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**INTERNATIONAL SYMPOSIUM**

Nanomaterials in Organic World & Medicine

## **PUBLICATION**

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CPERI/ CE.R.T.H.*

## INVITED LECTURES AND SEMINARS

I have presented more than one hundred invited seminars and lectures at international scientific conferences, industrial research centres, Institutes and Universities in North America, Japan and Europe. More specifically, in the past twenty years I have presented the following invited lectures:

1. “Novel Nanoparticle-assisted Approaches for Oral Insulin Delivery”, **13<sup>th</sup> International Conference on Nanosciences & Nanotechnologies - NN16**, Thessaloniki, July 2016
2. “Recent Advances in Oral Delivery of Macromolecular Drugs via Lipid-based Drug Delivery Systems”, **13<sup>th</sup> International Conference on Nanosciences & Nanotechnologies - NN16**, Thessaloniki, July 2016
3. “Rational Design of Novel Drug Delivery Systems and Model-based Microbial Production of PHB in *Alcaligenes latus* Cultures”, Department of Biochemical Engineering, **University College London (UCL)**, May 2016 (*Public lecture*)
4. “Mucus Permeating Nanocarriers for the Delivery of Biopharmaceutics”, **12<sup>th</sup> International Conference on Nanosciences & Nanotechnologies – NN15**, Thessaloniki, July 2015
5. “Mucus Penetrating Nanocarriers for Controlled Delivery of Biopharmaceutics: Strategies to Overcome Mucus Gel Barriers”, **3<sup>rd</sup> Hellenic Forum for Science, Technology & Innovation, Life Sciences, Nanotechnology, Energy & Environment, ICT, Accelerator Technologies for Society**, Athens, July 2015
6. “From molecular to plant scale design, modeling and control of macromolecular architecture of synthetic polymers and biopolymers”, **10<sup>th</sup> Hellenic Polymer Society Conference**, Partas, Greece, December 4-6, 2014
7. “Proteolytic Enzyme-Functionalized PLGANanoparticles for Mucus Penetration”, **11<sup>th</sup> International Conference on Nanosciences & Nanotechnologies – NN14**, Thessaloniki, July 2014
8. “Nanocarrier-Aided Mucosal Delivery of Therapeutic Biomolecules and Vaccines”, **International Conference on Nanostructured Materials (NANO2012)**, Rhodes, August, 2012
9. "Recent Advances in Nanotechnology-based Water Purification Methods", **Industrial Technologies 2012**, "Quality of Life: Improving Availability of Water", Aarhus, Denmark, June, 2012
10. “Multi-phase Multivariate Population Balance Modeling of Polymerization and Biological Systems”, **AICES Seminar Series**, Aachen, Germany, January, 2012
11. “Nanoscale Functionalities for Targeted Delivery of Biopharmaceutics”, **61<sup>st</sup> Canadian Chemical Engineering Conference**, London, Ontario Canada, October, 2011 (*Keynote*)
12. “Safe Design of Nanomaterials via the Implementation of an Integrated EHS Computational Platform”, **61<sup>st</sup> Canadian Chemical Engineering Conference**, London, Ontario Canada, October 23-26, 2011 (*Highlighted speech*)

13. "Recent Developments in Nanomedicine: Drug Delivery Systems, Diagnostics and Regenerative Medicine", **Dendrimers as Composites of Advanced Drug Delivery nano Systems (aDDnSs). Biomedical Applications, COST action (TD0802)**, Athens, October, 2011
14. "Multi-scale Modeling of Gas- and Slurry-Phase Catalytic Olefin Polymerization Reactors", **Advances in Polymer Science & Technology**, Linz, September 2011
15. "Simulation of a Dry Powder Inhaler and Particle Deposition in the Respiratory Tract", **8<sup>th</sup> European Congress of Chemical Engineering (ECCE)**, Berlin, September, 2011 (*Keynote*)
16. "NANOofutures": European Technology Integration and Innovation Platform (ETIP) in Nanotechnology", **EUROSENSORS XXV**, Athens, September 2011
17. "Industry-Academia partnerships: A collection of good practices", **Workshop on "Innovation in the wider Black Sea region: Policies and Structures"**, Athens, June 2011
18. "Enabling Technologies in CSF for EU Research and Innovation Funding - Rapporteur", **Workshop on Enabling Technologies in Common Strategic Framework for EU Research and Innovation Funding**, Brussels, June 2011
19. "What Characterizes a Nanodrug?", **4<sup>th</sup> European Conference for Clinical Nanomedicine**, Basel, May 2011
20. "A Computational Platform for Safe Design of Nanomaterials and Nanoparticles - Rapporteur", **4<sup>th</sup> Nano Safety for Success Dialogue**, Brussels, March 2011
21. "Science, Technology and Innovation Governance", **The Research Council, INCONET-GCC Workshop, Best Practice in S&T Policies**, Muscat, December 2010
22. "Science, Technology and Innovation Policies for a Knowledge-Based Economy", **The Research Council, INCONET-GCC Workshop, Best Practice in S&T Policies**, Muscat, December 2010
23. "Cellular Regeneration of Articular Cartilage Using Biomimetic Implants", **Joint Conference of the Department of Hip and Knee Replacement Surgery of the Hellenic Society of Orthopedics Surgery and Traumatology & the Research Society of Hip and Knee & the Hellenic Society for Biomaterials**, Thessaloniki, Greece, November 2010
24. "Nanotechnology Applications in Orthopedics", **Joint Conference of the Department of Hip and Knee Replacement Surgery of the Hellenic Society of Orthopedics Surgery and Traumatology & the Research Society of Hip and Knee & the Hellenic Society for Biomaterials**, Thessaloniki, Greece, November 2010
25. "Education and Training for Research and Innovation", **European Industrial Technologies Conference**, Brussels, Belgium, September 2010
26. "Particle Transfer and Deposition Using an Integrated CFD Model of the Respiratory System", **20<sup>th</sup> European Symposium on Computer Aided Process Engineering (ESCAPE20)**, Ischia, Italy, June 2010
27. "New Tools for Nanoscale Science and Engineering", **EU-US Workshop "Long-term Impacts and Future Opportunities for Nanotechnology"**, Hamburg, Germany, June 2010

28. "The NANOfutures European Technology Platform", **2<sup>nd</sup> Transalpine Conference on Nanoscience and Nanotechnology (TransalpNano 2010)**, Como, Italy, June 2010
29. "Development of Biomimetic Cartilage Implants Based on High-Throughput Combination of Cell-Laden Bioactive Materials Using Bioprinting Technologies", **29<sup>th</sup> National Conference of the Orthopedic and Traumatological Society of Macedonia-Thrace**, Alexandroupoli, Greece, 7-10 April, 2010
30. "New Issues in Population Balance Modeling of Particulate Chemical, Biochemical and Biological Systems", **6<sup>th</sup> Chemical Engineering Conference for Collaborative Research in Eastern Mediterranean Countries (Keynote)**, Antalya, Turkey, March, 2010
31. "Current Developments of Nanomaterials in Orthopedics", **Conference on Advanced Technologies in Total Knee Arthroplasty**, Vassilitsa, Grevena, Greece, 20-22 November, 2009
32. "Stochastic and Deterministic Numerical Methods for Solving Multivariate Population Balance Equations for Liquid and Solid Dispersion", **9<sup>th</sup> Mathias Seminar, TOTAL**, Cannes, France, October 2009
33. "A Combined Metabolic/Polymerization Modeling Approach on the Poly(3-Hydroxybutyrate) Production", **8<sup>th</sup> World Congress of Chemical Engineering - WCCE8 (Keynote)**, Montreal, Canada, August, 2009
34. "Nanotechnology Challenges in Life Sciences and Health Care", **EuroNanoForum 2009 Nanotechnology for Sustainable Economy**, Prague, Czech Republic, June, 2009
35. "New Issues on Population Balance Modeling and Optimization of Particulate Polymerization and Biochemical Systems", **DTU Seminars**, Copenhagen, Denmark, May, 2009
36. "Advances in Highly X-link Polyethylene", **4<sup>th</sup> Seminar: Advances in the Therapy of Osteoarthritis**, Thessaloniki, Greece, 2-4 April, 2009
37. "Nanotechnology Challenges in Targeted Delivery of Biopharmaceuticals", **5<sup>th</sup> Scientific Conference of Medical School, AUTH**, Thessaloniki, Greece, 2-5 April, 2009
38. "Microbial and Biocatalytic Production of Advanced Functional Polymers", **Biorefinica: International Symposium Biobased Products and Biorefineries**, Osnabruck, Germany, January, 2009
39. "Nanotechnology Advances in Controlled Drug Delivery Systems", **NanoBio-Europe2008 (Keynote)**, Barcelona, Spain, June 2008.
40. "Application of Multi-dimensional Population Balance Equations to Polymerization & Biochemical Systems: Computational Methods and Experimental Validation", **1<sup>st</sup> European Conference on Process Analytics and Control Technology – EUROPACT (Plenary)**, Frankfurt, Germany, April 2008.
41. "Microbial and Biocatalytic Production of Advanced Functional Polymers", **Computer Aided Process Engineering – Forum (Keynote)**, Thessaloniki, Greece, February 2008.

42. "Nanoscale Functionalities for Targeted Delivery of Biopharmaceuticals. Large Scale EU Project-NANOBIOPHARMACEUTICS", **General Assembly European Technology Platform Nanomedicine**, Brussels, Belgium, January 2008.
43. "From Molecular to Plant Scale Modeling of Polyolefin Processes: Present State of the Art", **Borealis Advisory Board Meeting**, Porvoo, Finland, January 2008.
44. "Protein-Peptide Delivery through Pulmonary and Oral Delivery Routes", **4<sup>th</sup> pHealth Conference**, Porto Carras, Chalkidiki, Greece, June 2007.
45. "Latest Developments in PO Reactor Technology: Production of Polyolefins with Bimodal Molecular Weight and Copolymer Composition Distributions", **SCOPE 2007**, Athens, June 2007.
46. "Recent advances in Nanomedicine", **2<sup>nd</sup> International School and Workshop on INSIDE-PORes**), Thessaloniki, Greece, February 2007.
47. "Challenges in High-Pressure Low-Density Polyethylene Technology", **Borealis Advisory Board Meeting**, Stenungsund, Sweden, January 2007.
48. "The Nanomedicine Platform in the FP7", **7<sup>th</sup> International Symposium on Biological & Medical Data Analysis (ISBMDA)**, Thessaloniki, Greece, December 2006.
49. "Development of a Multi-scale, Multi-phase, Multi-zone Dynamic Model for the Prediction of Polymer Distributed Properties in Catalytic Olefin Polymerization FBRs", **6<sup>th</sup> Hellenic Conference in Polymers**, Patra, Greece, November 2006.
50. "European Technology Platform on Nanomedicine", **Nanotec Forum 2006 Conference**, Stockholm, Sweden, October 2006.
51. "Nanocarriers: An Overview", **Biointerfaces-Quo Vadis?, Chalmers University of Technology**, Goteborg, Sweden, August 24-25, 2006.
52. "Recent Developments in Targeted Drug Delivery", **3<sup>rd</sup> Workshop Nanosciences & Nanotechnologies "...where Sciences meet together..."**, Thessaloniki, Greece, July 2006.
53. "Recent Developments in Drug Delivery Systems", **International Conference on Modern Materials & Technologies**, Catania, Italy, June 2006.
54. "Training Course on High-Pressure Ethylene Polymerization: Modeling, Optimization and Control of LDPE Reactors", **Repsol YPF, SA**, Madrid, Spain, May 2006.
55. "A Multi-scale Approach for Modeling and Optimization of Nano- and Micro-particulate Processes", **Process Chemistry & Engineering 2006: Working Together in Isolation**, Newcastle Civic Centre, UK, April 2006.
56. "Advanced Modelling of High-Pressure LDPE Plants", **Borealis Advisory Board Meeting**, Linz, Austria, January 2006.
57. "Challenges in Catalytic and Non-catalytic Olefin Polymerization", **Borealis Advisory Board Meeting**, Linz, Austria, January 2006.
58. "Recent Developments in Targeted Drug Delivery Systems", **Life Matters: Conversations in Bionanotechnology**, Chalmers University of Technology, Goteborg, Sweden, October 2005.

59. "Recent Advances in Drug Delivery Systems", **8<sup>th</sup> International Symposium on Polymers for Advanced Technologies**, Budapest, Hungary, September 2005.
60. "Recent Developments in Targeted Drug Delivery Systems", **8<sup>th</sup> International Conference "Emerging Technologies in Drug and Gene-based Therapeutics"**, Crete Island, Greece, September 2005.
61. "Recent Advances in Novel Drug Delivery Systems", **EuroNanoForum 2005: Nanotechnology and the Health of the EU Citizen in 2020**, Edinburgh, September 2005.
62. "Polyolefin Reaction Engineering, Intensive Course", **LCPP-CNRS/CPE-Lyon**, Villeurbanne France, June 2005.
63. "Recent Developments in Targeted Drug Delivery Systems", **2<sup>nd</sup> International Symposium on Scientific & Regulatory Aspects of Dissolution & Bioequivalence**, Athens, Greece, June 2005.
64. "Recent Developments in Targeted Drug Delivery Systems", **ESF Research Conference on Biological Surfaces and Interfaces**, Sant Feliu de Guixols, Spain, June 2005.
65. "A Multi-Scale Approach to Modeling and Optimization of Nano- and Micro-Particulate Processes", **University of Newcastle, Newcastle, UK**, May 2005.
66. "New Issues on Population Balance Modeling and Optimization of Particulate Polymerization Processes", **Seminar Series 2005, Imperial College**, London, UK, May 2005.
67. "Use of particulate systems for drug delivery", **8<sup>th</sup> World Hellenic Biomedical Congress**, Athens, Greece, May 2005.
68. "Advanced Drug Delivery Systems for Controlled Release Applications", **12<sup>th</sup> Panhellenic Pharmaceutical Conference**, Athens, Greece, May 2005.
69. "Challenges in Catalytic and Non-catalytic Olefin Polymerization", **Borealis Advisory Board Meeting**, Ronningen, Norway, January 2005.
70. "Challenges in Polymerization Reactor Modeling and Optimization: A Population Balance Perspective", **7<sup>th</sup> International Symposium on Dynamics and Control of Process Systems**, Boston, USA, July 2004.
71. "Synthesis of Functional Nano- and Micro-Particles for Novel Delivery Systems and Environmental Applications", **Tufts University**, Boston, USA, July 2004.
72. "Mathematical Modeling of Catalytic Olefin Polymerization Reactors: Present State of the Art and Future Developments", **TOTALFINA SA**, Feluy, Belgium, April 2004.
73. "Production of Fluoropolymers in Supercritical CO<sub>2</sub>", **ATOFINA Chemical**, King of Prussia, Philadelphia, USA, January 2004.
74. "Modeling and Simulation of Vinylidene Fluoride Emulsion Polymerization in Vertical and Horizontal Reactors", **ATOFINA Chemical**, King of Prussia, Philadelphia, USA, January 2004.
75. "Population Balance Modeling of Particulate Polymerization Processes", International Conference on **Polymer Reaction Engineering: Modelling, Optimisation and Control**, Lyon, France, December 2003.

76. "A Population Balance Approach to Modeling and Optimization of Polymerization Reactors", UCSB Process Systems Engineering Workshop, **University of California, Santa Barbara, USA**, November 2003.
77. "Dynamic Simulations and Optimal Grade Transition in Gas-Phase Polyolefin Fluidized Bed Reactors: From Microscale to Macroscale Modeling and Optimization", **University of Alberta, Edmonton, Canada**, November 2003.
78. "Recent Developments in Gas Phase Olefin Polymerization Fluidized Bed Reactors: From Microscale to Macroscale Modeling", **McMaster University, Canada**, April 2002.
79. "Free-Radical Dispersion Polymerization in Supercritical CO<sub>2</sub>: Effect of Stabilizer Structure on Polymerization Rate and Particle Morphology", **McMaster University, Canada**, April 2002.
80. "Solution of Population Balance Equations for Prediction of Particle Size Distribution in Particulate Systems: Effect of Particle Nucleation, Growth and Aggregation Mechanisms", **McMaster University, Canada**, April 2002.
81. "Modeling and Optimization of the Borstar Polyolefin FBR: From Reaction Kinetics to Single Particle Modeling, Particle Size Distribution Developments and Dynamic Optimization", **Reactor in Petrochemical and Polymer Industry Workshop 2002**, Trondheim, Norway, February 2002.
82. "Nanobiotechnology, Nanobiomaterials and Biomedical Applications", **EC-NSF Workshop on "Nanotechnology-Revolutionary Opportunities and Societal Implications**, Lecce, Italy, January 2002.
83. "A Cleaner Way for Manufacturing of Plastics", **Solvay Research & Technology Center**, November 2001.
84. "Dynamic Simulation, Optimization, and Control of Polymerization Reactors", **Kolloquium Technische Kybernetik, University of Stuttgart**, Germany, October 2001.
85. "Computer Aided Design and Optimization of Polymerization Processes", **Centre for Process Analytics and Control Technology (CPACT)**, Glasgow, April 2001.
86. "Modeling of the Borstar Process", **Borealis Company**, Porvoo, Finland, January 2001.
87. "Application of Population Balance Modeling to Particulate Polymerization Processes", **1<sup>st</sup> Population Balance Modeling and Application Conference**, United Engineering Foundation, Inc., Kona, Hawaii, January 2000.
88. "Recent Developments in Modeling Gas Phase Olefin Polymerization Fluidized Bed Reactors: From Microscale to Macroscale", **1<sup>st</sup> European Conference on the Reaction Engineering of Polyolefins**, Lyon, France, July 2000.
89. "Computer Aided Design, Optimization and Control of Polymerization Reactors", **Centre for Process Systems Engineering, Imperial College**, London, UK, May 1999.
90. "High-pressure Polymerization Processes", **EFCE Working Party "Symposium on Polymer Reaction Engineering**, Amsterdam, Netherlands, June 1999.

91. "Modeling, Optimization and Control of Polymerization Processes", **University of Newcastle**, UK, November 1999.
92. "Development of Microencapsulation Techniques", **Henkel**, Germany, March 1999.
93. "Molecular and Nano-scale Drug Delivery Systems", **4<sup>th</sup> European Intensive Course on New Forms and New Routes of Administration for Drugs**, Athens, Greece, April 1998.
94. "High Pressure PE Polymerization", **DSM**, Eindhoven, The Netherlands, May 1998.
95. "Intelligent Manufacturing of Polymers", **EU-China Workshop on Materials Research**, Beijing, China, November 1998.
96. "Intelligent Manufacturing of Polymers", **Shanghai Science Forum**, Shanghai, China, November 1998.
97. "On-line Monitoring, Optimization and Control of Polymer Processes", **University of Trondheim**, Norway, April 1997.
98. "Recent Developments in Polymer Reactor Modeling", **SINTEF Research Institute**, Norway, April 1997.
99. "Modelling of Polymerization Processes", **MITSUBISHI**, Mizushima, Japan, March 1997.
100. "On-line Monitoring, Optimization and Control of Polymer Processes", **BASF**, Ludwigshafen, Germany, February 1997.
101. "Polymerization Reactor Modelling: A Review of Recent Developments and Future Directions", **14<sup>th</sup> International Symposium on Chemical Reaction Engineering**, Brugge, Belgium, May 1996, **(Plenary)**.
102. "Modelling, Optimization and Control of Polymerization Processes", **PCD Polymere**, Linz, Austria, February 1996.
103. "On-line Parameter Estimation in a High Pressure Low Density Polyethylene Tubular Reactor Model", **13<sup>th</sup> International Symposium on Chemical Reaction Engineering**, Baltimore, Maryland USA, September 1994.
104. **Novel Reactors for the 21<sup>st</sup> Century**, **Abo Akademi**, Turku, Finland, July 1995.
105. **SRI** (Southwest Research Institute in San Antonio, Texas, USA), September 1994.
106. "Real-time Optimization and Multivariable Control of Polymer Reactors", **NATO-ASI Workshop on "Model Based Process Control"** in Turkey, August 1994
107. "Advanced Modeling of Molecular and Morphological Properties in Polymer Reactors", **3<sup>rd</sup> International Scientific Symposium**, in EXXON Chemical, Leuven, Belgium, October 1992.
108. **Rolduc Polymer Meeting**, **DSM Research**, **The Netherlands**, May 1992 **(Plenary)**.



## PUBLISHED BOOKS AND REPORTS

1. **“Acoustical Phenomena in a Liquid-Fuel Combustion Chamber”**, Diploma Thesis, pp. 120 (1971)
2. **“Application of Finite Elements to Heat Conduction, Fluid Flow and the Calendering of Thermoplastics”**, M. Eng. Thesis, pp. 203 (1975)
3. **“Modelling and Experimental Studies of a Continuous Emulsion Polymerization Reactor”**, Ph.D. Thesis, pp. 295 (1978)
4. **“Design and Analysis of Chemical Reactors”**, Textbook in Greek, pp. 480, (2000).
5. **“Dynamic Analysis of Physical, Chemical and Biochemical Systems”**, Textbook in Greek, pp. 600, (2009).
6. **“Chemical Process Control”** Textbook by G. Stephanopoulos, translation from English to Greek, pp. 700 (1991).
7. **Co-Editor of the report: Greek Technology and Science Initiatives (GTSI)**, pp. 357, (2008)
8. **Editor of the EAG Position Paper on “Future Research and Development Activities of NMP for the Period 2010 – 2015”**, pp. 178, (2009)
9. **Editor or/and Contributor to more than 150 confidential technical reports**
10. **“Polymer Reaction Engineering”**, Course Notes, pp. 400 (1986).
11. **“Modelling, Optimization, and Control of Polyolefin Processes”**, Course Notes, pp. 180, March (1987).
12. **“Recent Advances in the Modeling, Optimization and Control of Polymerization Reactors”**, Course Notes, pp. 700 (1995).
13. **“5<sup>th</sup> IFAC Symposium on Dynamics and Control of Process Systems (DYCOPS-5)”**, Proceedings, June 1998, Corfu, Greece
14. **3<sup>rd</sup> Chemical Engineering Conference for Collaborative Research in Eastern Mediterranean (EMCC-3)**, Proceedings, May 13 –15, 2003. Chalkidiki, Greece
15. **“Workshop on Nanoscale Functionalities for Medicine, Nutrition and Health” (NANOFUNCTIONS)**, Proceedings, October 2003, Chalkidiki, Greece.
16. **Functional Microparticles for Nutraceuticals, Biotechnology and Agrochemical Applications (COST 840)**, Proceedings, November 28 –29, 2003, Thessaloniki, Greece
17. **Symposium on Knowledge Driven Batch Processes (BatchPro)**, Proceeding, June 6 –9, 2004, Poros, Greece
18. **1<sup>st</sup> Conference on Innovation & Entrepreneurship**, Book of Abstracts, March 2006, Thessaloniki, Greece
19. **International Conference on NANOMEDICINE**, Proceedings, September 9 –11, 2007, Chalkidiki, Greece
20. **2<sup>nd</sup> Conference on Innovation & Entrepreneurship**, Book of Abstracts, May 2008, Thessaloniki, Greece

21. **Workshop on “Algae: The Energy Supplier of the Future”**, Book of Abstracts, October 2009, Thessaloniki, Greece
22. **3<sup>rd</sup> Conference on Innovation & Entrepreneurship**, Book of Abstracts, October, 2009, Thessaloniki, Greece
23. Symposium on **“New Frontiers in Chemical and Biochemical Engineering”**, Book of Abstracts, November 2009, Thessaloniki, Greece
24. **CERTH - 10 year, Anniversary Issue**, June 2010
25. Book Chapter **“Molecular Imprinting for Chiral Separation of Tryptophan: Potentials and Prospects”**, Blake L. Whitley and Sarah H. Thornton (Eds): “Tryptophan: Dietary Sources, Functions and Health Benefits”, Nova Science Publishers, Inc., 2011
26. Book Chapter **“A Research and Development Framework for the GCC Countries”**, Thomas Andersson and Abdelkader Djeflat (Eds): “Relevant Best Practice in Science, Technology, and Innovation Policies”, The Research Council (TRC), Muscat, Oman, 2011
27. Book Chapter **“Energy Resources and Their Use in Greece: Possible Paths to Future Economic Development and Sustainability”**, Pantelis Sklias & Nikolaos Tzifakis (Eds): “Greece’s Horizons Reflecting on the Country’s Assets and Capabilities”, Published by Springer-Verlag Berlin Heidelberg 2013
28. Editor of **"Special Issue on Recent Advances in Nanotechnology-based Water Purification Methods"** in Industrial & Engineering Chemistry Research, ACS Publications, vol. 52, issue 39, October 2013.
29. Book Chapter **"Polymerization Reactors"**, in Reference Module in Chemistry, Molecular Sciences and Chemical Engineering (Editor: Reedijk, J.), Elsevier, 2014. doi: 10.1016/B978-0-12-409547-2.10908-4.
30. Book Chapter **"Nanotechnology Advances in Diagnostics, Drug Delivery and Regenerative Medicine"**, in The Nano-Micro Interface: Bridging the Micro and Nano Worlds (Editors: M. Van de Voorde, M. Werner and H.-J. Fecht), Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim, Germany, 2015. doi: 10.1002/9783527679195.ch16
31. Book Chapter **"Nanoeducation for Industry and Society"**, in Managing Risk in Nanotechnology. Topics in Governance, Assurance and Transfer (Editors: Murphy, Finbarr, McAlea, Eamonn M., Mullins, Martin), Springer, 2016. doi: 10.1007/978-3-319-32392-3\_6

## PAPERS PUBLISHED IN REFEREED JOURNALS

1. **Kiparissides, C.** and Vlachopoulos, J., "*Finite Element Analysis of Calendering*", *Poly. Eng. Sci.*, 16, pp. 712-719 (1976).
2. **Kiparissides, C.** and Vlachopoulos, J., "*A Study of Viscous Dissipation in the Calendering of Power-Law Fluids*", *Poly. Eng. Sci.*, 18, pp. 210-214 (1978).
3. **Kiparissides, C.**, MacGregor, J.F. and Hamielec, A.E., "*Continuous Emulsion Polymerization. Modelling Oscillations in Vinyl Acetate Polymerization*", *J. Appl. Polym. Sci.*, 23, pp. 401-418 (1979).
4. **Kiparissides, C.**, MacGregor, J.F. and Hamielec, A.E., "*Continuous Emulsion Polymerization of Vinyl Acetate. Part I: Experimental Studies*", *Can. J. Chem. Eng.*, 58, pp. 48-55 (1980).
5. **Kiparissides, C.**, MacGregor, J.F. and Hamielec, A.E., "*Continuous Emulsion Polymerization of Vinyl Acetate. Part II: Parameter Estimation and Simulation Studies*", *Can. J. Chem. Eng.*, 58, pp. 56-64 (1980).
6. **Kiparissides, C.**, MacGregor, J.F., Singh, S. and Hamielec, A.E. "*Continuous Emulsion Polymerization of Vinyl Acetate. Part III: Detection of Reactor Performance by Turbidity - Spectra and Liquid Exclusion Chromatography*", *Can. J. Chem. Eng.*, 58, pp. 65-71 (1980).
7. **Kiparissides, C.**, MacGregor, J.F. and Hamielec, A.E., "*Characterization of Size Distribution during Continuous Emulsion Polymerization - Oscillations in Vinyl Acetate Polymerization*", in *Polymer Colloids II*, ACS-Symposium Series, Plenum Publishing Co., N.Y., pp. 555-582 (1980).
8. **Kiparissides, C.** and Ponnuswamy, S.R., "*Hierarchical Control of a Train of Continuous Polymerization Reactors*", *Can. J. Chem. Eng.*, 59, pp. 752-759 (1981).
9. **Kiparissides, C.**, MacGregor, J.F. and Hamielec, A.E., "*Suboptimal Stochastic Control of a Continuous Latex Reactor*", *AIChE Journal*, 27, pp. 13-19 (1981).
10. Lynch, D. and **Kiparissides, C.**, "*Numerical Simulation of a Tubular Polymerization Reactor*", *J. Appl. Polym. Sci.*, 26, pp. 1283-1293 (1981).
11. **Kiparissides, C.** and Ponnuswamy, S.R., "*Application of Population Balance Equations to Latex Reactors*", *Chem. Eng. Commun.*, 10, pp. 283-291 (1981).
12. **Kiparissides, C.** and Shah, S.L., "*Self-Tuning and Stable Adaptive Control of a Batch Polymerization Reactor*", *Automatica*, 19, pp. 225-235 (1983).
13. Thomas, I.M. and **Kiparissides, C.**, "*Sensitivity Analysis of a Batch Polymerization Reactor*", *J. Appl. Polym. Sci.*, 29, pp. 2195-2204 (1984).
14. Thomas, I.M. and **Kiparissides, C.**, "*Computation of the Near-Optimal Temperature and Initiator Policies for a Batch Polymerization Reactor*", *Can. J. Chem. Eng.*, 62, pp. 284-291 (1984).
15. Mavridis, H. and **Kiparissides, C.**, "*Optimization of a High Pressure Polyethylene Tubular Reactor*", *Polym. Proc. Eng.*, 3, pp. 263-290 (1985).

16. Ponnuswamy, S.R., Shah, S.L. and **Kiparissides, C.**, "On-line Monitoring of Polymer Quality in a Batch Polymerization Reactor", *J. Appl. Polym. Sci.*, 32, pp. 3239-3253 (1986).
17. **Kiparissides, C.** and Mavridis, H., "Mathematical Modelling and Sensitivity Analysis of High Pressure Polyethylene Reactors" ; *Chemical Reactor Design and Technology*, H. De Lasa ed., Martinus Nijhoff Publishers, Dordrecht, pp. 759-777 (1986).
18. Ponnuswamy, S.R., Shah, S.L. and **Kiparissides, C.**, "On-line Monitoring of MWD in a Batch Polymerization Reactor by Size Exclusion Chromatography", *J. Liquid Chrom.*, 9, pp. 2411-2423 (1986).
19. Ponnuswamy, S.R., Shah, S.L. and **Kiparissides, C.**, "Computer Optimal Control of Batch Polymerization Reactors", *I & EC Process Design and Development*, 26, 2229 (1987).
20. **Kiparissides, C.** and Georgiou, A., "Finite Element Solution of Nonlinear Optimal Control Problems with a Quadratic Performance Index", *Comput. Chem. Eng.*, 11, 77 (1987).
21. Achilias, D. and **Kiparissides, C.**, "Mathematical Modelling of Thermal Co-polymerization of Styrene/p-Methylstyrene". *Polymer Process Engin.*, 5, 23 (1987).
22. Achilias, D. and **Kiparissides, C.** "Modelling of Diffusion-Controlled Free-Radical Polymerization Reactions", *J. Appl. Polym. Sci.*, 35, 1303 (1988).
23. Ponnuswamy, S.R., **Kiparissides, C.**, and Penlidis, A, "Batch Solution Polymerization of Methyl Methacrylate: Parameter Estimation", *Chemical Engineering Journal*, 39, 175 (1988).
24. Chatzi, E.G., Gavrielides, A. and **Kiparissides, C.**, "Generalized Model for Prediction of the Steady-State Drop Size Distributions in Batch Stirred Vessels" *Ind. Eng. Chem. Res.*, 28, 1704 (1989).
25. Diamadopoulos, E., Zoubourtikoudis, I. and **Kiparissides, C.**, "Aggregation Phenomena in the Suspension Polymerization of VCM", *Colloid and Polym. Sci. J.*, 286, 306 (1990).
26. **Kiparissides, C.** "Prediction of the Primary Particle Size Distribution in Vinyl Chloride Polymerization" *Die Makromol. Chemie, Macrom. Symp.* 35/36, 171 (1990).
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