

CURRICULUM VITAE

DIMITRIS S. ARGYROPOULOS

Group Web Page: <http://www4.ncsu.edu/~dsargyro/index.htm>

EDUCATION

1985	Ph.D	Chemistry	McGill University, Montreal, Quebec, Canada
1981	M. Phil.	Polymer Chemistry	Brunel University, Uxbridge, England
1980	B.Sc. (Hons.)	Chemistry	University of London, London, England

AWARDS

- *Finland Distinguished Professor of Chemistry*, Dept. of Chemistry, University of Helsinki,
- *Fellow* Chemical Institute of Canada, Ottawa, Ontario. Elected, March 2000.
- *Fellow* International Academy of Wood Science, Vancouver, BC. Elected 1998.
- *High Impact Paper Scholarship Award*. 2nd Prize. Technical Association of the Pulp & Paper Industry (TAPPI) for the best paper presented during the 1998 Pulping Conference, Atlanta, GA, July 1999.
- *Visiting Professor*. Department of Chemistry, University of Bordeaux, Bordeaux, France. Elected, July 1998.
- *Participant* with the National Network of Excellence on Protein Engineering, Canada, April 1994.
- *Participant* with the National Network of Excellence on Mechanical and Chemimechanical Wood Pulps, Montreal, Canada., 1991 to 2002
- *Research Associateship*. National Research Council of Canada, January 1988.
- *Dean's Honorary Distinction* for High Academic Achievement during a Doctorate degree. McGill University, April 1985.
- *C.B. Purves Memorial Fellowship*. McGill University, September 1982 to September 1984.
- *Overseas Student Scheme Competitive Award*. Committee of Vice Chancellors and Principals of British Universities, September 1980 to August 1981.

EMPLOYMENT HISTORY

Period	Employer	Position
July 2002 – To Date	North Carolina State University, College of Natural Resources, Dept. of Forest Biomaterials	Professor
Oct. 1991 – June. 2002	Department of Chemistry, McGill University Pulp and Paper Research Centre	PAPRICAN Professor
July 2001 – June 2002	Pulp and Paper Research Institute of Canada Pointe Claire, Québec, Canada	Principal Scientist
Oct. 1988 – July 2001	Pulp and Paper Research Institute of Canada Pointe Claire, Québec, Canada	Senior Scientist
May 1987 – May 1988	Polysar Limited, Sarnia, Ontario, Canada	Research Scientist, Product Research and Development Latex Division
March 1985 – April 1987	Pulp and Paper Research Institute of Canada Pointe Claire, Québec, Canada`	Research Scientist, Fibre Chemistry Section
May 1979 – Sept. 1979	MacPherson Powders Ltd., Barking, Essex, England	Trainee on “ <i>Computer Colour Matching Procedures for Epoxies.</i> ”
Oct. 1977 – March 1978	Wavin Plastics Ltd., Ashford, Kent, England	Trainee

GRADUATE & UNDERGRADUATE TEACHING

Period	Department/Course Description	Course No./Description
Taught 2005, 2006 With Profs Lucian, & Rojas	“Principles of Biomaterials Science” Department of Wood & Paper Science North Carolina State University	WPS 595B Graduate Course
Taught 2006, 2007, 2008 With Profs Lucian, Rojas & Pawlak	“Biomaterials Characterization ” Department of Wood & Paper Science North Carolina State University	WPS 595B Graduate Course
Annually since 2004	“Wood & Pulping Chemistry” Department of Wood & Paper Science North Carolina State University	WPS 332 Undergraduate Course
Annually since 2003 (Taught, 2003-2007,2010)	“Chemistry of Wood Polysaccharides” Department of Wood & Paper Science North Carolina State University	WPS 721 Graduate Course
Teaching At McGill University		
Annually 1995-2002	“Organic Chemistry of Wood Components” Department of Chemistry, McGill University “Organic Chemistry of Wood Components”	CH 555 A Graduate Course
Annually 1992-1994	Department of Chemistry, McGill University “The Chemistry of Pulp and Paper”	CH 655 A Graduate Course
Annually since 11/2000 With Prof. Chan	Department of Chemistry, McGill University “Green Chemistry”	A Late Undergraduate Course
Annually since 04/ 2001 With Prof. Sleiman	Department of Chemistry, McGill University “Synthetic Polymer Chemistry”	A Late Undergraduate Course
Annually since 1998 With Prof. Kazlauskas	Department of Chemistry, McGill University “Structural Organic Chemistry”	An Undergraduate Course
Annually 1992-1994 With Prof. Marchessault	Department of Chemistry, McGill University “Introduction to Polymer Chemistry”	A Late Undergraduate Course
Annually 1991-1998	Pulp and Paper Research Institute of Canada PAPRICOURSE	
Oct. 1980 – March 1981	Department of Non-Metallic Materials Brunel University, England “Polymer Chemistry,” Teaching Assistant	
Oct. 1981 – June 1982	Department of Chemistry, McGill University “General Chemistry,” Teaching Assistant	
Sept. 1989 – June 1992 Part Time	Federation of Greek Parents and Guardians, Montreal, Québec, Canada Greek High School Teacher	

STUDENTS AND THESES SUPERVISED:

- Dr. Ilari Filpponen, “*The Synthetic Strategies for Unique Properties in Cellulose Nanocrystal Materials*”. PhD July 2009.
- Ms. Sofia Contreras “*On the Propensity of Lignin to Associate; Static Light Scattering Measurements*” MSc. Feb. 2008).
- Ms. Labrini Adamopoulos “*Understanding the Formation of Sugar Fatty Esters*” MSc 2004-2006 – Recipient of the Cellulose & Renewable Materials Student Excellence Award, American Chemical Society, 2006.
- Dr. Quirong Fu “*Studies on the Pyrolysis of Chromated Arsenate-Treated Wood : Analytical Methodology & Optimization*”, (2002-2006)
- Dr. Kamilah Smith, “*Semi-Quantitative Detection of Free Radicals Using Spin-Trapping & ³¹P NMR.*” M.Sc. Jan., 2003.
- Ms. Christa Beaton, “*Photo-Protection Mechanisms of UV Stabilizers on Milled Wood Lignin.*” M.Sc. Sept., 2000, (Dean’s Honours List).
- Mr. Ivan De Souza, “*Physicochemical Changes of Cellulose Subjected to Oxidative Conditions.*” M.Sc. Dec., 1999.
- Mr. Patrick Halevy, “*Protection Mechanisms of Novel Photoyellowing Inhibitors.*” M.Sc. Nov., 1999.
- Dr. David Moore, “*In Situ Perborate Bleaching of Thermomechanical Pulp.*” Ph.D. June, 1999.
- Dr. Jhi Hua Jiang, “*Advances and Applications of Quantitative ³¹P NMR for the Structural Elucidation of Lignin.*” Ph.D. Nov., 1997.
- Ms. Martine Lepage, “*Kinetics of Formamide Sulfinic Acid Degradation.*” M.Sc. Nov., 1997.
- Dr. Behzad Ahvazi, “*Development and Application of Novel NMR Methods for the Study of Lignin.*” Ph.D. July, 1998.

STUDENT MENTORING/ADVISING ACTIVITIES

Committee Chair:

- Ilari Filpponen (PhD) (2006-2009)
- Quirong Fu, (PhD) (2002-2005)
- L. Adamopoulos (MSc. 2005-2007)
- Sofia Irma Contreras (MSc. 2006-2008)
- Paula Jarvi (U. Helsinki, Chem. PhD 2007-)

Committee Member/ Co-chair :

- N. J. Sharma (PhD) (2003-2005)
- Richard Gang (PhD) (2004-2009)
- C. Moriarty (MSc) (2002-2007)
- H. Kim (PhD) (2002-2004)
- Jeong Chang Woo (PhD) (2003-2006)
- Wang Yun (PhD) (2004-2006)
- Junlong Song (PhD) (2004-2007)
- Takao Sezaki (MSc) (2002-2003)
- Jung Myoung (PhD) (2002-2007)
- J. T. Wallace (MSc) (2003-2006)
- P. W. Ondachi (PhD) (2004-2008)
- J. Budhathoki-Uprety (PhD Chem. 2009-)
- Mathew Lehman (PhD Chem. 2010-)
- David Barrios (PhD-Chem. 2008-)
- Florentino De La Cruz (PhD Civil 2009-)
- Cassandra Morisson (PhD Chem. 2010-)

Post-Doctoral/Doctoral Research Associates (An additional 9 such associates were employed in my lab at McGill from 1991-2002)

- Dr. K. Coda (2003-2005)
- Dr. Hongyang Li (2004-2006)
- Dr. Armindo Gaspar (2004-2007)
- Dr. Xingwu Wang (2004-2006)
- Dr. Abdul Hai (2005-2006)
- Dr. J. Soriano (2005-2007)
- Dr. A. Guerra (2005-2006)
- Dr. Carl Saquing (2005-2006)
- Dr. Bin Li (2007-2008)

- Ms Ana Xavier (2005-2006)
- Dr. Haibo Xie (2006-2007)
- Dr. Hui Sun (2007-2008)

Visiting Scientists (Visits Funded by the Foreign Institutions/ Governments)

- Dr. Claudia Crestini- Italy (1997-1999)
- Dr. A. Stina Jaskelainen-Finland (2000-2001)
- Dr. Leo Liu- China (2004-2005)
- Dr. Shubin Wu- China (2001-2002)
- Dr. Luca Zoia- Italy (2007-2008)
- Mr. Mahmood Yussif- Egypt (2007-2008)
- Dr. Alistair King - Finland (2007)
- Dr. Rafalella Perazini, Italy, (2009)
- Mr. Timo Leskinen, Finland (2009)
- Dr. Janne Asikalla, Finland (2009-2011)
- Dr. Hasan Sadeghifar, Iran (2010-2011)

Undergraduate Research Advising:

- R. A. Ernest (2003)
- A. Lee (2003)
- M. Mixon (2003)
- J. N. Harris (2003)
- B. Godfrey (2004)
- T. Bayer (2004)
- D. Abrecht (2005-)
- T. Blalock (2005-)
- K. Spence (2005-)
- G. Culberthson (2004-2005)
- R. Clark (2005)
- B. Bogumil (2005)
- N. Southards (2005)
- G. Okotie, Saint Augustine’s College (2006)
- Dana Kelley, (2006)
- Karoline k. Yoo (2006)
- L. Royce (2006)

EXAMINER DUTIES

Examiner for Ph.D Oral Theses for: Dr. Younghao Ni (March 1991), Dr. Francoise Morin (April 1994), Dept. Chem. Eng., McGill, Drs. Alexander Vekselman (Nov. 1996), G. Barbiero (March 1997), J-F Alary (Feb. 1998), Dept. Chem., McGill, Humayun Mandal, Dept. Chem. (Aug. 1998), Dr. C. Murphy, Dept. Chem., McGill (Nov. 2001).

Examiner of M.Sc Theses for: Ms Karen Maa, Dept. Chem., Lakehead Univ. (1996), Ms. E. Kimpe, Dept. Chem. Eng., McGill Univ. (1997), J. Revenaz, Dept. of Atm. & Oceanic Sci., McGill Univ. (June 2001).

Official Opponent, Dr. Erja Ammalahti, Faculty of Science, University of Helsinki, (November 1999).

Official Opponent, Dr. Kyösti Ruuttunen, Helsinki University of Technology (October 5th 2006).

REVIEWING DUTIES (since year)

40. Green Chemistry (2009)
39. Angewante Chemie (2009)
38. J. Physical Chemistry (2008)
37. J. Appl. & Anal. Pyrolysis (2007)
36. Biomacromolecules (2007)
35. J.Appl. Polym. Sci. (2007).
34. Cellulose (2005)
33. Bioresources (2006)
32. Bioresouce Technology (2007)
31. Research Letters in Org.Chem. (2006);
30. Advanced Synthesis & Catalysis, (2004)
29. Journal of the Science of Food & Agric.(2004)
28. Journal American Chemical Society, (2001)
27. Organic Geochemistry, (2001)
26. Chemosphere, (2001)
25. Science, (2000)
24. Chemical Physics Letters, (2000)
23. Industrial & Eng. Chem.Research, (2000)
22. National Science Foundation, (2000)
21. Petroleum Research Fund, (2000)
20. Polymer International, (1999)
19. Chemistry, A European Journal, (1999)
18. Journal of Polymer Science,.(1998)
17. Environmental Science & Technology, (1998)
16. Journal of Agric. & Food Chem., (1995)
15. Natur Wissenschaften, (1997)
14. Bioresource Technology, since Sept. 1997
13. Canadian J. of Chem. Engineering, (1996)
12. United States Department of Agriculture (USDA), Competitive Grants Scheme, (1996)
11. Photochemistry and Photobiology, (1995)
10. Journal of Computational Chemistry,(1994)
9. Research on Chemical Intermediates, (1994)
8. Phytochemistry, since February (1994)
7. Natural Sciences and Engineering Research Council of Canada, Research Grants (1993)
6. Hozlforschung, Intern. Journal of the Biology, Chemistry, Physics & Technol.of Wood, (1993)
5. Canadian Journal of Chemistry, (1992)
4. Pulp and Paper Research Institute of Canada, Internal Report Series, (1988)
3. Journal of Wood Chemistry & Technol.(1991)
2. Journal of Pulp and Paper Science, (1989)
1. American Chem.Soc., Books Dept. (1989)

EDITORIAL BOARD MEMBERSHIPS & OTHER HONORARY PROFESSION AFFILIATIONS

16. Editorial Board, Journal of Biotechnology & Biomaterials - OMICS Publishing Group, July 2010
15. Area Editor, Journal of Engineered Fibres & Fabrics, since, Oct. 2009.
14. Associate Editor, New Zealand Journal of Forestry Science, Nov. 2005.
13. Expert Scientific Advisor & Chair, European Community, FP7 Biorefinery/Bioenergy January 2009
12. Chairman, Scientific Committee, Wood Wisdom Swedish-Finnish Research Program, Stockholm, 2007
11. Board of Directors, International Lignin Institute, Lausanne Switzerland, 2006-2008
10. Editorial Board, BioResources, Journal, March 2006
9. Advisory Board, EWT Holdings Corp., 2005-2006.
8. Editorial Board, Holzforschung an International Journal, Nov. 2003.
7. Editorial Board Wood Sci. and Technol. an International Journal. Commencing from Vol. 35, 1, 2001.
6. Editorial Board, Cellulose Chem. and Technol. Commencing from Vol. 34, No. 1, 2000 February 2000.
5. Board of Directors, National Network Centre of Excellence on Wood Pulps. Elected Sept. 1999.
4. Expert Scientific Advisor; European Community, DG General XII, Agriculture & Fisheries, since 1997.
3. National Ministry Education & Religious Affairs, Athens, Greece, Review panel member, since 1998.
2. National Secretariat Research and Development, Athens Greece, Review panel member, since 1998.
1. National Science Foundation, Washington DC Review Panel Member, Aug. 2001.

INTERNATIONAL SCIENTIFIC COMMITTEES

15. Italian Meeting on Lignin Chemistry, *Italic 5* Villa Monatero, Varenna Lecco Italy Sept. 1-4, 2009
14. 4th International Symposium on Pulping & Papermaking Guangzhou, China, November 8-10, 2010
13. Italian Meeting on Lignin Chemistry, *Italic 4*, University of Rome, May 8-10, 2007
12. 14th International Symp. Wood, Fibre & Pulping Chemistry, Durban South Africa, June 25-28, 2007.
11. 5th International Non-Wood Fiber Pulping and Papermaking Conference (INWFPPC) & 3rd Intern. Symp. on Emerging Technol,s of Pulping and Papermaking, Guangzhou, China, November 8-10, 2006
10. Italian Meeting on Lignin Chemistry, *Italic 3*, University of Rome, June 24-26, 2005.
9. 13th Intern. Symp. Wood Fiber & Pulping Chem., May 16-19, 2005, Auckland New Zealand, 2005.
8. 12th International Symposium on Wood and Pulping Chemistry, Madison, Wisconsin, June 8-12, 2003.
7. Italian Meeting on Lignin Chemistry, *Italic 2*, University of Milan, February 20-21, 2003.
6. 2nd Intern. Symp. Emerging Technoln of Pulping & Papermaking, Guangzhou, China, Oct. 9-11, 2002.
5. 7th Brazilian Symp. on Lignin Chem. & Other Wood Components, B. Horizonte, Brazil, Sept. 3-5, 2001.
4. 11th International Symposium on Wood and Pulping Chemistry, Nice, France, June 11-14, 2001.
3. Italian Meeting on Lignin Chemistry, *Italic 1*, University of Rome, February 16-17, 2001.
2. International Symposium on Wood and Pulping Chemistry, Montreal, Quebec, June 9-12, 1997.
1. Advances in Microscopy & NMR Spectroscopy of Lignocellulosic Materials, Quebec, June 5-7, 1997.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

1. Member of Tappi, Atlanta, 1988.
2. Member of the Plastics and Rubber Institute, MPRI, London, 1986.
3. Member of the Canadian Pulp and Paper Association, Montreal, 1986.
4. Member of New York Academy of Sciences, New York, 1985.
5. Member of the American Chemical Society, Washington, 1982.
6. Member of the Canadian Chemical Society, MCIC, Ottawa, 1982.
7. Graduateship of the Royal Society of Chemistry, GRSC, London, 1980.
8. Graduateship of the Plastics and Rubber Institute GPRI, London, 1980.
9. Member of Sigma-X, Society for the Advancement of Science 1993.

COMMITTEE MEMBERSHIPS

11. North Carolina State University, Faculty Senate Executive Committee 2010-2011
10. North Carolina State University, Faculty Senator for the College of Natural Resources 2009-2011
9. Chair (2002), American Chemical Society, Washington, DC. Cellulose and Renewable Materials Division. Elected January 2002.
8. Chair-Elect (2001-2002), American Chem. Society, Washington, DC. Cellulose, Paper and Textiles Division. Elected January 2001.
7. Secretary (1996-2001), American Chem. Society, Washington, DC. Cellulose, Paper and Textiles Division.
6. Chairman NMR User's Committee, Department of Chemistry, McGill University, since September 1994 to date.
5. Executive Committee Member (1994-1995), American Chemical Society, Washington, DC. Cellulose, Paper and Textiles Division.
4. Executive Committee Member (1996-1997), International Lignin Institute, Lausanne, Switzerland. Elected February 1996.
3. Executive Committee Member of the Technical Association of the American Pulp and Paper Industry, of the Wood Chemistry. Elected September 1995.
2. Executive Committee Member, Sigma-X, Society for the Advancement of Science, Montreal Chapter. Elected May 1994 - May 1995.
1. Chairman (1997-1998) Academic Committee, Hellenic Scholarships Foundation, Montreal, Quebec.

CONFERENCE ORGANIZATION

- Ionic Liquids; Novel Processing Platforms of Cellulose & Biomass, Pacifichem 2010, Honolulu, Hawaii, December 15-20 2010
- Materials, Chemicals & Energy from Forest Biomass, Pacifichem 2005, Honolulu, Hawaii, December 15-20 2005
- Primary nominator & organizer of the Anselme Payen Award symposium honoring Prof. R. St. J. Manley, Cellulose & Renewable Materials Division, 225th National Meeting, New Orleans, LA, March 23-27, 2003.
- Organized a symposium on “*Fundamentals and Catalysis of Oxidative Delignification Processes.*” American Chemical Society, National Meeting, San Francisco, CA, March 2000.
- Organized a Workshop on “*Advances in Microscopy and NMR Spectroscopy of Lignocellulosic Materials,*” Quebec City Hilton, June 5-6 1997.
- Member of the organizing committee for the 9th International Symposium on Wood and Pulping Chemistry, Montreal, Canada. June 9-12, (1997).
- Organized a symposium entitled: “*Structure and Properties of Lignocellulosic Materials*” at the 5th Chemical Congress of North America, Cancun, Mexico, Nov. 11-15 1997.

EXTRACURRICULAR ACTIVITIES

Director, Hellenic Scholarships Foundation 1992-1995.

President of McGill Hellenic Association, 1983-1984.

Radio Program Producer for Radio Centre Ville Cinq FM 102.3 working with the Hellenic Group, May 1986 - April 1987.

PUBLICATIONS STATISTICS

Papers in International Refereed Journals: 145

Book chapters, refereed: 16

Combined Science Citation Index as of 2007 = 906, 2008 =1006, 2010= 1673

h Index =20 (2008); 23 (2010)

Books Edited: 3

Proceedings (4 pages or more): 213

Patents: 6

Invited Lectures: 91

Plenary/Keynote Lectures: 18

Popular Papers/Extensive Technical Reports/Theses: 8

PUBLICATIONS

Books Edited

1. *Oxidative Delignification Chemistry: Fundamentals and Catalysis*. ACS Symposium Series no. 785, Argyropoulos, D. S., Ed.; Washington, ACS Books, 2001. Containing 31 Chapters in 533 pages. ISBN: 0-8412-3738.
2. *Advances in Lignocellulosics Characterization*, Argyropoulos, D. S., Ed. Atlanta, Tappi Press, 1999. Containing 15 Chapters in 382 pages. ISBN: 0-89852-3575.
3. *Materials, Chemicals and Energy from Forest Biomass*, ACS Symposium Series No. 954, Argyropoulos, D. S., Ed.; Washington, ACS Books, 2006. Containing 33 Chapters, ISBN: 978-0-8412-3981-4, February 2007)

Patents

6. Dimitris S. Argyropoulos and Haibo Xie, "Polymer Derivatives & Composites From the Dissolution of Lignocellulosics in Ionic Liquids", US Patent Application No. 12/026,998, World Patent Application No. PCT/US2008/053151, Filed Feb 6 2008, U.S. Pat. Appl. Publ. (2008), 30pp. CODEN: USXXCO US 2008188636 A1 20080807 CAN 149:225172 AN 2008:945510
5. Dimitris S. Argyropoulos, "Use of Lignocellulosics Solvated in Ionic Liquids for Production of Biofuels", US Patent Application No. 12/026,997 US2008190013-A1, World Patent No. WO2008098032-A2, WO2008098032-A3, 2008-08-14, PCT Int. Appl. (2008), 44pp. CODEN: PIXXD2 A2 20080814 AN 2008:973672 U.S. Pat. Appl. Publ. (2008), 30pp. CODEN: USXXCO US 2008188636 A1 20080807 CAN 149:225172 AN 2008:945510
4. Dimitris S. Argyropoulos, "Product Preparation & Recovery From Thermolysis of Lignocellulosics in Ionic Liquids", US Patent Application No. 12/026,993, World Patent Application No. 12026993, Filed Feb 6 2008, U.S. Pat. Appl. Publ. (2008), 17pp. CODEN: USXXCO US 2008185112 A1 20080807 CAN 149:226205 AN 2008:941468
3. Krishna Narasimhan, Jennifer L. Hostetler and James A. Madea, Dimitris S. Argyropoulos, Armindo R. Gaspar, "Metal/N-Hydroxyphthalimide-Catalyzed Oxygen Delignification", US Patent Application, 60,820,676, submitted July 28 2006;
2. Krishna Narasimhan, Jennifer L. Hostetler, James A. Madea and Drucilla D. Knutsen, Dimitris S. Argyropoulos, Armindo R. Gaspar, "Delignification and Bleaching of Wood Pulp with Water-Soluble, Mixed Metal Catalyst Formulations and Peroxide", US Patent Application, 60,820,684, submitted July 28 2006;
1. Krishna Narasimhan, Jennifer L. Hostetler and James A. Madea, Dimitris S. Argyropoulos, Armindo R. Gaspar, "Delignification and Bleaching of Wood Pulp with Metal-Organic Catalyst Formulations and Peroxide", US Patent Application, 60,820,696, submitted July 28 2006;

Other Publications

1. Argyropoulos, D. S. "Cellulose and Renewable Materials Division: a Renewed Outlook for the Future", *Cellulose*, 9 (2): 103-104 June 2002
2. Argyropoulos, D. S. What's in a Name? *Chemical & Engineering News*, 20, 51, (2002)
3. Argyropoulos, D. S. Book Review. "Wood and Cellulose Chemistry: Second Edition, Revised and Expanded." *Journal of the American Chemical Society*, 123(36), 8880-8881, 2001

Refereed Book Chapters

162. Argyropoulos, D. S., "Heteronuclear NMR Spectroscopy of Lignins"; In *Lignin & Lignans; Advances in Chemistry*, by Heitner, C., Dimmel, D. Schmidt, J., Editors. pp 245–265, ISBN 978-1-57444-486-5 Hardback, CRC Press, 2010.
161. Xie, H., Kilpeläinen, I., King, A., W., T., Järvi, P., Argyropoulos, D. S., "Opportunities with Dissolved Wood"; In *Cellulose Solvents; For Analysis, Shaping and Chemical Modification; ACS Symposium Series*, May 2009 Chapter 19, pp 343–363 Chapter DOI: 10.1021/bk-2010-1033.ch019, *ACS Symposium Series*, Vol. 1033 ISBN13: 9780841200067eISBN: 9780841200074, Publication Date (Web): February 23, 2010
160. Saladino, R., Crestini, C., Argyropoulos D. S. "Recent Advances in the Oxidative Valorisation of Low Molecular Weight Cellulose Derivatives" *Materials, Chemicals and Energy from Forest Biomass*, ACS Symposium Series No. 954, Argyropoulos, D. S., Ed.; Chapter 17, pp.262-279, 2007.
158. Rojas, O. J., Jheong, C., Turon, X., Argyropoulos, D. S., "Measurement of Cellulase Activity with Piezoelectric Resonators". *Materials, Chemicals and Energy from Forest Biomass*, Argyropoulos, D. S., Ed., ACS Symposium Series, No. 954, Chapter 30, pp. 478-494, 2007
159. Rojas, O. J., Bullón, J., Ysambert, F. Forgiarini, A., Argyropoulos, D. S., Salager, J-L., "Lignin as Emulsion Stabilizers". *Materials, Chemicals and Energy from Forest Biomass*, Argyropoulos, D. S., Ed., ACS Symposium Series, No. 954, Chapter 12, pp. 182-199, 2007
158. Lucian, A. L., Argyropoulos, D. S., Adamopoulos, L., Gaspar, A. R., "Chemicals & Energy from Forest Biomass: A Review". *Materials, Chemicals and Energy from Forest Biomass*, Argyropoulos, D. S., Ed., ACS Symposium Series, No. 954, Washington, DC. Chapter 1, pp.2-30, 2007
157. Lucian A. L., Argyropoulos, D. S. Ban, W., Song, J., "Modifying the Functionality of Starch Films with Natural Polymers" *Materials, Chemicals and Energy from Forest Biomass*, Argyropoulos, D. S., Ed., ACS Symposium Series, No. 954, Washington, DC. Chapter 13, pp.200-218, 2007.
156. Argyropoulos, D. S.; Saquing, C. D.; Gaspar, A. R.; Soriano, N. U.; Lucia, L. A.; Rojas, O. J., "Oxidative Chemistry Of Lignin In Supercritical Carbon Dioxide & Expanded Liquids" *Materials, Chemicals and Energy from Forest Biomass*, Argyropoulos, D. S., Ed., ACS Symposium Series, No.954, Washington, DC. Chapter 20, pp.311-331, 2007.
155. Suchy, M., and Argyropoulos, D. S. "Catalysis and Activation of Oxygen and Peroxide Delignification of Chemical Pulps: A Review." *Oxidative Delignification Chemistry: Fundamentals and Catalysis*, ACS Symposium Series no. 785, Argyropoulos, D. S., Ed.; Washington, ACS Books, 2001, Chapter 1, pp. 2-48.
154. Jurasek, L., and Argyropoulos, D. S. "A Detailed Study of the Alkaline Oxidative Degradation of A Residual Kraft Lignin Model Compound." *Oxidative Delignification Chemistry: Fundamentals and Catalysis*, ACS Symposium Series no. 785, Argyropoulos, D. S., Ed.; Washington, ACS Books, 2001, Chapter 7, pp. 130-148.
153. Crestini C., and Argyropoulos, D. S. "On the Role of 1-Hydroxybenzotriazole as Mediator in the Lacasse Oxidation of Residual Kraft Lignin." *Oxidative Delignification Chemistry: Fundamentals and Catalysis*, ACS Symposium Series no. 785, Argyropoulos, D. S., Ed.; Washington, ACS Books, 2001, Chapter 23, pp. 373-390.
152. Argyropoulos, D. S. "Applications of Quantitative ³¹P NMR to Pulping, Bleaching and Yellowing." *Advances in Lignocellulosics Characterization*, Argyropoulos, D. S., Ed., Atlanta, Tappi Press, 1999, Chapter 4, pp.109-129.
151. Liu, Y., Carriero, S., Pye K. and Argyropoulos, D. S. "A Comparison of the Structural Changes Occurring in Lignin During Alcell and Kraft Pulping of Hardwoods and Softwoods" In *Lignin: Historical, Biological and Materials Perspectives*. W. G. Glasser, R. A. Northey, T.P. Schultz, Eds. ACS Symposium Series No. 742, Washington, ACS Books, 1999, Chapter 22, pp. 447-464.
150. Billa, E., Argyropoulos, D. S., Koukios, E. "Advances in Residual Lignin Characterization Combining ³¹P NMR and Fluorescence Spectroscopy by Chemometrics." In *Advances in Lignocellulosics Characterization*, Argyropoulos, D. S., Ed., Atlanta, Tappi Press, 1999, Chapter 5, pp. 131-144.
149. Argyropoulos, D. S. and Menachem., S. B. "Lignin." In *Biopolymers From Renewable Resources*, Kaplan, D. L Ed., Springer Verlag, 1998, Chapter 12, pp. 292, 322.
- 148 Argyropoulos, D. S. and S. B. Menachem., "Lignin." In *Advances in Biochemical Engineering/Biotechnology*, Vol. 57, Eriksson, K-E, Ed., Springer Verlag, 1997, pp. 127-158.

Articles in Preparation or Submitted for Publication

148. Timo Leskinen, Alistair King, Ilkka Kilpeläinen, and Dimitris S. Argyropoulos, “Fractionation of Lignocellulosic Materials with Ionic Liquids: Part 1. Effect of Mechanical Treatment, submitted at Industrial & Engineering Chemistry Research February 2011
147. Filpponen, I., Argyropoulos, D. S. “Photoresponsive Coumarin Modified Cellulose Nanocrystals” submitted at Makromolekulare Chemie Rapid Communications, June 2010
146. Järvi, P., Olszewska, A King, A, Granstrom, M., Hietala, S., Kilpeläinen, I., Argyropoulos., D. S., “Study of the Rheological Behaviour of Micro Crystalline Cellulose, Dissolved in Two Different Ionic Liquids.”; To be submitted at Carbohydrate Polymers 2010.

Articles Appeared in the Archival Literature

2011

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KEYNOTE & PLENARY PRESENTATIONS

18. **Opening Plenary Lecture** “Creating Supramolecular Structures with Cellulose Nanocrystals” 4th International Symposium on Emerging Technologies of Puling & Papermaking, November 8-10 2010, Guangzhou, China.
17. **Keynote Session Lecture** “Supramolecular Chemistry Using Nature’s Most Abundant Template; The Cellulose Nanocrystal” International Workshop on Wood Biorefinery & Tree Biotechnology 21-24 June 2010, Ornskoldsvik, Sweden.
16. **Keynote Session Lecture** “Analytical and Other Opportunities With Dissolved Wood” Italian Lignin Chemistry Symposium, *Italic5*, 1-4.Sept..2009, Symp. Proceedings ISBN 978-88-95688-18-3 pp. 81-84, Varenna, Italy, 2009.
15. **Opening Lecture** “Development & Applications of ³¹P- NMR Spin Trapping; Toward a Detailed Understanding of the Radical Mechanism of Action of Oxidative Enzymes”, Symposium on Advances in Natural Substances Chemistry & Biology, Sala del Consiglio del Dipartimento ABAC-Vecchio Edificio di Agraria-Università della Tuscia, Italy, November 19th 2009.
14. **Plenary Keynote Lecture** ”Opportunities with Dissolved Wood for the Forest Biorefinery” 2nd Annual Biorefinery for the Pulp & Paper Industry, Dec 1-3, 2008, Radisson SAS Royal Hotel, Helsinki, Finland.
13. **Keynote Lecture** ”Towards Probing the Structure of Lignin Without is Prior Isolation Using Quantitative ³¹P NMR in Ionic Liquids” COST Action E41 Analytical Tools with Applications to Wood and Pulping Chemistry, May 19-21, 2008, Turku / Åbo, Finland.
12. **Plenary Lecture**, Society for Wood & Polymer Chemistry in Finland, 50 Year Anniversary, Helsinki, Kirkkokatu 6, May 21 2008, “Ionic Liquids, Opportunities for Wood Science and Technology”.
11. **Plenary Lecture** “*On the Propensity of Lignin to Associate*”. Italian Meeting on Lignin Chemistry, *Italic 4*, University of Rome, Tor Vergata University, May 8-10, 2007
10. **Keynote Lecture** “*New Insights into Eucalyptus Lignin & Pulping Chemistry*”, 3rd International Colloquium on Eucalyptus Kraft Pulp, Bello Horizonte, Brazil March 4-7 2007.
9. **Plenary Lecture** “Understanding the Role of Mediators in the oxidation of Kraft Lignin by Laccase”, Iberoamerican Congress on Pulp & Paper Research, Madrid-Cordoba, Nov. 10-12, 2004
8. **Keynote Lecture**, “Supercritical CO₂ Oxidation of Lignin for High Value Added Products” 3rd Italian Meeting on Lignin Chemistry, June 23-24, Università Degli Studi, L’Aquila, pp. 2-11, 2005.
7. **Plenary Lecture** ”The Significance of Lignin Research to the Pulp and Paper Industry” COST Action E41 “Analytical Tools with Applications to Wood and Pulping Chemistry” Dipoli Conference Centre, Helsinki, Finland , Oct 20, 2004.
6. **Keynote Lecture**, “New Lignin Insights into Pulping and Bleaching.”, 2nd International Symp. Emerging Technologies of Pulping and Papermaking, Guangzhou, PR., China, Oct. 9-11, 2002.
5. **Keynote Lecture**, “Recent Advances in Wood Chemistry.”, Seventh Brazilian Symposium on the Chemistry of Lignins and Other Wood Components, Uro Minas Hotel, Bello Horizonte, PR. Brazil, Sept. 1- 4 (2001), Oral Presentations Volume, pp. 43-51.
4. **Distinguished Lecture Series**, University of British Columbia, Dept. of Chemical Engineering, “*Recent Advances in Lignin Chemistry*,” Advanced Papermaking Initiative, November 23, 2001.
3. **Plenary Lecture**, From Organic Chemistry to Organic Chemical Technologies, A Symposium In Memory of Professor G. Valkanas “*New Lignin Reactions and Future Research Directions*,” National Technical University of Athens, February 21, 2001.
2. Otaniemi Symposium on Lignin Chemistry 1999, VTT Chemical Technology, Espoo, Finland, **Plenary Lecture**, “Understanding Pulping, Bleaching and Yellowing Using Novel NMR Techniques; A Review of our Work at McGill.” November 9, 1999.
1. **Plenary Lecture**, “Fundamental NMR Studies of Lignins: Emerging Answers to Issues of Concern in Relation to Pulping, TCF Bleaching and Yellowing.”, Fifth Brazilian Symposium on the Chemistry of Lignins and Other Wood Components/Workshop of the International Energy Agency on Biotechnology Applied to Lignocellulosic Materials, Burbon Hotel, Curitiba, Brazil, Aug. 31-Sept.4 1997.

CONFERENCE PRESENTATIONS

(*Asterisk Signifies the Speaker)

2010

216. Alistair King, Ilkka KIpelaned, Dimitris S. Argyropoulos, "Reactivity of Wood Biopolymers in ionic Liquids" Paper ID no 47, In Ionic Liquids; Novel Processing Platforms of Cellulose & Biomass, Pacifichem 2010, Honolulu, Hawaii, December 15-20 2010
215. Dimitris S. Argyropoulos, B. Li; J. Asikalla; I. Filpponen "Factors Affecting Wood Dissolution & Regeneration of Ionic Liquids" Paper ID no 32, In Ionic Liquids; Novel Processing Platforms of Cellulose & Biomass, Pacifichem 2010, Honolulu, Hawaii, December 15-20 2010
214. Ilari, Filpponen & Dimitris S. Argyropoulos, "Creating Supramolecular Structures with Cellulose Nanocrystals" Volume I , 4th International Symposium on Emerging Technologies of Puling & Papermaking, November 8-10 2010, Guangzhou, China.
213. Umesh P. Agarwal*, Richard S. Reiner, Ilari Filpponen, Dimitris S. Argyropoulos, Akira Isogai, "Crystallinities of Nanocrystalline and Nanofibrillated Celluloses by FT- Raman Spectroscopy" 2010 TAPPI Intl Conf on Nano for the Forest Product Industry, Dipoli Congress Centre, Sept. 27th -29th 2010, Espoo, Finland
212. Ilari Filpponen, Dimitris S Argyropoulos*, Regular Linking of Cellulose Nanocrystals via Click Chemistry-Synthesis and Formation Chareacterization of Cellulose nanoPlatelet Gels, 11th European Workshop on Lignocellulosics & Pulp August 16-19, 2010, Hamburg, Gernany.
211. Janne Asikkala*; Tarja Tamminen; Stella Rovio; Annika Smeds, Tapani Suortti; Martti Alkio; Rafaelle Saladino; Dimitris S Argyropoulos, Oxidation of lignin with hydrogen peroxide catalysed by methyltrioxorhenium in supercritical CO2 and in water., 11th European Workshop on Lignocellulosics & Pulp August 16-19, 2010, Hamburg, Gernany.
210. Alistair W. T. King*, Paula Jarvi, Anna Olszewska, Ilkka Kilpelainen, Dimitris S. Argyropoulos Solubility of wood and wood biopolymers in ionic liquids; 239th ACS National Meeting & Exposition March 21-25, 2010, San Francisco, California, paper no, 328
209. Li, B*, Ilari Filpponen, Janne Asikkala, .Dimitris S Argyropoulos, Factors Affecting Wood Dissolution and Regeneration of Ionic Liquids, 239th ACS National Meeting & Exposition March 21-25, 2010, San Francisco, California, paper no, 129
208. Yu Liu*, Lucian Lucia, .Dimitris S Argyropoulos Elucidation of the lignin chemistry and delignification mechanism occurring during green liquor pretreatment and kraft pulping of softwood by the use of ionic liquids; 239th ACS National Meeting & Exposition March 21-25, 2010, San Francisco, California, paper no, 39
207. Ilari Filpponen*, Dimitris S Argyropoulos, "Formation & Characterization of Cellulose nanoPlatelet Gels", 239th ACS National Meeting & Exposition March 21-25, 2010, San Francisco, California, paper no, 107
206. Li, B*, .Ilari Filpponen, Janne Asikkala, .Dimitris S Argyropoulos, Acid hydrolysis of wood in ionic iquids_, 239th ACS National Meeting & Exposition March 21-25, 2010, San Francisco, California, paper no, 92

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205. Argyropoulos, D..S*. 'Green Chemistry Biomass Processing Platforms", Society of Environmental Toxicology and Chemistry (SETAC) Annual Meeting, 30th anniversary, Green Biorefinery session, Hilton , Riverside, New Orleans, November 19-23, 2009.
204. Maija-Liisa Mattinen*, Ilari Filpponen, Riikka Järvinen, Bin Li, Heikki Kallio, Johanna Bouhert, Pekka Lehtinen, Dimitris S. Argyropoulos, "Structural Characterization of Suberin Isolated from Potatos;Italian Lignin Chemistry Symposium , Italic5, 1-4. Sept.2009, Symp. Proceedings ISBN 978-88-95688-18-3 pp. 36-39, Varenna, Italy, 2009.

203. Alistair King*, Paula Järvi, Ilkka Kilpeläinen, Anna Olszewska., I., Dimitris Argyropoulos, “Solubility and Reactivity of Wood Biopolymers in Ionic Liquids” 2nd Nordic Wood Biorefining Conference , Sept.2nd to 4th Finlandia Hall, Helsinki Finland, 2009.
202. Alistair King*, Dimitris Argyropoulos, Paula Järvi, Ilkka Kilpeläinen, Anna Olszewska., I., “Solubility and Reactivity of Wood Biopolymers in Ionic Liquids” 3rd Congress on Ionic Liquids , May 31st to June 4th Cairns Convention Centre, Cairns Australia, 2009.
201. Filpponen*, I. & Dimitris S. Argyropoulos, “Cellulose Nanocrystals as Scaffolds for Nanodevices” Italian Lignin Chemistry Symposium , Italic5, 1-4. Sept.2009, Symp. Proceedings ISBN 978-88-95688-18-3 pp. 105-108, Varenna, Italy, 2009.
200. Luca Zoia* & Dimitris S. Argyropoulos, “³¹P NMR Spin Trapping: A New Tool for Understanding Radical Mechanisms in Lignin Chemistry, Italic5, 1-4.9.2009, Symp. Proceedings ISBN 978-88-95688-18-3 pp. 71-74, Varenna, Italy, 2009.
199. Tarja Tamminen*, Markku Leskelä, Dimitris S. Argyropoulos, Liisa Viikari, Kari Kolppo, Stefan Willför, Kristiina Poppius-Levlin, Alan Fernyhough, Lucian Lucia “LigniVal: Adding Value to Lignin”Italian Lignin Chemistry, Italic5, 1-4.9.2009, Symp. Proceedings ISBN 978-88-95688-18-3 pp. 197-198,Varenna, Italy, 2009.
198. Maija-Liisa Mattinen, Evanthia Monogioudi, Emilia Selinheimo, Raija Lantto,Kristiina Kruus, Johanna Buchert, Maarit Hellman, Nisse Kalkkinen, Perttu Permi, Nathalie Creusot, Harry Gruppen, Bin Li, Ilari Filpponen, & Dimitris S. Argyropoulos, ; Modification of Proteins by Tyrosinase and Laccase”, 237th ACS National Meeting, Salt Lake City, USA, Division of Cellulose & Renewable Materials, March 2009.

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197. Liu* Yu, Huaiyu, Zhan, Jiachuan Chen, I., Argyropoulos, D. S. “Lignin Structural and Molecular Weight Changes & their Relationship 'During Kraft Pulping”, pp , International Conference on Pulping, Paper making & Biotechnology, Nanjing Forestry University, Nov 4-6, 2008
196. Filpponen*, I., Argyropoulos, D. S. “ Determination of Cellulose Reactivity by using phosphitylation and Quantitative ³¹P NMR spectroscopy”, pp 169-172, 10th European Workshop on Lignocellulosics & Pulp, Stockholm, Sweden, August 25-28, 2008
- 195 L. Zoia*, Argyropoulos., D. S., “Understanding the Radical Mechanism of Action of Oxidative Enzymes on the Lignocellulosic Substrate Using Quantitative ³¹P NMR Spin Trapping”, pp.105-108,10th European Workshop on Lignocellulosics & Pulp, Stockholm, Sweden, August 25-28, 2008
194. Järvi*, P., Olszewska, A King, A, Granstrom, M., Hietala, S., Kilpeläinen, I., Argyropoulos., D. S., “Study of the Rheological Behaviour of Micro Crystalline Cellulose, Dissolved in Two Different Ionic Liquids.”pp177-180, 10th European Workshop on Lignocellulosics & Pulp, Stockholm, Sweden, August 25-28, 2008
193. Mattinen,* M. L. Suortti,T., Gosselink, R., Argyropoulos, D. S, Evtuguin, D., Suurnäkki, A., de Jong, E., Tamminen, T., “Polymerization of Different Lignins by *Trametes Hirsuta* Laccase” 10th European Workshop on Lignocellulosics & Pulp, Stockholm, Sweden, pp.201-204, August 25-28, 2008
- 192 L. Zoia*, Argyropoulos., D. S., “Microwave Assisted Lignin Isolation Using the Enzymatic Mild Acid Hydrolysis (EMAL) Protocol” 10th European Workshop on Lignocellulosics & Pulp, Stockholm, pp. 490-493, Sweden, August 25-28, 2008
191. King*, A., Järvi, P., Olszewska, A. M., Kilpeläinen, I., Argyropoulos., D. S., “*In-Situ* Quantitative Analysis and Discussion of Lignin Functionalities in Wood Based on Ionic Liquids.” pp. 32-35, 10th European Workshop on Lignocellulosics & Pulp, Stockholm, Sweden, August 25-28, 2008
190. Olszewska* A. M. Järvi, P., King , A., Kilpeläinen, I., Argyropoulos., D. S., “Determination of the Molecular Weight Distribution of Intact Spruce Wood Acetylated in Ionic Liquid Media” pp. 222-225, 10th European Workshop on Lignocellulosics & Pulp, Stockholm, Sweden, August 25-28, 2008

189. Filpponen*, I., Argyropoulos, D. S. “ Determination of the accessible hydroxyl groups in cellulose by using phosphitylation and 31P NMR spectroscopy” 235rd ACS National Meeting, New Orleans, LA, April 6-10, 2008, Paper #1058041.1169284
188. Filpponen*, I., Argyropoulos, D. S. and L. Lucia “ Cellulose Nanocrystals as Scaffolds or Nanodevises.” 235rd ACS National Meeting, New Orleans, LA, April 6-10, 2008, Paper #1168143
187. Xie*, H., King, A., Kilpelainen, I., Granström, M., Argyropoulos, D. S. ”Thorough Chemical Modification of Wood Based Lignocellulosic Materials in Ionic Liquids” 235rd ACS National Meeting, New Orleans, LA, April 6-10, 2008, Paper #1058041.
186. King*, A., Sun, H., Xie, H. Kilpelainen, I. Granstrom M., I., Argyropoulos, D. S. “ Novel Ionic Solvents for Lignocellulose Analysis and Derivatization” 235rd ACS National MeWood based Lignocellulosic Materials in Ionic Liquids”, 235rd ACS National Meeting, New Orleans, LA, April 6-10, 2008, Paper #1058041.1168143
185. Contreras*, S., Argyropoulos, D. S. and L. Lucia “On the Propensity of Lignin to Associate; Static Light Scattering Measurements on Native Lignin” 235rd ACS National Meeting, New Orleans, LA, April 6-10, 2008.

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184. King* W. T. Alistair, Xie Haibo, Kilpelainen Ilkka, , Argyropoulos, D. S, “Protocols for 31P NMR Analysis of Lignocellulosics Using Ionic Liquids T”. 2nd International Congress on Ionic Liquids , August 5-10, 2007, Yokohama , Japan .
183. King* W. T. Alistair, Xie Haibo, Granstrom, Mari, Kilpelainen Ilkka, , Argyropoulos, D. S, “Toward an Understanding of the Wood Dissolution Process in Ionic Liquids”. 11th Annual Green Chemistry and Engineering Conference , Paper no. 16, June 26-29, 2007, Washington DC. USA.
182. Ilari Filpponen*, Xinqwu Wang, Lucian A. Lucia, Dimitris S. Argyropoulos, “*Formation and Thermal Properties of Cellulose Nanocrystals*” – International Conference on Nanotechnology for Forest Products Industry , Knoxville, Tennessee, USA, June 13-15, 2007.
181. Kilpelainen* Ilkka, Xie Haibo, Granstrom Mari, King Alistair, , Argyropoulos, Dimitris S, “*Wood Solutions*”. Italian Meeting on Lignin Chemistry, *Italic 4*, University of Rome, Tor Vergata University, pp. 45-48, May 8-10, 2007
180. Guerra, A., Gaspar, A., Contreras, I. S., Lucia L., Crestini, C., Argyropoulos*, D. S., “*On the Propensity of Lignin to Associate*”, International Symposium on Wood, Fiber & Pulping Chemistry, Durban South Africa June 25-28, 2007.
179. Haibo Xie.* Dimitris S. Argyropoulos, Ionic Liquids: A Powerful Tool for Biorefineries, Advance Polymeric Materials Symposium of Chinese Academy of Sciences, Ningbo Institute of Material Technology & Engineering, Chinese Academy of Sciences, May 5-May 9, 2008.
178. Guerra, A., Filpponen, I., Lucia, L., Argyropoulos*, D. S., “*On the Virtues of the Enzymatic Mild Acidolysis Lignin (EMAL) Isolation Process*” International Symposium on Wood, Fiber & Pulping Chemistry, Durban South Africa June 25-28, 2007.
177. Soriano, J., Venditti, R., Argyropoulos*, D.S. , “*The Concept of Critical Micelle Pressure and its Utility towards Natural Product Extraction from Complex Natural Substanes*” International Symposium on Wood, Fiber & Pulping Chemistry, Durban South Africa June 25-28, 2007.
176. Filpponen*, I., Guerra, A., Hai, A., Lucia, L., Argyropoulos, D. S., “*Spectral Monitoring of the Formation and Degradation of Polysulfide Ions in Alkaline Conditions*” International Symposium on Wood, Fiber & Pulping Chemistry, Durban South Africa June 25-28, 2007..
175. Ysambertt*, F., Infante M. , Rojas O.J., Gaspar A., Argyropoulos D.S., Bravo, B., Cáceres A., Chavez, C., Bullón, J. “*Un Rápido Procedimiento para la Acetilación de Ligninas Asistida por Microondas (Fast Microwave-Assisted Lignin Acetilation)*, 8th Venezuelan Chemistry Congress, Caracas, June 24-28, 2007.
174. Piña, N., Ysambertt, F., Infante, M., Bravo, B., Chávez, G., Berrío, N., Cáceres, A., Bullón, J., Rojas*, O.J., Argyropoulos, D.S., Gaspar, A.R., Marquez, N., “*Modificación Estructural de Ligninas Asistida por Microondas y Evaluación de su Carácter Anfífilico (Microwave-Assisted Structural Modification of Lignins & Evaluation of their Amphiphilic Properties)*, 8th Venezuelan Chemistry Congress, Caracas, June 24-28, 2007.
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Symposium on Wood and Pulping Chemistry, Poster presentations volume II, pp. 228-231, June 7-10, (1999), Yokohama, Japan.

72. Argyropoulos* , D. S., and Zhang, L., "On the Semiquantitative Determination of Quinonoid Structures in Soluble Lignins by ³¹P NMR." 10th International Symposium on Wood and Pulping Chemistry, Poster presentations volume II, pp. 172-177, June 7-10, (1999), Yokohama, Japan.
71. Ahvazi*, B., and Argyropoulos, D. S., "Proton Spin-Lattice relaxation Time Measurements of Solid Wood and its Constituents as a Function of pH." 10th International Symposium on Wood and Pulping Chemistry, Poster presentations volume II, pp. 142-147, June 7-10, (1999), Yokohama, Japan.

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70. Argyropoulos*, D. S., and Liu, Y., "The Role and Fate of Lignin's Condensed Structures During Oxygen Delignification." Tappi Pulping Conference, Montreal, Canada Oct. 25-29, Vol. 3, pp. 1527-1540, 1998.
69. Suchy*, M., and Argyropoulos, D. S. "Activation of Alkaline Peroxide Delignification Using a Vanadium Peroxo Complex." Tappi Pulping Conference, Montreal, Canada Oct. 25-29, Vol. 3, pp. 1277-1290, 1998.
68. Ahvazi, B., Pageau, G., and Argyropoulos*, D. S., "On the Formation of Diphenylmethane Structures in Lignin Under Kraft, Soda and EMCC Pulping Conditions." Fifth European Workshop on Lignocellulosics and Pulp, Aveiro, Portugal, pp. 495-499, Aug.30- Sept. 2 1998.
67. Crestini*, C., and Argyropoulos, D. S., "Aliphatic Moieties Induced on Lignins when Exposed to Oxygen, Peroxide, and Enzymatic Oxidations." Fifth European Workshop on Lignocellulosics and Pulp, Aveiro, Portugal, pp. 273-276, Aug.30- Sept. 2 1998.
66. Moore*, D., and Argyropoulos, D. S., "A Sensitive Analytical Protocol for the Detection of Active Oxygen Species Present on Solid Lignocellulosic Matrices." Fifth European Workshop on Lignocellulosics and Pulp, Aveiro, Portugal, pp. 237-240, Aug.30- Sept. 2 1998.
65. Billa*, E., Argyropoulos, D. S., and Koukios, E., G., "Correlating ³¹P NMR and Fluorescence Data of Residual Kraft Lignins by Multivariate Chemometric Analysis." Fifth European Workshop on Lignocellulosics and Pulp, Aveiro, Portugal, pp. 183-186, Aug.30- Sept. 2 1998.
64. Colodette*, J. L., Gomide, J. L. Robles, Y. A. M., Almeida, J. M., de Brito, A. C. H., Mehlman, S. K., Argyropoulos, D. S. "Effect of the Pulping Process on Pulp Bleachability With ECF, Z-ECF and TCF Bleaching Sequences." International Pulp Bleaching Conference, Vol. 1, pp.61-70, June 1998.
63. Liu, Z. and Argyropoulos, D. S*. "Maintaining the Brightness of Mechanical Pulps via Solid-State Perborate Bleaching." 84th Annual Meeting of the Technical Section of the Canadian Pulp and Paper Association, B235-B240, 1998.
62. J. Young* , Y. Sun and D. S. Argyropoulos "Functional Group Changes in Residual and Solubilized Lignins Through Various Stages of a Northern Bleached Softwood ECF Fibreline." 84th Annual Meeting of the Technical Section of the Canadian Pulp and Paper Association, 1998.

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61. Argyropoulos, D. S*. "Heteronuclear NMR Analysis of Lignocellulosic Materials." Fifth Chemical Congress of North America, Cancun, Mexico, Nov. 11-15, 1997.
60. Asgari, F. and D. S. Argyropoulos*, "Fundamentals of Oxygen Delignification, Part II, Kinetics of Functional Group Formation/Elimination in Residual Kraft Lignin." Tappi Pulping Conference, San Francisco, CA. Oct. 18-23, Vol. 2 pp. 951-961, 1997.
59. Argyropoulos, D. S*. "Fundamental NMR Studies of Lignins: Emerging Answers to Issues of Concern in Relation to Pulping, TCF Bleaching and Yellowing." Plenary Lecture, Fifth Brazilian Symposium on the Chemistry of Lignins and Other Wood Components/Workshop of the International Energy Agency on Biotechnology Applied to Lignocellulosic Materials, Bourbon Hotel, Curitiba, PR. Brazil, Aug. 31- Sept. 4 1997.
58. Jiang, J*, Argyropoulos, D. S., "Isolation and Characterization of Residual Lignin in Kraft Pulp." 9th International Symposium on Wood and Pulping Chemistry, Oral presentations volume, pp. J2-1to J2-6, June 9-12, (1997). Montreal, Canada.
57. Argyropoulos, D. S. and Sun, Y*, "Photochemically Induced Degradation, Condensation and Rearrangement Reactions in Lignin Model Compounds and Milled Wood Lignin." 9th International

Symposium on Wood and Pulp Chemistry, Oral presentations volume, pp. K5-1toK5-6 June 9-12, (1997). Montreal, Canada.

56. Crestini, C*, G. G. Sermani, and Argyropoulos, D. S. "The Biodegradation of Wheat Straw Lignins by the White-Rot Fungus *Lentinus Edodes*." 9th International Symposium on Wood and Pulp Chemistry Posters volume pp. 16-1 to 16-4, June 9-12, (1997). Montreal, Canada.
55. Ahvazi, B*, Argyropoulos, D. S. "Quantitative Detection of Carbonyl Groups in Native and Technical Lignins." 9th International Symposium on Wood and Pulp Chemistry, Posters volume pp. 7-1 to 7-5, June 9-12, (1997). Montreal, Canada.
54. Crestini*, C., Argyropoulos, D. S., "The Early Biodegradation Pathways of Residual Kraft Lignin Model Compounds with Laccase." 9th International Symposium on Wood and Pulp Chemistry, Posters volume pp. 20-1 to 20-5, June 9-12, (1997). Montreal, Canada.
53. Billa, E*, Argyropoulos, D. S. and Koukios, E., "Correlating Residual Kraft Lignins ³¹P NMR and Fluorescence Spectroscopy Data by Multivariant Chemometric Analysis." Advances in Microscopy and NMR Spectroscopy of Lignocellulosic Materials, Pre-symposium Workshop to the 9th International Symposium on Wood and Pulp Chemistry, June 5-6, (1997).
52. Argyropoulos, D. S*, "Quantitative Phosphorus and Fluorine NMR Spectroscopies for the Structural Elucidation of Lignin." Advances in Microscopy and NMR Spectroscopy of Lignocellulosic Materials, **Invited Presentation**, Pre-symposium Workshop to the 9th International Symposium on Wood and Pulp Chemistry, June 5-6, (1997).
51. Liu, J., and Argyropoulos, D. S*. "Bleaching out The Yellow While it Forms During Reversion with Solid-State Bleaching." *CPPA Pacific and Western Branches Joint Technical Conference*, Whistler, BC, Session 3A, paper no. 2, May 14-17 1997.
50. Puping*, P. Halevy, P., Argyropoulos, D. S. "Photoyellowing Inhibition of BCTMP Using Water Soluble UV Screens." *83rd Annual Meeting of the Technical Section of the Canadian Pulp and Paper Association*, Feb. 1997.

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49. Sun, Y., and Argyropoulos, D.S*. "Fundamentals of High Pressure and Low Pressure Oxygen-Peroxide (Eop) Delignification of Softwood and Hardwood Kraft Pulps." Book 1, pp. 457-463, Tappi Pulping Conference, Nashville, TN, 1996.
48. Billa, E*, Argyropoulos, D. S., and Koukios, E., "Multivariate Chemometrics Approach for the Fluorescence of Residual Kraft Lignins." Workshop on Bioproducts from Lignocellulosics-Progress in Developing Feasible Bio/Chemical Pathways," Sounion, Greece, September, 25-27, 1996.
47. Crestini, C, and Argyropoulos, D. S*. "Biodegradation of Kraft Lignin Model Compounds by Laccase from *Trametes Versicolor*." Invited presentation, Workshop on Bioproducts from Lignocellulosics-Progress in Developing Feasible Bio/Chemical Pathways, Sounion, Greece, September, 25-27, 1996.
46. Argyropoulos, D.S*, "Recent Advances on Lignin Characterization." **Invited Presentation**, Workshop on Bioproducts from Lignocellulosics-Progress in Developing Feasible Bio/Chemical Pathways, Sounion, Greece, September, 25-27, 1996.
45. Crestini, C*, and Argyropoulos, D. S. "Structural Analysis of Wheat Straw Lignin by Quantitative ³¹P-NMR and 2D NMR Spectroscopy; The Occurrence of Ester Bonds and beta-O-4 Substructures." Fourth European Workshop on Lignocellulosics and Pulp, on Advances in Characterization and Processing of Wood, Non-woody and Secondary Fibres, Stresa, Italy, Sept. 8-11, pp. 51-55, 1996.
44. Billa, E., Argyropoulos, D.S*. and Koukios, E. "A Multivariate Chemometrics Approach for the Fluorescence of Residual Kraft Lignins." Fourth European Workshop on Lignocellulosics and Pulp, on Advances in Characterization and Processing of Wood, Non-woody and Secondary Fibres, Stresa, Italy, Sept. 8-11, pp. 304- 308, 1996.
43. A. Spyros*, D. S. Argyropoulos and R.H. Marchessault, "³¹P NMR, A New and Efficient Tool for Determining Molecular Weights and Studying Degradation of PHA's." International Symposium on Bacterial Polyhydroxyalkanoates 1996, Davos Switzerland, 18-23 August 1996.
42. Mazur*, M., and Argyropoulos, D. S., "Relaxation Mechanisms of Phosphitylated Lignins." 11th NMR Valtice 15-17, Slovakia, April 1996.
41. Bouchard, J*, Maine, C., Argyropoulos, D. S. and Berry, R. M., "Kraft Pulp Bleaching Using *In-Situ* Dimethyldioxirane: Mechanism and Reactivity of the Oxidants." *CPPA Pacific and Western Branches Joint Technical Conference*, Jasper, Alberta, May 15-18 1996.

40. Y. Sun, D. S. Argyropoulos* "A Comparison of the Reactivity and Efficiency of Ozone, Chlorine Dioxide, Dimethyldioxirane and Hydrogen Peroxide with Residual Kraft Lignin." *CPPA Pacific and Western Branches Joint Technical Conference*, Jasper, Alberta, May 15-18 1996.
39. Bouchard*, J, Chen, J. and Argyropoulos, D. S. "Bleaching With Dimethyldioxirane: A Review of its Fundamentals." Cellulose Paper and Textile Division Paper no. 220, *211st American Chemical Society Meeting*, New Orleans LA, March 24-28 1996.
38. Ahvazi*, B., Borbaruah, M., Argyropoulos, D. S. "¹⁹F NMR Spectroscopy for the Elucidation of Carbonyl-Groups in Lignins; Part I, Lignin Model Compounds." *37th Experimental NMR Conference*, Asilomar, CA March 19-22, Paper WP140, p.292, 1996.
37. Ahvazi, B*, Argyropoulos, D. S. "Quantitative Detection of Carbonyl Groups in Native and Technical lignins by ¹⁹F NMR Spectroscopy." Cellulose Paper and Textile Division Paper no. 114, *211st American Chemical Society Meeting*, New Orleans LA, March 24-28 1996.
36. Ahvazi, B*, Borbaruah, M., Argyropoulos, D. S. "¹⁹F NMR Spectroscopy for the Elucidation of Carbonyl-Groups in Lignins; Part I, Lignin Model Compounds." *82nd Annual Meeting of the Technical Section of the Canadian Pulp and Paper Association*, Feb. 1996.
35. Zhang, L*. Argyropoulos, D. S. "Quantification of Quinonoid Structures in Soluble Lignins by Phosphorus NMR." *82nd Annual Meeting of the Technical Section of the Canadian Pulp and Paper Association*, Feb. 1996.

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34. Argyropoulos, D. S*. "The Development of Condensed Structures in Lignin During Kraft Pulping." International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, Paper, O1E-183, Dec. 19, 1995.
33. Argyropoulos, D. S*, Hortling, B., Poppius-Levlin, K., Sun, Y, Mazur, M., "MILOX Pulping, Lignin Characterization by ³¹P NMR Spectroscopy and Oxidative Degradation." *8th International Symposium of Wood & Pulping Chemistry*, Helsinki, Finland, June 6-9, Vol. 1 495-502, 1995.
32. Y. Sun, D. S. Argyropoulos* "A Comparison of the Reactivity and Efficiency of Ozone, Chlorine Dioxide, Dimethyldioxirane and Hydrogen Peroxide with Residual Kraft Lignin." *8th International Symposium of Wood & Pulping Chemistry*, Helsinki, Finland, June 6-9, Vol. 1 361-368, 1995.
31. Z. Jiang and D. S. Argyropoulos* "The Application of the Mannich Reaction Toward the Quantitative Analysis of Lignins." *8th International Symposium of Wood & Pulping Chemistry*, Helsinki, Finland, June 6-9, Vol. 1 511-518, 1995.
30. Faix*, O., Andersons, B., Argyropoulos, D. S. and Robert, D. "Determination of Total Phenolic Hydroxyl and Carbonyl Groups of Lignins. A Critical Overview." *8th International Symposium of Wood & Pulping Chemistry*, Helsinki, Finland, June 6-9, Vol. 1 559-566, 1995.
29. Jiang, Z.H*, Argyropoulos, D. S. and Granata, A. "Correlation Analysis of ³¹P NMR Chemical Shifts with Substituent Effects of Phenols." paper no. 249, *36th Experimental NMR Conference*, Copley Place, Boston MA, March 26-30, 1995.
28. Argyropoulos, D. S*. "Fundamental NMR Studies of Lignins: Emerging Answers to Issues of Concern in Relation to Pulping, TCF Bleaching and Yellowing." *81st Annual Meeting of the Technical Section of the Canadian Pulp and Paper Association*, A-209-A214, Feb. 1995.
27. Argyropoulos, D. S. and Luo*, S. G. "Structural Investigations of lignin During the Bleaching of Sulphonated Mechanical Pulps." *81st Annual Meeting of the Technical Section of the Canadian Pulp and Paper Association*, Poster Session, Feb. 1995.
26. Jiang, Z.H., Sun, Y*, Argyropoulos, D. S. "Correlation Analysis in ³¹P NMR Spectroscopy Aimed at Understanding Photochemical Events in Lignin." *81st Annual Meeting of the Technical Section of the Canadian Pulp and Paper Association*, Poster Session, Feb. 1995.

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25. Argyropoulos, D. S*, Sun, Y, Berry, R. M. and Bouchard, J. "On the Reactivity of Dimethyldioxirane with Lignin Model Compounds." *Third European Workshop on Lignocellulosics and Pulp*, Hasseludden, Stockholm, Sweden, August 29-31, pp. 266-271, 1994.
24. B. Saake*, D. S. Argyropoulos, O. Faix, "Structural Investigations of Synthetic Lignins (DHP's) as a Function of Molar Mass and Mode of Preparation." *Third European Workshop on Lignocellulosics and Pulp*, Hasseludden, Stockholm, Sweden, August 29-31, pp. 210-214, 1994.

23. Argyropoulos, D. S*, Heitner, C. and Schmidt, J. A. "Observation of Quinonoid Groups During the Light-Induced Yellowing of Softwood Mechanical Pulp." *Third European Workshop on Lignocellulosics and Pulp*, Hasseludden, Stockholm, Sweden, August 29-31, pp. 154-158, 1994.
22. Argyropoulos, D. S*, Sun, Y, Berry, R. M. and Bouchard, J. "Reactions of Dimethyldioxirane with Lignin Model Compounds." *1994 International Pulp Bleaching Conference.* Hyatt Regency Hotel, Vancouver B.C. June 13-16, Posters vol., p.p. 83-91, 1994.
21. Sun, Y*, and Argyropoulos, D. S. "Fundamentals of High Pressure Oxygen and Low Pressure Oxygen-Peroxide (EOP) Delignification of Softwood and Hardwood Kraft Pulps; A Comparison." *New Developments in Pulp Bleaching and Brightening.* American Institute of Chemical Engineers, Spring National Meeting, Atlanta Georgia, Paper no. 30d, April 17-24 1994. **Invited Contribution.**

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20. Argyropoulos D.S*. "Phosphorus-31 NMR Analysis of Lignins: A Novel Quantitative Method to Follow Structural Changes in Lignins." *Proceedings International Conference on Emerging Technologies in the Pulp and Paper Industry*, Taipei Taiwan, pp. 8-12, May 18-20 1993. **Invited Contribution.**
19. Argyropoulos D. S*. and Morin, F. "Probing the Macromolecular Structure of Wood and Pulps with Proton Spin-Lattice Relaxation Time Measurements in the Solid State." *American Chemical Society National Meeting*, Cellulose Paper and Textiles Division, Paper No. 78, Denver Colorado, March 28-April 2 1993, **Invited Contribution.**
18. Argyropoulos, D. S*. "Quantitative Phosphorus-31 NMR Analysis of Lignins; A New Tool for the Lignin Chemist." *American Chemical Society National Meeting*, Symposium on "NMR of Biomaterials." Cellulose Paper and Textiles Division, Paper No. 152, Denver Colorado, March 28-April 2 1993, **Invited Contribution.**
17. Argyropoulos, D. S*. "³¹P NMR in Wood Chemistry, A Review of Recent Progress." *Proceedings 7th International Symposium of Wood & Pulping Chemistry*, Beijing, China, May 25-28, Vol. 2. pp 776-787, 1993.
16. Argyropoulos, D. S*, Bolker, H. I., Heitner, C., Archipov, Y., "The Structural Elucidation of Lignins Using ³¹P NMR Spectroscopy." *Emerging Science and Technology for the Pulp and paper Industry*, McMaster University, Hamilton Ontario, Sept. 2 1993.

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15. Argyropoulos, D.S*. "Phosphorus-31 NMR Spectroscopy as Applied to Wood Biopolymers." *33rd Experimental Nuclear Magnetic Resonance Conference*, March 29-April 2, 1992, Asilomar Conference Center, Pacific Grove California.
14. Argyropoulos, D. S*, "Phosphorus-31 NMR Analysis of Steam Explosion Lignins." *Advances in Thermochemical Biomass Conversion*, May 11-15, 1992, Interlaken Switzerland.

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13. Argyropoulos, D.S*. "New NMR Methods." *Modern Methods of Analysis of Wood, Annual Plants and Lignins*, Monteleone Hotel, New Orleans, November 29 - December 1, 1991, **Invited Contribution.**
12. Argyropoulos, D.S*. "Phosphorus-31 NMR Analysis of Six Soluble Lignins. A Novel Method for Functional Group Quantitation." *Modern Methods of Analysis of Wood, Annual Plants and Lignins*, Monteleone Hotel, New Orleans, November 29 - December 1, 1991, **Invited Contribution.**
11. Argyropoulos, D.S*. and Heitner C. "Ultra High Yield Pulping Part VII. The Effect of pH During Impregnation on the Quality of Lightly Sulphonated TMP." *International Mechanical Pulping Conference*, Minneapolis, Minnesota, pp.191-197, June 1-6, 1991.
10. Heitner, C., Argyropoulos, D.S*, Miles, K., Karnis, A. and Kerr, B. "Alkaline Sulphite Ultra-High Yield Pulping of Aspen Chips - A Comparison of Steam Explosion and Conventional Chemimechanical Pulping." *International Mechanical Pulping Conference*, Minneapolis, Minnesota, pp.151-164, June 1-6, 1991.
9. Archipov, Y., Argyropoulos, D.S*, Bolker, H. I., and Heitner, C. "³¹P NMR Spectroscopy in Wood Chemistry." *International Symposium of Wood & Pulping Chemistry*, Melbourne Australia, 1, pp.359-366 April 30-May 4, 1991.

8. Argyropoulos, D.S*, Archipov, Y., Bolker, H. I., and Heitner, C. The Potential of ^{31}P NMR Spectroscopy in Wood Chemistry.” *Workshop on Methods of Analysis of Wood and Environmental Samples*, Rotorua, New Zealand , May 7-8, 1991.
7. Fillppov, V., Archipov, Y*, and Argyropoulos, D. S., “4,4,5,5-Tetramethyl-1,3,2-dioxaphospholanyl Chloride-Derivatizing Reagent for Lignin Functional Group Analysis.” *Materials 7th International Conference of Young Scientists*, Riga, Latvia, (1991).

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6. Argyropoulos, D.S* and Bolker, H. I. “The Gel Degradation Theory of Wood Delignification; Experimental Confirmation with a Model Polymer.” *Proceedings of the 4th International Symposium of Wood and Pulping Chemistry*, 1, 399-405, Paris, France, April 1987.
5. Argyropoulos, D.S* and Bolker, H. I. “Species Distribution in the Sol Phase Beyond the Gel Point.” *Macromolecular Reprints, Royal Society of Chemistry*, Oxford, England, Vol, 1, 111-114, (1986).
4. Argyropoulos, D.S*, Bolker, H. I., “A Facile Synthesis of Monodisperse Carboxylated Polystyrene.” *Polymer Preprints* 27(1), 457, (1986). ACS National Meeting, New York, April 1986.
3. Argyropoulos, D.S* and Bolker, H. I. “Synthesis and Degradation of Polymer Networks.” *Polymer Preprints*, 25(2), 130 (1984), ACS National Meeting, Philadelphia, PA., August 1984.
2. Argyropoulos, D.S* and Bolker, H. I. “Breaking Crosslinks to Solubilize Lignin.” *Cellulose, Paper and Textile Division*, Paper No. 133 ACS National Meeting, Philadelphia, PA., August 1984.
1. Argyropoulos, D. S*, Hodd, K.,A., and Wright, W., W., “The influence of Crosslink Density on Thermal Properties of Some Epoxy Resins Based on 4,4'-Diaminodiphenyl Methane.” 7th International Conference on Thermal Analysis, Paper no. IV-FF-5, Kingston, Ontario, August 22-28, 1982.

INVITED LECTURES / SEMINARS

91. Lignin Biorefinery, “Structure of Lignin & Lignin Fragments” Pacifichem 2010, Honolulu, Hawaii, December 15-20 2010
90. Peking University, Beijnh China, Department of Chemistry , November 2 2010, “Opportunities with Dissolved Wood for the Forest Biorefinery” & , Supramolecular Chemistry Using Nature’s Most Ambundant Template;The Cellulose Nanocrystal”
89. Chinese Academy of Sciences, Laboratory of Process Enginerring , November 3 2010, “Use of Ionic Liquids in the Green Processing of Biomass”
88. Department of Biotechnology; National Laboratory for Clean Energy, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, November 4 2010, “Opportunities with Dissolved Wood for the Forest Biorefinery” & Supramolecular Chemistry Using Nature’s Most Ambundant Template;The Cellulose Nanocrystal”
87. University of Helsinki, Department of Applied Chemistry & Microbiology, , October 20th 2009, Helsinki, Finland. “Development & Applications ^{31}P NMR Spin Trapping; Toward a Detailed Understanding of the Radical Mechanism of Action of Oxidative Enzymes with the Lignocellulosic Substrate”
86. Helsinki Technical University, October 19th 2009, Helsinki, Finland “The Use of Cellulose Nanocrystals as Scaffolds for Nanodevices; Supramolecular Chemistry using Nature’s most Ambundant Template”.
85. Department of Chemistry,Dublin University of Technology, October 16th 2009, Dublin, Ireland. “The Modern Forest Biorefinely”
84. Department of Chemistry,Dublin University of Technology, October 16th 2009, Dublin, Ireland. “Supercritical CO_2 as a Novel Processing Platfrom for the Oxidation of Kraft Lignin”
83. Dublin University of Technology, October 15th 2009, Dublin, Ireland “Development of Heteronuclear NMR and Diverse Applications”, Department of Chemistry,.
82. Department of Chemistry, Dublin University of Technology, October 14th 2009, Dublin, Ireland. “Green Chemistry as Applied to the Forest Biorefinery”
81. Department of Agrochemistry & Agrobiology, , University of Tuscia, Viterbo, Italy July 14th , 2009 “The Research & Education Program at the Dept of Forest Biomaterials at NCSU”
80. Department of Agrochemistry & Agrobiology, , University of Tuscia, Viterbo, Italy July 15th , 2009 “The Chemistry Oxidative Enzymes as Probed by Novel ^{31}P NMR Spin Trapping Techniques”

79. Department of Agrochemistry & Agrobiology, , University of Tuscia, Viterbo, Italy July 10th , 2009 “Ionic Liquids as Solvents of Wood for Technology & Science”;
78. Eastman Chemical Co., Focus School Lecture Series, October 6th, 2008, Kingsport Tennessee, USA. “Opportunities with Dissolved Wood for Green Materials & Chemicals”;
77. “Green Chemistry of Wood & Wood Components”,BioRefine 2007-2012, September 22nd 2008,Lahti, Finland.
76. “Global Warming and the Need for Green Chemistry Biomass Processing Platforms”, University of Helsinki May 27th, 2008, Finland.
75. Florida International University, Dept. of Chemistry, November 30th 2007 “Technology Platforms for the Forest Biorefinery”
74. Pöyry Forest Industry Tekes Focus Group, Kemira Oyj Espoo Research Center Luoteisrinne 2 02270 Espoo, Sept 6th 2007 “The Chemical Biorefinery”
73. Durban University of Technology , June 28th 2007 “New Technology Platforms for use in Tomorrow’s Forest Biorefinery”
72. Novozymes Research Centre, Franklinton, North Carolina, May 31st 2007 “Novel Methods of Analysis and Pretreatments for Lignocellulosic Substrates”
71. University of Helsinki, November 10th 2006 “Toward the Forest Biorefinery with New Chemistry & New Tools”
70. Helsinki University of Technology , October 4th 2006 “The Concept of Forest Biorefinery”.
69. Helsinki University of Technology , October 4th 2006 “The Research & Education Program at the Wood & Paper Science Dept. at NCSU”.
68. Centre Technique du Papier (CTP), Grenoble, France, April 11th 2006 “Advances in Oxidation Chemistry of Biomass “
67. North Carolina State University – Department of Wood & Paper Science – Forest Biomaterials and Cellulose Nanorods”, Oct. 1, 2005.
66. North Carolina State University – Department of Wood & Paper Science – An Activity Profile Related to Biomaterials Research”, OMG Americas Inc. Technology Seminar Series, Cleveland, Ohio, Jan 4, 2005.
65. Plenary Lecture “Understanding the Role of Mediators in the oxidation of Kraft Lignin by Laccase”,Iberoamerican Congress on Pulp & Paper Research, Madrid-Cordoba, Nov. 10-12, 2004
64. Plenary Lecture ”The Significance of Lignin Research to the Pulp and Paper Industry” COST Action E41 “Analytical Tools with Applications to Wood and Pulping Chemistry”Dipoli Conference Centre, Helsinki, Finland , Oct 20,2004.
63. North Carolina State University, Department of Chemistry “*Advances in Lignin Chemistry,*” May 2, 2002.
62. University of Sherbrooke, Department of Chemistry, “New Insights in Lignin and Future Research Directions,” November 28, 2001.
61. University of British Columbia, Dept. of Chemical Engineering, “*Recent Advances in Lignin Chemistry,*” Distinguished Lecture Series, Advanced Papermaking Initiative, November 23, 2001.
60. Université Du Quebec A Trois Rivieres, Pulp and Paper Research Centre, “*Insights in Lignin Structure,*” March 16, 2001.
59. Plenary Lecture, From Organic Chemistry to Organic Chemical Technologies, A Symposium In Memory of Professor G. Valkanas “*New Lignin Reactions and Future Research Directions,*” National Technical University of Athens, February 21, 2001.
58. Opening Invited Lecture, Italian Meeting on Lignin Chemistry, *Italic 1*, University of Rome, “*Novel Aspects of Lignin Chemistry,*” February 16-17, 2001.
57. McGill University, Dept. of Chemistry, “*Salient Lignin Reactions,*” January 9, 2001.
56. Alberta Research Council, Edmonton, Alberta, “*Lignin Reactions Operating Under Industrial Conditions,*” February 16, 2000.
55. Otaniemi Symposium on Lignin Chemistry 1999, VTT Chemical Technology, Espoo, Finland, Plenary Lecture, “Understanding Pulping, Bleaching and Yellowing Using Novel NMR Techniques; A Review of our Work at McGill.” November 9, 1999.
54. White Martins Inc., Dunque de Caxias, RJ, Brazil, “Why Oxygen Fails to Fully Delignify Kraft Pulps,” October 29, 1999.

53. Université Bordeaux 1, Sciences Technologies, Bordeaux, France, "Probing the Macromolecular Structure of Wood and Pulps with Proton Spin Lattice Relaxation Time Measurements in the Solid State," July 20, 1999.
52. Université Bordeaux 1, Sciences Technologies, Bordeaux, France, "The Development and Elimination of Condensed Structures in Lignin During Pulping and Oxygen Delignification," July 12, 1999.
51. Université Bordeaux 1, Sciences Technologies, Bordeaux, France, "Development and Applications of Heteronuclear NMR for the Structural Elucidation of Lignins, Carbohydrates, and Synthetic Polymers," July 7, 1999.
50. Institut de Chimie Moléculaire Paul Sabatier, Université Toulouse III, "Development and Applications of Heteronuclear NMR for the Structural Elucidation of Lignins, Carbohydrates, and Synthetic Polymers," July 5, 1999.
49. Université Bordeaux 1, Sciences Technologies, Bordeaux, France, "Maintaining the Brightness of Mechanical Pulps with Solid State Perborate Bleaching," July 1, 1999
48. Forestry and Forest Products Research Institute, Tsukuba Science Cty, Japan, "Development and Application," June 4, 1999.
47. American Chemical Society, 217th National Meeting, Tutorial on Analytical Methods in Lignocellulosics, Cellulose Paper and Textiles Division, "Quantitative ³¹P and ¹⁹F NMR Spectroscopies for the Structural Analysis of Lignins," Invited Presentation, March 21-25, 1999, Anaheim, Ca.
46. Pulp and Paper Research Institute of Canada, Pointe Claire Laboratory, "On the Formation of Diphenylmethane Structures in Lignin Under Kraft, Soda and EMCC Pulping of Heteronuclear NMR for the Analysis of Lignins Conditions," November 9, 1998.
45. National Technical University of Athens, Department of Chemical Engineering, "Development and Applications of Novel NMR Techniques for the Study of Lignocellulosic Materials," May 27, 1998.
44. University of Hamburg, Wood Chemistry Laboratory, "Kinetic Aspects of Lignin Degradation During Oxygen Delignification," April 22, 1998.
43. University of Rome, 'La Sapienza', Department of Chemistry, "Analytical Issues Relevant to The Canadian Pulp and Paper Industry," February 25, 1998.
42. University of Maine, Departments of Chemical Engineering and Chemistry, Distinguished Lecture Series, "Looking at Modified Pulping and TCF Bleaching with Novel NMR Techniques," October 3, 1997.
41. Weldwood of Canada, Hinton Division, Hinton Alberta, "*Changes in Residual Kraft Lignin During Oxygen Delignification I*," and "Functional Group Changes of Residual and Solubilized Lignins Induced in the Various Stages of the Hinton Bleach Plant," July 28, 1997.
40. Mechanical and Chemimechanical Wood Pulps Network, National Network Centre of Excellence Annual Meeting, "*Milestones in Our Reversion Research at McGill; Past, Present and Future*," University of Toronto, May 29, 1997.
39. Repap Technologies Inc., "*Kinetics of Functional Group Formation/Elimination from Residual Kraft Lignin During Oxygen Delignification*," "*The Influence of Metal Ions in the Decomposition and Radical Coupling Reactions of Alkaline Hydrogen Peroxide with Residual Kraft Lignin Model Compounds*," "*A Comparison of the Fundamental Lignin Chemistry Between the Alcell and the Kraft Pulping Processes*," Valley Forge, PA, April 2, 1997.
38. Alberta Research Council, "*Photoyellowing Inhibition of Mechanical Pulps with Water-Soluble UV Screens*," Industry Workshop on Bleaching and Yellowing Inhibition, Edmonton, Alberta, October 2, 1996.
37. Alberta Research Council, "*Maintaining the Brightness of Mechanical Pulp Solid-State Perborate Bleaching*," Industry Workshop on Bleaching and Yellowing Inhibition, Edmonton, Alberta, October 2, 1996.
36. Pulp and Paper Research Institute of Canada, Pointe Claire Laboratories, "*Biodegradation of Kraft Lignin Model Compounds with Laccase*," October 7, 1996.
36. University of Montana, Department of Chemistry "*Probing Wood Biopolymers with New NMR Techniques*," August 5, 1996.
35. Howe Sound Pulp and Paper, Port Melon BC. "*Kinetic Aspects of Lignin Chemistry During Oxygen Delignification*." July 18, 1996.

34. University of Toronto, Department of Chemical Engineering, "*Fundamental NMR Studies of Lignins: Emerging Answers to Issues of Concern in Relation to Pulping, TCF Bleaching and Yellowing.*" May 1, 1996.
33. Ecole Polytechnique, Department of Chemical Engineering, "*Magnetic Resonance as Applied to Pulp and Paper Research,*" March 21, 1996.
32. International Lignin Institute, Fribourg Switzerland, Third International Forum, "*Probing the Biopolymers of Wood with ³¹P NMR, A Review of Recent Progress and Applications.*" February 29 - March 1 1996 .
31. University of Ioannina, Greece, "*Applications of ³¹P NMR, in Wood Chemistry, Polymer Science and Cyclosporin Chemistry.*" February 20, 1996.
30. Universita degli Studi della Tuscia, Italy, Dept. of Agrochemistry and Agrobiolgy, "*Probing the Biopolymers of Wood with ³¹P NMR, A Review of Recent Progress and Applications.*" February 13 1996.
29. CANFOR Research and Development Centre, Vancouver, BC, "*Lignin Condensation Reactions,*" Jan. 3, 1996.
28. Pulp and Paper Research Institute of Canada, Vancouver Laboratory, "*Lignin Condensation Reactions,*" January 3, 1996.
27. University of New Brunswick, Department of Chemistry, "*Probing Natural Polymers with NMR.*" Oct. 27, 1995.
26. Pulp and Paper Research Institute of Canada, Pointe Claire Laboratory "*NMR Applications to Issues of Practical Concern.*" October 16, 1995.
25. DuPont, Wilmington, Delaware, "*Bleaching with Different Oxidants,*" September 19, 1995.
24. FMC Corporation , Princeton ,New Jersey, "*Bleaching with Different Oxidants,*" September 18, 1995.
23. CANFOR Research and Development Centre, Vancouver B.C. "*A Comparison of the Reactivity and Efficiency of Ozone, Chlorine Dioxide, Dimethyldioxirane Hydrogen Peroxide with Residual Kraft Lignin.*" May 8, 1995.
22. REPAP Technologies, "*Probing the Biopolymers of Wood with ³¹P NMR.*" Valley Forge PA October 28, 1994.
21. CANFOR Research and Development Centre, Vancouver B.C. "*Probing the Biopolymers of Wood with ³¹P NMR, A Review of Recent Progress and Applications.*" April 22, 1994.
20. Pulp and Paper Research Institute of Canada, Vancouver Laboratory "*Fundamentals of Oxygen and EoP Delignification of Kraft Pulps.*" April 22 1994.
19. NORANDA Technology Centre, Montreal, Que. "*On the Reactivity of Dimethyldioxirane with Lignin Model Compounds.*" March 15, 1994.
18. Pulp and Paper Research Institute of Canada, Pointe Claire Laboratory "*Reactions of Dimethyldioxirane with Lignin Model Compounds.*" February 7 1994.
17. BASF Aktiengesellschaft, Ludwigshafen, Germany, "*Probing the Biopolymers of Wood with ³¹P NMR, A Review of Recent Progress.*" January 10 1994.
16. BASF, Aktiengesellschaft, Ludwigshafen, Germany, "*Synthesis and Degradation of Model Network Polymers.*" January 11 1994.
15. National Technical University of Athens, Department of Chemical Engineering, Bioresource Technology Unit, "*Applications of ³¹P NMR to Wood Chemistry.*" January 7 1994.
14. University of Athens, Department of Chemistry, "*The Potential of ³¹P NMR in Lignin, Polymer and Cyclosporin Chemistry.*" December 20 1993.
13. Argyropoulos, D. S. "*Phosphorus-31 NMR in Wood Chemistry: A New Tool for the Lignin Chemist,*" Fall Meeting and Symposium: Newer Methods in Wood, Pulp and Paper Analysis, Empire State Paper Research Associates, October 26-29 1993.
12. Pulp and Paper Research Institute of Canada, Pointe Claire Laboratory "*Probing Wood and Kraft Pulps with Solid State NMR.*" Pointe Claire , November 17 1992.
11. Pulp and Paper Research Institute of Canada, "*Identifying Chromophores in Mechanical Pulps Using NMR,*" Lecture Delivered for the Chief Executives of the Canadian Pulp and Paper Industry, Montreal, Dec. 2 ,1991.
10. Pulp and Paper Research Institute of Canada, Vancouver Laboratory "*Applications of Nuclear Magnetic Resonance Spectroscopy to Wood Chemistry.*" Vancouver, April 22 1991.

9. Lakehead University, Department of Chemistry, Thunderbay Ontario Canada, “³¹P Nuclear Magnetic Resonance Spectroscopy in Wood Chemistry.” Thunderbay, February 25 1991.
8. National Network of Excellence on Mechanical and Chemimechanical Wood Pulps, “*Methods of Nuclear Magnetic Resonance Spectroscopy in Wood Chemistry.*” Palais de Congress de Montreal, January 28 1991.
7. Pulp and Paper Research Institute of Canada “*Alkaline Sulphite Ultra-High Yield Pulping of Aspen Chips - A Comparison of Steam Explosion and Conventional Chemimechanical Pulping,*” Repeat of Mill Manager's Seminar, Montreal, December 10 1990.
6. Tufts University, Department of Chemical Engineering, “*The Gel Degradation Theory of Crosslinked Polymer Networks.*” Medford, Massachusetts December 3 1990,.
5. National Research Council of Canada, Division of Chemistry, “*The Formation of Model Networks and the Gel Degradation Theory,*” Ottawa, Ontario, February 19, 1988.
4. Ecole Polytechnique, Department of Chemical Engineering, “*Structural Correlations Governing Water Absorption on Epoxy Resin Systems.*” Montreal, December 11, 1986,.
3. MacMillan Bloedel Research Ltd., “*Delignification and Degradation of Polymer Networks.*” Vancouver, B.C., September 5, 1984,.
2. University of Washington, Department of Chemical Engineering and Division of Forest Products, “*Delignification and Degradation of Polymer Networks.*” Seattle, September 3, 1984.
1. Polysar Research Laboratories, “*The Chemistry of New Epoxides and the Synthesis and Degradation of Model Network Systems.*” Sarnia, Ontario, January 10, 1984.

RESEARCH GRANTS AWARDED

Granting Agency/Company & Title of Research Program	Amount Awarded (\$ US)	Period of Award
Industrial Research Institute/National Science Foundation ”Catalytic Oxidation Chemistry Aimed at Upgrading Lignin” in Collaboartion with E. Ison, Dept of Chemistry NCSU	500,000	2011-2012
National Technology Agency of Finland “ <i>Lignin Valorization</i> ” In collaboration with: Technical Research Center if Finland (VTT), Pulp & Paper Research Center of Finland (KCL), Technical University of Tempere (TKK), Abo Academy University of Helksinki (TY).	1,500.000	2008-2011
National Technology Agency of Finland “ <i>Lipid Modifying Enzymes</i> ” In collaboration with: Biotechnolgy Research Institute of Finland (VTT), Helsinki University of Technology (TKK), University of Turku (TY)	2,000.000	2008-2010
National Technology Agency of Finland “ <i>Green Chemistry of Wood & Wood Components</i> ” with Ikka Kilpelainen	1,600.000	2007-2010
US Department of Energy “ <i>Highly Energy Efficient Pulping</i> ” with L. Lucia, S. Banerjee & C. E. Courchene	2,850.000	2004-2009
North Carolina Biotechnology Center and Novozymes Inc. <i>Enzymatic Activity of Cellulases Studied by the Quartz Crystal Microbalance</i> ” with Orlando., J. Rojas.	130,000	2005-2007
OMG Americas Corporation “ <i>Oxidative Catalysts as Applied to the Pulp and Paper Industry</i> ”	135,050	2005-2006
Consortium for Plant Biotechnology Research “ <i>Supercritical Fluid Extraction Systems to Obtain High Value Products from Thermally</i> ”	110,000	2005-2007

Granting Agency/Company & Title of Research Program	Amount Awarded (\$ US)	Period of Award
<i>Labile Agricultural Materials</i>		
USDA CRESS Competitive Grants Program ‘ <i>Structure-Property Relations in Amphoteric Polymers for Papermaking and Non-Food Fiber Applications</i> ’ with M. Hubbe, O. Rojas	300,000	2004-2006
Environmental Water Corporation “ <i>Development of Peroxyglycolic Acid as Bleaching Agent for the Use of the Pulp and Paper Industry</i> ”	132,519	2004-2005
OMG Americas Corporation “ <i>Development of Oxidation Catalysts for the Use of the Pulp and Paper Industry</i> ”	115,000	2004-2005
Portugese Ministry of Science & Technology “ <i>Supercritical Oxidation Technologies for Biomass Conversion</i> ”	~ 50,000	2004-2006
Natural Sciences and Engineering Research Council of Canada (NSERC), Operating Grant, “ <i>³¹P NMR in Wood Chemistry</i> ”	Can \$ 55,600	1992-1994
National Networks Centres of Excellence (NCE) “ <i>Chromophores in Wood Pulps</i> ”	Can \$ 58,000	1992-1994
Industry Science and Technology Canada “ <i>Fundamentals of Chemical Pulp Bleaching</i> ”	Can \$ 193,500	1992-1993
Industry Canada “ <i>Fundamentals of Delignification and Bleaching</i> ”	Can \$185,500	1994-1995
McGill University “ <i>Ozone Generator</i> ”	Can \$ 8,000	1994
Natural Sciences and Engineering Research Council of Canada (NSERC) with T.H. Chan, D.N. Harpp, M.J. Damha, A. Hay “ <i>Broadband NMR Accessory for 300 MHz NMR Instrument</i> ”	Can \$ 33,639	1994
Natural Sciences and Engineering Research Council of Canada (NSERC), Research Grant “ <i>P NMR in Wood Chemistry</i> ”	Can \$ 53,400	1994-1996
National Networks of Excellence (NCE), Mechanical and Chemimechanical Wood Pulps Network “ <i>Bleaching and Inhibition of Yellowing of Pulps</i> ”	Can \$ 403,350	1994-1997
National Networks of Excellence, Protein Engineering Network Centre of Excellence (PENCE) “ <i>Lignin Degrading Enzymes</i> ”	Can \$ 43,740	1994-1995
Natural Sciences and Engineering Research Council of Canada (NSERC), Individual Strategic Grant, “ <i>Fundamentals and Catalysis of Oxygen and Peroxide Reinforced (EOP) Oxygen Delignification</i> ”	Can \$ 277,700	1996-1998
Natural Sciences and Engineering Research Council of Canada (NSERC), Research Grant “ <i>³¹P NMR in Wood Chemistry</i> ”	Can \$ 110,800	1996-1999
Natural Sciences and Engineering Research Council of Canada (NSERC), Research Grant “ <i>Heteronuclear NMR in Wood Chemistry</i> ”	Can \$ 120,000	2000-2003
Natural Sciences and Engineering Research Council of Canada (NSERC), Equipment Grant with B. Lennox, A. Eisenberg, T.H. Chan, R.H. Marchessault, A. Hay, “ <i>300 MHz NMR Spectrometer</i> ”	Can \$ 270,000 \$	1998
Natural Sciences and Engineering Research Council of Canada (NSERC), Equipment Grant with L. Reven, A. Eisenberg, R.H. Marchessault, “ <i>Fluorine Probe for Solid State NMR spectrometer</i> ”	Can \$ 38,000	1998

Granting Agency/Company & Title of Research Program	Amount Awarded (\$ US)	Period of Award
National Networks of Excellence (NCE), Mechanical and Chemimechanical Wood Pulps Network <i>"Bleaching and Inhibition of Yellowing of Pulps"</i>	Can \$ 264,000	1998-2001
White Martins Gases Industriais, S.A. Brazil	Can \$ 73,000	1998-1999
McGill University, NSERC Seed Grant	Can \$ 10,000	1999-2000
Us Borax Inc. Grant in Aid	Can \$ 30,000	1999-2000
Natural Sciences and Engineering Research Council of Canada (NSERC), Strategic Grant, with P. Englezos, Dept. Chem. Eng. UBC, <i>"Metal Fibre Interactions"</i>	Can \$ 339,900	2000-2004
Natural Sciences and Engineering Research Council of Canada (NSERC), Equipment Grant with B. Lennox, D.F.R. Gilson, R.H. Marchessault, C.J. Barrett, A. Hay, L. G. Reven <i>"Thermal Analysis Instrumentation"</i>	Can \$ 108,119	2000
Natural Sciences and Engineering Research Council of Canada (NSERC), Equipment Grant with A. Eisenberg, R.H. Marchessault, C.J., Barrett, A. Hay, H., F., Sleiman, and T.G.M. Van de Ven <i>"Multi Angle Static Light Scattering Photometer"</i>	Can \$ 125,854	2000
Us Borax Inc. Grant in Aid	Can \$ 30,000 2001 Can \$ 20,000 2001	2001-2002

