NMR studies on the conformation of linear hydrocarbons in aromatic solvents.

61st Conference of the Technical Institute of Canada. Macromolecular Science Division, June 4-7, 1979, Winnipeg, Manitoba, Canada.

2. C.M. Paleos, Photis Dais, S. Voliotis and G. Margomenou-Leonidopoulou

Radiation induced polymerisation of 3N-dodecyl-1-vinylimidazolium iodide in micellar aggregates.

IUPAC, 26th International Symposium on Macromolecules, Sept. 17-21, 1979, Mainz, W. Germany.

3. C.M. Paleos and Photis Dais

Organic reactions in oriented systems.

4th Chemical Week, Nuclear Research Centre Demokritos, February 1979, Athens, Greece.

4. C.M. Paleos, G Margomenou-Leonidopoulou, S. E. Philipakis and Photis Dais

Further examples on liquid crystalline polymer synthesis by the interaction of poly(acryloylchloride) with mesogenic compounds.

IUPAC, 28th Macromolecular Symposium, July 12-16, 1982, Amherst, MA, USA.

5. C.M. Paleos and Photis Dais

Polymerisation of allyldimethyldodecylammonium bromide in micellar and isotropic media.

IUPAC MACRO83, Sept. 5-9, 1983, Bucharest, Romania.

6. Photis Dais

Participation in the Discipline of Biomolecular stereodynamics. June 7-10, 1983, New York at Albany, USA.

7. Photis Dais and C.M. Paleos

Polymerisation of allyldimethyldodecylammonium bromide liquid crystalline monomer to its liquid crystalline polymer.

6th Workshop on Liquid Crystal Polymer Systems, Sept. 12-14, 1983, Bungby, Denmark.

8. Photis Dais and A.S. Perlin

Carbon-13 spin-lattice relaxation studies on carbohydrates in solution. Motional behaviour of asperlin. 67th Congress of the Chemical Institute of Canada, June 2-5, 1984, Montreal, Canada.

9. Photis Dais and A.S. Perlin

Stabilization of the β -furanose form and kinetics of the mutarotation of D-fructose in methylsulfoxide. 67th Congress of the Chemical Institute of Canada, June 2-5, 1984, Montreal, Canada.

10. D. Babilis, **Photis Dais** and C.M. Paleos

Polymerisation of allyl and diallyl vesicle forming quaternary ammonium salts. ACS Symposium on Polymeric Surfactants, April 29-May 3, 1985, Miami, USA.

11 Photis Dais

Carbon-13 magnetic relaxation and local chain motions of amylose in solution. 69th Canadian Chemical Conference and Exhibition, June 3-6, 1986, Regina, Saskatchewan, Canada.

12. J. Michas, C.M. Paleos and Photis Dais

Polymerisation of head and tail methacrylate micelle forming surfactants andthermotropic liquid crystalline character of these monomers and their polymers.

12th International Liquid Crystal Conference, August 15-19, 1988, Freiburg, FRG.

13. C.M. Paleos, D. Tsiourvas and Photis Dais

Mesomorphic-like character of long-chain amine salts formed by template neutralization on polyacids. 12th International Liquid Crystal Conference, August 15-19, 1988, Freiburg, FRG.

14.Photis Dais

Participation in the McGill Polymer Symposium on The Structure and Properties of High Performance Polymers, Sept. 22-23, 1988, Montreal, Canada.

15. Photis Dais

Participation in the Moot NMR Mini symposium, Sept. 25-26, 1988, Montreal, Canada.

16. F.G. Morin, M.H. Nedea, Photis Dais and R. H. Marchessault

A survey of NMR relaxation data on poly (β-hydroxyalkanoates) (PHA). 25th Canadian High Polymer Forum, August 23-25, 1989, Montreal, Canada.

17. A. Kokkinia, C.M. Paleos and Photis Dais

Liquid crystalline behaviour of some bipolar quaternary and phosphate amphiphiles. International Conference of the Organic Solid State, July, 2-7, 1989, Como, Italy.

18. Photis Dais, A. Kokkinia and C.M. Paleos

Liquid crystalline character of novel main-chain polyphosphates bearing lipophilic and/ or mesogenic moieties. 198th American Chemical Society Meeting, Sept 11-15, 1990, Miami, Florida.

19. Photis Dais, M.H. Nedea, F.G. Morin and R. H. Marchessault

13C spin-lattice relaxation and chain local motions of poly(β-hydroxybutyrate) in tetrachloroethane. Greek-Italian Meeting on Chemistry of Biological Systems and Molecular Chemical Engineering, June 10-13, 1990, Loutraki, Greece.

20. Photis Dais, M.H. Nedea, F.G. Morin and R.H. Marchessault

Rotational dynamics and chain local motions of poly (β-hydroxybutyrate) in solution. 33rd IUPAC International Symposium in Macromolecules, July 8-13, 1990, Montreal, Canada.

21. A. Spyros and Photis Dais

Structure and dynamics of poly (1-naphthyl acrylate) in solution by ¹³C NMR spectroscopy.

13th Hellenic National Conference in Chemistry, October 21-25, 1991, Athens

22. D. Pissas, Photis Dais and F. Sauriol

13C magnetic relaxation and dynamic behaviour of the methyl ester of fluorene-3-carboxylic acid.

13th Hellenic National Conference in Chemistry, October 21-25, 1991, Athens.

23. Photis Dais, D. Pissas, and F. Sauriol

1D and 2D NMR spectra of the methyl ester of fluorene-3-carboxylic acid.

13th Hellenic National Conference in Chemistry, October 21-25, 1991, Athens.

24. Photis Dais and R.H. Marchessault

¹³C nuclear magnetic resonance relaxation of amylose and dynamic behaviour of the hydroxymethyl group.

4th Chemical Congress of North America, August 25-30, 1991, New York, USA.

25. **A Spyros** and Photis Dais

Structure and dynamics of poly (1-naphthyl acrylate) in solution by carbon-13 NMR spectroscopy.

27th Europhysics Conference on Macromolecular Physics, Sept.23-27, 1991, Iraklion, Crete, Greece.

26. G. Nika, C.M. Paleos, A. Malliaris and Photis Dais

Aggregation of polymeric micelles of methacrylate functionalized quaternary ammonium salts.

5th European Colloid and Interface Society Conference, Sept.25-28, 1991, Mainz, Germany.

27. D. Pissas, **Photis Dais** and E. Mikros

Rotational dynamics of flexible chain molecules. ¹³C NMR relaxation study of n-alkyl esters of fluorene-3-carboxylic acid.

26th Congress Ampere on Magnetic Resonance, Sept. 6-12, 1992, Athens, Greece.

28. A. Spyros, Photis Dais and R.H. Marchessault

 ^{13}C NMR spin-lattice relaxation and molecular dynamics in amorphous poly(β hydroxyalkanoate)s.

26th Congress Ampere on Magnetic Resonance, Sept.6-12, 1992, Athens, Greece.

29. T. Radiotis, Photis Dais and G.R. Brown

¹³C nuclear magnetic relaxation and chain local motions of PVC in dibutylphthalate and tetrachloroethane solutions.

76th Canadian Society for Chemistry Conference and Exhibition, Division: Macromolecular Science and Engineering, May 30-June 3, 1993, Sherbrooke, Quebec, Canada.

30. A. Spyros and Photis Dais

Local chain dynamics of $poly(\beta-hydroxyalkanoate)s$ (PHA) in the bulk.

NMR on Biological Macromolecules, NATO Advanced Institute Study, Aug. 23- Sept. 2, 1993, Colympari, Crete.

31. Photis Dais

Dynamic modelling of polysaccharides in solution, NMR on Biological Macromolecules.

NATO Advanced Institute Study, Aug. 23- Sept. 2, 1993, Colympari, Crete.

32. Photis Dais

¹³C nuclear magnetic relaxation of carbohydrate molecules in solution, NMR on Biological Macromolecules. NATO Advanced Institute Study, Aug. 23-Sept. 2, 1993, Colympari, Crete.

33. Photis Dais

 ^{13}C nuclear magnetic relaxation and motional behaviour of polysaccharide molecules in solution.

5th European Conference on the Spectroscopy of Biological Molecules, Sept. 5-10, 1993, Loutraki, Greece.

34. **Photis Dais**, A. Spyros, and F. Heatley

Multifield, Temperature, and Viscosity Dependence of Local Motions in Poly(1-naphthylalkyl acryale)s in Solution

1st European Symposium on Polymer Spectroscopy, July 20-22, 1994, Valladolid, Spain.

35. A. Spyros, **Photis Dais**, and R.H. Marchessault

Local Segmental Dynamics and Side chain Motion of $Poly(\beta-hydroxyoctanoate)$ in the Amorphous State by ^{13}C Nuclear Magnetic Relaxation.

International Symposium on Bacterial PHA, August 14-18, 1994, Montreal, Canada.

36. E. Tylianaklis and Photis Dais

 ^{13}C Nuclear magnetic relaxation and chain local motions of amylose in DMSO solutions.

15th Hellenic National Conference in Chemistry, December 6-10, 1994, Thessaloniki, Greece.

37. I. Andre, F.R. Taravel, E. Tylianakis, and Photis Dais

Rotational Dynamics of linear polysaccharides in solution .¹³C relaxation study of amylose and inulin. Eurocarb VIII, 8th European Carbohydrate Symposium, July 2-7, 1995, Seville, Spain

38. E. Tylianakis, **Photis Dais**, I. Andre, and F.R. Taravel

Rotational Dynamics of linear polysaccharides in solution . ¹³C relaxation study of amylose and inulin. 12th Specialized Colloque Ampere, September 10-15, 1995, Corfu, Greece

39. E. Tylianakis, and Photis Dais

Non-Kramers behavior of PVC in dilute solutions as detected by ¹³C NMR relaxation experiments. 16th Hellenic National Conference in Chemistry, December 5-8, 1995, Athens, Greece

40. I. Andre, F.R. Taravel, C. Gey, E. Tylianakis, and Photis Dais

Dynamics of amylose and inulin in solution.

13th European Experimental NMR Conference (EENC 96), May 19-24, 1996, Paris, France

41. Photis Dais and E. Tylianakis

Chain local dynamics of PVC in dilute solutions by NMR spectroscopy. Polymer-plasicizer interactions. 5th Conference of Chemistry Cyprus-Greece, September 4-7, 1996, Nicosia, Cyprus.

42. E. Tylianakis and **Photis Dais**

¹³C magnetic relaxation studies of the local chain motions of the linear polysaccharides dextran and 1,3-glucan in dimethylsulfoxide and water solutions.

16th Hellenic National Conference in Chemistry, December 1-4, 1996, Patra, Greece.

43. Photis Dais, E. Tylianakis, F.R. Taravel, A. Perico

Motional dynamics of linear polysaccharides in solution as a function of linkage position and stereochemistry. ¹³C NMR relaxation measurements and dynamic modeling.

7th European Conference on Spectroscopy of Biological Molecules, September 7-12, 1996, Madrid, Spain.

44. **Photis Dais**, E. Tylianakis, F.R. Taravel, A. Perico

Motional dynamics of linear polysaccharides in solution as a function of linkage position and stereochemistry. C-13 NMR relaxation measurements and dynamic modeling.

XIX International Carbohydrate Symposium, August 9-14, 1998, San Diego, California, USA.

45. A. Karali, Photis Dais

NMR spectral assignment and nuclear magnetic relaxation of the industrial polymer poly(N-vinylcarbazole). 6th Conference of Chemistry Cyprus-Greece, September 2-5, 1999, Rhode, Greece.

46. Photis Dais, S. Christophoridou, A. Spyros

Detection and quantification of polyphenol-containing olive oil model compounds by employing ³¹P NMR spectroscopy.

The 5th International Conference on Applications of Magnetic Resonance in Food Science, September 18-20, 2000, Aveiro, Portugal.

47. Photis Dais, A. Karali, F. Heatley

Conformation and Chain Local Dynamics of Poly(N-vinylcarbazole) in Dilute Solutions by employing 1D and 2D NMR Spectroscopy.

PACIFICHEM 2000, December 14-19, Honolulu, Hawaii, USA.

48. Photis Dais, A. Spyros, P. Fronimaki, S. Christoforidou

Diglycerides, a useful index for the quality control of virgin olive oils.

18th Hellenic National Conference in Chemistry, March 10-13, 2001, Piraeus.

49. A. Spyros, P. Fronimaki, S. Christoforidou, Photis Dais

Classification of edible oils by employing NMR spectroscopy and chemometrics.

18th Hellenic National Conference in Chemistry, March 10-13, 2001, Piraeus.

50. S. Christoforidou, A. Spyros, P. Fronimaki, Photis Dais

NMR spectra of polyphenol-containing olive oil model compounds. A first approach to the determination of polyphenols in virgin olive oils.

18th Hellenic National Conference in Chemistry, March 10-13, 2001, Piraeus.

51. Photis Dais

Local dynamics of linear polysaccharides as a function of linkage position and stereochemistry by employing NMR spectroscopy and dynamic modeling.

4th International Discussion Meeting on Relaxations in Complex Systems, June 17-23, 2001, Hersonissos, Heraklion, Crete.

52. Photis Dais, K. Fronimaki, A. Spyros, S. Christoforidou

Determination of the diglycerides content in Greek virgin olive oils and some commercial olive oils by employing ³¹P NMR spectroscopy.

The 6th International Conference on Applications of Magnetic Resonance in Food Science, September 4-6, 2002, Paris, France.

53. G. Vigli, K. Fronimaki, A. Spyros, Photis Dais

Classification of oils of different botanical origin by employing and NMR spectroscopy in combination with multivariate statistical analysis.

The 6th International Conference on Applications of Magnetic Resonance in Food Science, September 4-6, 2002, Paris, France.

54. Photis Dais, S. Christophoridou, K. Fronimaki, A. Spyros

A new methodology for quality control and authentication of virgin olive oil.

19th Hellenic National Conference in Chemistry, November 6-10, 2002, Iraklion. Crete..

55. I. Stephanaki, A. Tsatsou-Dritsa, Photis Dais

Ochratoxin A Concentrations in Greek Domestic Wines and Dried Vine Fruits Determined by Immunoaffinity Clean-up and High Performance Liquid Chromatography.

19th Hellenic National Conference in Chemistry, November 6-10, 2002, Iraklion. Crete..

56. F. Michalopoulou, Photis Dais

A new fast method for the diglycerides detection and quantitation in milk.

19th Hellenic National Conference in Chemistry, November 6-10, 2002, Iraklion. Crete..

57. G. Vigli, K. Fronimaki, Photis Dais

Classification of oils of different botanical origin by employing and ¹H and ³¹P NMR spectroscopy in combination with multivariate statistical analysis.

19th Hellenic National Conference in Chemistry, November 6-10, 2002, Iraklion. Crete...

58. A. Filippidis, **Photis Dais**

Geographical classification of Greek virgin olive oils by employing NMR spectroscopy in combination with multivariate statistical analysis.

19th Hellenic National Conference in Chemistry, November 6-10, 2002, Iraklion. Crete...

59. S. Christoforidou, Photis Dais

Qunatitative determination of free and bound Tyrosol and Hydroxytyrosol in virgin olive oil by ³¹P NMR spectroscopy. Useful indices for the oxidation stability of olive oil.

19th Hellenic National Conference in Chemistry, November 6-10, 2002, Iraklion. Crete..

60. Photis Dais, G. Vigli, A. Philippidis, A. Spyros

Classification of edible oils by employing ³¹P and ¹H NMR Spectroscopy in combination with multivariate statistical analysis. Detection of seed oils adulteration in virgin olive oils.

International Symposium the Olive tree and the environment, October 1-3, 2003, Chania, Crete.

61. Photis Dais, A. Spyros, A. Philippidis

Determination of storage history (age) of virgin olive oil.

3rd Symposiom on Product quality assurance and competitivness in food industry, November 6-8, 2003, Athens, Greece.

62. Photis Dais, S. Christoforidou

A Novel Approach for Detection and Quantification of Phenolic Compounds in Olive Oil Based on ³¹P NMR Spectroscopy.

3rd Euro Fed Lipid Congress, September 5-8, 2004, Edinburgh, Scotland.

63. Photis Dais, S. Christoforidou, Li-Hong Tseng, M. Spraul

Identification of Phenolic Compounds in Olive Oil by Coupling Liquid Chromatography with Nuclear Magnetic Resonance Spectroscopy (LC NMR).

The 7th International Conference on Applications of Magnetic Resonance in Food Science, September 13-15, 2004, Copenhagen, Denmark.

64. G. Fragaki, A. Spyros, G. Siragakis, Photis Dais

Detection of extra virgin olive oil adulteration with lampante olive oil, refined olive, and olive pomace oil using NMR spectroscopy and multivariate statistical analysis.

Chemistry, Quality of Life and Education, 8th Conference Greece-Cyprus, December 10-13, 2004, Thessaloniki, Greece.

65. Photis Dais, S. Christophoridou, M. Spraul

A novel approach for separation and identification of phenolic compounds in olive oil by coupling high Performance liquid chromatography with post-column solid phase extraction to nuclear magnetic resonance spectroscopy (LC-SPE- NMR).

Greek Lipid Forum, Modern Trends in the Sector of Fats and Oils, June 8-9, 2005, Athens, Greece.

66. Georgia Fragaki, Photis Dais

 ${}^{1}H$ and ${}^{1\bar{3}}C$ spectra of mycotoxins.

20th Hellenic National Conference in Chemistry, September 20-24, 2005, Ioannina. Greece.

67. Vagia Tsironi, Photis Dais

Detection and quantification of phenolic compounds in table oluves with NMR spectroscopy.

20th Hellenic National Conference in Chemistry, September 20-24, 2005, Ioannina. Greece.

68. Photis Dais, Georgia Fragaki, Apostolos Spyros

Classification of Three Grades of Olive Oils by Employing ³¹P NMR Spectroscopy and Multivariate Statistical Analysis. Detection of Extra Virgin Olive Oil Adulteration with Refined and Lampante Olive oils.

26th World Congress and Exhibition of the International society for fat research (ISF), Modern Aspects of Fats and Oils. A Fascinating Source of Knowledge, September 25-28, 2005, Prague, Czech Republic.

69. Emmanuel Hatzakis, Photis Dais

A Novel Approach for Detection and Quantification of Glycerol in Olive Oil and Wine Based on ³¹P NMR Spectroscopy.

4th International Conference on Instrumental Methods of Analysis (IMA05), October 2-6, 2005, Heraklion, Crete, Greece.

70. Stella Christophoridou, Photis Dais

A novel approach for detection and quantification of phenolic compounds in Olive Oil Based on ³¹P NMR Spectroscopy.

4th International Conference on Instrumental Methods of Analysis (IMA05), October 2-6, 2005, Heraklion, Crete, Greece.

71. Photis Dais

³¹P NMR spectroscopy in authentication and quality assessment of extra virgin olive oil.

4rd Euro Fed Lipid Congress, October 1-4 2006, Madrid, Spain.

72. Photis Dais

Analysis of virgin olive oil by NMR spectroscopy.

Days of Food Chemistry, December 16-17 2006, Thessaloniki, Greece.

73. Photis Dais and Emmanuel Hatzakis

³¹P NMR spectroscopy in authentication and quality assessment of extra virgin olive oil.

Trace Meeting, Traceability: Perspectives from science, supply chain and consumer, April 26-27, 2007, Hersonissos, Crete, Greece.

74. Photis Dais and Emmanuel Hatzakis

Moisture determination in extra virgin olive oil by using ³¹P NMR spectroscopy.

Greek Lipid Forum, Fats, oils, Lipids: Present and Future, June 7-8, 2007, Athens, Greece.

75. Photis Dais

³¹P NMR spectroscopy in the quality control and authentication of extra virgin olive oil

98th AOCS Annual Meeting& Expo, May 13-16 2007, Quebec City, Quebec, Canada.

76. **Photis Dais** and Emmanuel Hatzakis

Moisture determination in olive oil by ³¹P NMR spectroscopy.

5rd Euro Fed Lipid Congress, September 16-19, 2007, Gothenburg, Sweden.

77. Photis Dais

³¹P NMR spectroscopy in authentication and quality assessment of extra virgin olive oil.

5rd Euro Fed Lipid Congress, September 16-19, 2007, Gothenburg, Sweden.

78. E. Hatzakis, Photis Dais, A. Koidis, and D. boskou

Determination of Phospholipids in Olive Oil by ³¹P NMR Spectroscopy.

6rd Euro Fed Lipid Congress, September 07-10, 2008, Athens, Greece.

79. A. Agiomyrgianaki, Photis Dais, and P. V. Petrakis

Classification of Greek olive cultivars based on compositional analysis of olive oils by NMR spectroscopy and multivariate statistical analysis.

6rd Euro Fed Lipid Congress, September 07-10, 2008, Athens, Greece.

80. P. V. Petrakis, A. Agiomyrgianaki, and Photis Dais

On the classification of Greek oils (geographical and botanical origin): fatty acids and biophenols as markers and protection units.

6rd Euro Fed Lipid Congress, September 07-10, 2008, Athens, Greece.

81. Photis Dais and S. Christophoridou

Detection and Quantification of Phenolic Compounds in Olive Oil by High Resolution ¹H Nuclear Magnetic Resonance Spectroscopy. A proposal for on-line screening.

6rd Euro Fed Lipid Congress, September 07-10, 2008, Athens, Greece.

82. A. Agiomyrgianaki, P. V. Petrakis and Photis Dais

Detection of the presence of refined hazelnut oil in refined olive oil by employing NMR spectroscopy and multivariate statistical analysis.

Modern trends in the lipid field, Greek Lipid Forum, 3rd panhellenic Conference, June 15, 2009, Athens, Greece.

83. E Hatzakis, A. Agiomyrgianaki, and Photis Dais

Quantitative determination of sterols in olive oil by using NMR spectroscopy

10° Congress Greece-Cyprus, Chemical Awareness in the 21° Century, July, 2-4, 2009, Heraklion, Crete.

84. Photis Dais

Ελεγχος ποιότητας και αυθεντικότητας παερθένου ελαιόλαδου. (2010).

Υπουργείο Αγροτικής Ανάπτυξης & Τροφίμων, 1° Συνέδριο Κρητική Διατροφή & Υγεία, 22-23 Μαϊου, Χανιά, Κρήτη.

85. Photis Dais, Adreas Orfanakis, Emmanuel Hatzakis, Spyros Pergantis, Apostolos K. Rizos.

Characterization of polyglycerol polyricinolate formulations by using a combination of NMR spectroscopy, electrospray mass spectrometry, and dynamic light scattering.

9th Euro Fed Lipid Congress, September 18-21, 2011, Rotterdam, Netherlands.

86. Photis Dais. A. Agiomyrgianaki, P. V, Petrakis

Influence of harvest year, cultivar and geographical origin on Greek extra virgin olive oils composition: a study by NMR spectroscopy and biometric analysis.

9th Euro Fed Lipid Congress, September 18-21, 2011, Rotterdam, Netherlands.

87. Photis Dais

Characterization of olive oil with NMR spectroscopy.

11th Conference Greece-Cyprus. October, 26-30 2011, Limassol, Cyprus.

88. A. Spyros, Manolopoulou, Photis Dais, A. Spinella, E. Caponetti

High resolution-magic angle spinning NMR study of olive leaves

11th International Conference in Magnetic Resonance in Food Science, June 26-29, 2012, Wageningen, Netherlands.

89. **Photis Dais**, A. Spyros

NMR spectroscopy in food analysis-A short account of recent progress at the University of Crete.

Bulding Trust through Authentic Food and Safety (BuTRaFoS), 29-31 October 29-31 2012, Limassol, Cyprus.

90. Photis Dais, A. Orfanakis, E. Hatzakis, K. Kanaki, S.A. Pergantis, A. Rizos

Structure and morphology of the emulsifier polyglycerol ricinileate (PGPR)

Recent trends in the field of lipids, Greek Lipid Forum, 5rd panhellenic Conference, March 29-30, 2013, Athens, Greece.

91. A. Spyros, Photis Dais, M. Amarhianitaki, Evangelia Ralli, Maria Miziak

Small Molecule Analysis in Food: an Overview and Some Recent Applications

Small Molecule NMR Conference (SMASH), September, 22 - 25, 2013, Santiago de Compostela, Spain.

92. **Photis Dais,** M. Amargianitaki, A. Spyros

Assessment of Cretan wines maturation using NMR spectroscopy, sensory testing and chemometrics

105th AOCS Annual Meeting & Expo, May 4-7 2014, San Antonio, Texas USA.

93. M. Amargianitaki, A. Spyros, Photis Dais

Analysis and optimization of the wine making procedure by NMR spectroscopy

XII International Conference on the Applications of Magnetic Resonance in Food Science: Defining Food by Magnetic Resonance, May, 20-23, 2014, Cesena, Italy.

94. E. Hatzakis, M. Misiak, Photis Dais

Compositional Analysis of Encapsulated Fish Oil Supplements using Multinuclear and Multidimensional NMR Spectroscopy

Small Molecule NMR Conference, September 7 - 10, 2014, Atlanta, Georgia, USA.

95. Photis Dais, M. Misiak, E. Hatzakis

Compositional Analysis of Encapsulated Fish Oil Supplements using Multinuclear and Multidimensional NMR Spectroscopy

13th Congress of the European Federation of Lipids, September 27-30, 2015, Florence, Italy.

96. Photis Dais

The Stern-Gerlach experiment: Confirmation of a wrong theory

9th Hellenic Conference of History, Philosophy and Didactics of Physical Sciences, 11-13 November 2016, Athens Greece

97 A. Spyros, M. Amargianitaki, E. Ralli, M. Miziak, Photis Dais

Food quality control and authentication using NMR spectroscopy and metabolomics

10th International Conference on Instrumental Methods of Analysis. Modern Trends and Applications. 17-21 September 2017, Heraklion, Crete, Greece.

INVITED TALKS

- 1. Rotational dynamics of small and medium sized molecules in solution, (1982) University of Patras, Patra, Greece.
- 2. ¹³C NMR spectroscopy and microstructure determination of synthetic polymers, (1982) University of Patras, Patra, Greece.
- 3. Structure determination of organic molecules by using selective and nonselective ¹H spin-lattice relaxation rates, (1983) Universite de Montreal, Montreal, Canada
- 4. Structure determination of organic molecules by using selective and nonselective ¹H spin-lattice relaxation rates, (1984) McGill University, Montreal, Canada.
- 5. ¹³C spin-lattice relaxation and chain local motions in polymer systems, (1986) McGill University, Montreal, Canada.
- 6. ¹³C spin-lattice relaxation and chain local motions in polymer systems, (1987) Pulp and Paper Institute, Montreal, Canada.
- 7. Nuclear magnetic resonance and dynamic behaviour of macromolecules in solution, (1989) University of Crete, Crete, Greece.
- 8. Nuclear magnetic resonance and dynamic behaviour of macromolecules in solution, (1989) N. R. C. Demokritos, Athens, Greece.
- 9. Carbon-13 nuclear magnetic relaxation and rotational dynamics of synthetic and biological polymers in solution, (1993) CEMAG, Genova, Italy.
- 10. NMR spectroscopy: A short course of NMR theory and Application, (Summer School 1993) N. R. C. Demokritos, Athens, Greece.
- 11. Dynamic modelling of polysaccharides in solution, NMR on Biological Macromolecules, (1993) NATO Advanced Institute Study, Colympari, Crete.
- 12. ¹³C nuclear magnetic relaxation of carbohydrate molecules in solution, NMR on Biological Macromolecules, (1993) NATO Advanced Institute Study, Colympari, Crete.
- 13. ¹³C nuclear magnetic relaxation and motional behaviour of polysaccharide molecules in solution, (1993) 5th European Conference on the Spectroscopy of Biological Molecules, Loutraki, Greece.
- 14. NMR imaging in medicine (1994) 15th Hellenic National Conference in Chemistry, Thessaloniki, Greece.
- 15. NMR methods for the clinical diagnoses of diseases, (Summer School 1995) N. R. C. Demokritos, Athens, Greece.
- 16. Study of structure and morphology of synthetic polymer systems by employing liquid and solid state NMR spectroscopy, (1995) 16th Hellenic National Conference in Chemistry, Athens, Greece.
- 17. Structure, morphology and dynamics of synthetic polymeric systems. A short presentation of practical applications of the NMR spectroscopy, (1996) 1st Symposium of the Institute of Physical Chemistry, Research and Chemical Industry, July 3-5, Research Center Demokritos, Athens.
- 18. Structure and morphology of synthetic polymeric systems by employing liquid and solid state NMR spectroscopy, (1996), University of Cyprus, Department of Natural Sciences, Nicosia, Cyprus.

- 19. Nuclear Magnetic Relaxation and dynamics of synthetic and biological polymers in solutions. (1997), University of Cyprus, Department of Natural Sciences, Nicosia, Cyprus.
- 20. Motional dynamics of linear polysaccharides in solution as a function of linkage position and stereochemistry. C-13 NMR relaxation measurements and dynamic modelling. (1998), CERMAV, Grenoble, France.
- 21. Motional dynamics of linear polysaccharides in solution as a function of linkage position and stereochemistry. C-13 NMR relaxation measurements and dynamic modelling. (1998), XIX International Carbohydrate Symposium, San Diego, California, USA.
- 22. NMR Spectroscopy, a new methodology in food analysis. (1998), symposium on Foods' Safety and Hygiene, Iraklion, Crete, Greece.
- 23. Applications of NMR Spectroscopy in food analysis. (1999), University of Crete, Crete.
- 24. ³¹P NMR spectroscopy in food analysis. (2000) Bruker NMR Users Meeting, Athens, Greece.
- 25. NMR Spectroscopy. Introducing the research activities of the NMR laboratory of the University of Crete. (2000), E.I.T.X.H.D, Thessaloniki, Greece.
- 26. Conformation and Chain Local Dynamics of Poly(N-vinylcarbazole) in Dilute Solutions by employing 1D and 2D NMR Spectroscopy. (2000) PACIFICHEM 2000, December 14-19, Honolulu, Hawaii, USA.
- 27. Local dynamics of linear polysaccharides as a function of linkage position and stereochemistry by employing NMR spectroscopy and dynamic modelling. (2001) 4th International Discussion Meeting on Relaxations in Complex Systems, June 17-23, Hersonissos, Heraklion, Crete.
- 28. Foundation of Chemistry as a Science, (2002) Symposium of the Chemistry Department celebrating the Day of Chemistry, April 13, Heraklion, Crete.
- 29. Authentication of Greek extra virgin olive oils by employing NMR spectroscopy. (2004) Meeting on process development for an integrated olive oil mill waste, March 30, Gergeri, Crete, Greece.
- 30. A novel methodology for detection and quantification of some minor compounds in olive oil. Applications to olive oil quality control and authentication. (2004) Second EU Workshop for the EU Wine Databank and the application of Isotopic Methods for anti-fraud (PECO and MS workshop), European Commission Joint Research Centre, June 9-11, Ispra, Italy.
- 31. Novel methodologies for the quality control and authentication of extra virgin olive oil, (2005) Department of Chemistry, University of Cyprus, Nicosia, Cyprus.
- 32. ³¹P NMR spectroscopy in authentication and quality assessment of extra virgin olive oil. (2007) 5rd Euro Fed Lipid Congress, September 16-19, 2007, Gothenburg, Sweden.
- 33. *Quality control and authentication of virgin olive oil by* ³¹P NMR spectroscopy. (2008) Department of Chemistry, University of Bari, Italy.
- 34. *Quality control and authentication of virgin olive oil. The need for innovative analytical techniques.* (2008) CRETACERT 2° International conference for the quality and marketing of agricultural products, September 25-27, Chersonisos, Crete, Greece.
- 35. *Quality control and authentication of virgin olive oil*. (2009). Technogical University of Cyprus, Lemessos, Cyprus.
- 36. *Quality control and authentication of virgin olive oil. The need for innovative analytical techniques* (2009). Department of Chemistry, Uiversity of Cyprus, Nicosia, Cyprus.

- 37. Authentication of Greek extra virgin olive oils by employing NMR spectroscopy. (2009). Department of Pharmaceutical Chemistry, University of Athens.
- 38. *Quality control and authentication of virgin olive oil* (2010) 1st Symposium on Cretan diet and health 1° Συνέδριο Κρητική Διατροφή & Υγεία, May 22-23, Chania, Crete.
- 39. Food analysis with emphasis to olive oil by using NMR spectroscopy (2010). Department of Chemistry, Uiversity of Cyprus, Nicosia, Cyprus.
- 40. *Olive oil characterization with NMR spectroscopy* (2011). 11th Conference Greece-Cyprus; the contribution of Chemistry to the human civilization-Past, present and future, October, 26-30, Limassol, Cyprus.
- 41. *A long journey with vihecle the NMR spectroscopy*. (2012) Department of Chemistry, University of Crete, Heraklion, Crete.
- 42. The penetration of thermodynamics in chemistry: The birth of chemical thermodynamics in Europe and America (2017) Department of Chemistry, University of Crete.
- 43. From molecular beams and Radar to the Nuclear Magnetic Resonance. (2019) Department of Chemistry, University of Crete.