Curriculum Vitae

Stamatina N. Vouyiouka

Associate Professor, National Technical University of Athens

Synopsis

Dr. Stamatina Vouyiouka is an elected Associate Professor (December 2019) in the School of Chemical Engineering at National Technical University of Athens (NTUA), Greece. For the periods 2014-2019 and 2009-2014 she served as Assistant Professor and as a Lecturer in the same School. She received the Diploma Degree in Chemical Engineering and the Ph.D. Degree in Polymer Science and Technology from NTUA, in 2000 and 2004, respectively. Her PhD work focused on polyamides solid state polymerization and post-polymerization processes, in the frame of a scientific collaboration between the Laboratory of Polymer Technology at NTUA and the Experimental Station of Dupont Textiles & Interiors Inc. (Delaware, USA). For the years 2005-2009, she has worked as a postdoctoral researcher in the R&D Department "Plastic Additives Segment, Polymer Design" (CIBA Specialty Chemicals Lampertheim GmbH, Germany) and in the Laboratory of Polymer Technology (NTUA, Greece).

Dr. Vouyiouka teaches polymer courses in Chemical Engineering at NTUA at graduate and undergraduate levels, and several laboratory exercises. She has (co)supervised/is supervising more than 50 undergraduate students (Diploma Theses) and graduate students (Master Theses) and 8 doctoral students. She has served as the Organizing Secretariat of an International Conference with ca. 300 delegates (MoDeSt 2010) and of the 12th Panhellenic Conference of Chemical Engineering (2019), while she has received awards regarding her performance as student, researcher, and diploma thesis advisor.

Her research interests are in the area of environmentally-friendly polymerization processes, such as solid state polymerization (SSP) and enzymatic polymerization, with special emphasis on polyamides and polyesters including biobased and biodegradable polymers. Her activity on polymerization processes also covers encapsulation methods and upgrading polymeric micro/nanoparticles, such as microcapsule-based systems for controlled release and self-healing materials. In parallel, her research focuses on the sustainable management of polymeric materials exploring material eco-design approaches (e.g. biobased polymers, vitrimers, halogen-free flame retardants, natural antioxidants) and recycling technologies towards value-added products.

Her research is documented in more than 45 refereed publications, in 5 chapters in books and edited volumes, in two WO Patents and in more than 80 presentations in International and National Conferences. She is also the joint Editor (with Professor C.D. Papaspyrides) of the book titled "Solid State Polymerization", which was published by John Wiley & Sons, Inc., in 2009. She is the Guest Editor of the Special Issue "Advances in Polycondensate Polymerization Techniques" in Materials (MDPI). Finally, she serves as the Scientific Supervisor and/or Principal Investigator of National and European Funded R&D Projects and has actively contributed in the research fellowships held by the Laboratory of Polymer Technology group with International Research and Industrial Centers (Coca-Cola Hellenic Bottling Company Greece, Dupont Textiles & Interiors, CIBA Specialty Chemicals Lampertheim, ROYAL DSM N.V.).

Personal Information

Date of Birth:	23 April 1977	**Place of Residence:**	Athens
Marital Status:	Married, two children	**ORCID:**	0000-0003-3764-1170
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Email:	mvuyiuka@central.ntua.gr		
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PolymeReEng	http://polymers.chemeng.ntua.gr/PolymeReEng		

Current Position

12.2019 – today **Associate Professor**
School of Chemical Engineering, National Technical University of Athens, Greece

Previous Positions

12.2014-12.2019 **Assistant Professor**
School of Chemical Engineering, National Technical University of Athens, Greece

09.2009-12.2014 **Lecturer**
School of Chemical Engineering, National Technical University of Athens, Greece

09.2007-09.2009 **Research Associate**
Laboratory of Polymer Technology, School of Chemical Engineering, National Technical University of Athens

05.2006-10.2006 **Post-Doctoral Researcher**
R&D Department, CIBA Specialty Chemicals Lampertheim GmbH, Germany. In: "Plastic Additives Segment, Polymer Design" – Halogen-free flame retardants

2005-2007 **Post-Doctoral Researcher**
Laboratory of Polymer Technology, School of Chemical Engineering, National Technical University of Athens, Greece. Title: "Catalyzed solid state polyamidation processes" (funded by the Greek State Scholarships Foundation)

Education

06.2000-11.2004 **Ph.D in Polymer Science and Technology**
School of Chemical Engineering, National Technical University of Athens (NTUA), Athens, Greece. Thesis title: "Optimization of polyamide properties through solid state polymerization technology"

10.1995-10.2000 **Diploma in Chemical Engineering**
School of Chemical Engineering, National Technical University of Athens (NTUA), Athens, Greece. Diploma degree: 8.08/10

Research experience and interests

Environmentally friendly polymerization processes, such as solid-state polymerization (SSP) and enzymatic polymerization, with special emphasis on polyamides and polyesters, including biobased and biodegradable polymers. Encapsulation methods and polymeric micro/nanoparticles upgrading, such as microcapsule-based systems for controlled release and self-healing materials. Development of polymer recycling technologies towards value-added products, along with properties study and

upcycling of biobased polymers. Use of environmentally friendly (green) additives such as halogen-free flame retardants and natural polyphenol-based antioxidants derived from agro-food waste in polyolefins (PE, PP).

Publications

Edited Book (Invited)

Papaspyrides C, Vouyiouka S, Editors. Solid state polymerization. NJ: John Wiley & Sons, Inc. 2009 294 pp, doi: 10.1002/9780470451830

Chapters in Books and Edited Volumes (Invited)

5. Vouyiouka S, Papaspyrides C. Mechanistic aspects of solid state polycondensation. In: Matyjaszewski K, Moeller M, editors. Comprehensive Polymer Science: Vol.4. Elsevier. 2012 pp.857-874, doi: 10.1016/B978-0-444-53349-4.00126-6
4. Boussia A, Vouyiouka S, Papaspyrides C. Polyamide nanocomposites by in-situ polymerization. Chapter 2. In: V. Mittal, editor. In-situ synthesis of polymer nanocomposites. Weinheim: Wiley VCH Verlag GmbH & Co. KGaA. 2012 pp.27-51, doi: 10.1002/9783527640102.ch2
3. Vouyiouka S, Papaspyrides C. Solid state polymerization. In: Encyclopedia of Polymer Science and Technology. 4th edition. NJ: John Wiley & Sons, Inc. 2011 pp.1-32, doi: 10.1002/0471440264.pst546
2. Papaspyrides C, Vouyiouka S. Fundamentals of solid state polymerization. In: Papaspyrides C, Vouyiouka S, editors. Solid state polymerization. Chapter 1. NJ: John Wiley & Sons, Inc. 2009 pp.1-37, doi: 10.1002/9780470451830.ch1
1. Vouyiouka S, Papaspyrides C. Kinetic aspects of polyamides solid state polymerization. In: Papaspyrides C, Vouyiouka S, editors. Solid state polymerization. Chapter 4. NJ: John Wiley & Sons, Inc. 2009 pp. 123-157, doi: 10.1002/9780470451830.ch4

Publications in Refereed Journals (* Corresponding author, 2020-2021 IF impact factor)

47. Gountela Chr, Vouyiouka* S. Enzymatic polymerization as a green approach to synthesizing bio-based polyesters. Macromol (Invited) 2022;2:30-57, doi: 10.3390/macromol2010003
46. Sourkouni G, Kalogirou Ch, Moritz Ph, Godde A, Pandis P, Hoft O, Vouyiouka S, Zorpas A, Argirusis* Chr. Study on the influence of advanced treatment processes on the surface properties of polylactic acid for a biobased circular economy for plastics. Ultrasonics Sonochemistry 2021;76:105627, doi: 10.1016/j.ultsonch.2021.105627 (IF 7.491)
45. Zotiadis Chr, Patrikalos I, Loukaidou V, Korres D, Karantonis A, Vouyiouka* S. Self-healing coatings based on poly(urea-formaldehyde) microcapsules: In situ polymerization, capsule properties and application. Prog. Org. Coatings 2021;161:106475, doi: 10.1016/j.porgcoat.2021.106475 (IF 5.161)
44. Porfyris* A, Luyt A, Gasmi S, Malik S, Aljindi R, Ouederni M, Vouyiouka S, Pfaendner R, Papaspyrides C. Enhancing the UV/heat stability of LLDPE irrigation pipes via different stabilizer formulations. SPE Polymers 2021;2:336–350, doi: 10.1002/pls2.10055
43. Mytara A, Chronaki K, Nikitakos V, Papaspyrides C, Beltsios K, Vouyiouka* S. Synthesis of polyamide-based microcapsules via interfacial polymerization: Effect of key process parameters. Materials 2021;14(19):5895, doi: 10.3390/ma14195895 (IF 3.623)
42. Mytara A, Porfyris A, Vouyiouka S, Papaspyrides* C. New Aspects on the direct solid state polycondensation (DSSP) of aliphatic nylon salts: The case of hexamethylene diammonium dodecanoate. Polymers 2021;13(16):2625, doi: 10.3390/polym13162625 (IF 4.329)
41. Porfyris* A, Vouyiouka S, Luyt* AS, Korres DM, Malik S, Gasmi S, Grosshauer M, Pfaendner R, Papaspyrides C. Development of value-added polyethylene grades with extended service

lifetime: Weathering resistant flame retarded materials for outdoor applications. J. Appl. Polym. Sci. 2021;138(19):50370, doi: 10.1002/app.50370 (IF 3.125)

40. Georgiopoulou I, Pappa* G, Vouyiouka S, Magoulas K. Recycling of post-consumer multilayer Tetra Pak® packaging with the selective dissolution-precipitation process. Res. Conserv. Rec. 2021;165:105268, doi: j.resconrec.2020.105268 (IF 10.204)
39. Gkountela Chr, Rigopoulou M, Barampouti EM, Vouyiouka* S. Enzymatic prepolymerization combined with bulk post-polymerization towards the production of bio-based polyesters: The case of poly(butylene succinate). Europ. Polym. J. 2021;143(15):110197, doi: 10.1016/j.eurpolymj.2020.110197 (IF 4.598)
38. Luyt* SA, Gasmi S, Malik S, Aljindi RM, Ouederni M, Vouyiouka S, Porfyris A, Pfaendner R, Papaspyrides C. Artificial weathering and accelerated heat aging studies on low-density polyethylene (LDPE) produced via autoclave and tubular process technologies. eXPRESS Polym Lett. 2021;15(2):121–136, doi: 10.3144/expresspolymlett.2021.12 (IF 4.161)
37. Panagiotopoulos Chr, Porfyris A, Korres DM, Vouyiouka* S. Solid-state polymerization as a vitrimerization tool starting from available thermoplastics: The effect of reaction temperature. Materials 2021;14(1):1-18, doi: 10.3390/ma14010009 (IF 3.623)
36. Tzavidi S, Zotiadis Chr, Porfyris A, Korres DM, Vouyiouka* S. Epoxy loaded poly(urea-formaldehyde) microcapsules via in situ polymerization designated for self-healing coatings. J. Appl. Polym. Sci. 2020;137(43):49323, doi: 10.1002/app.49323 (IF 3.125)
35. Chronaki K, Korres DM, Papaspyrides C, Vouyiouka* S. Poly(lactic acid) microcapsules: Tailoring properties via solid state polymerization. Polym. Degrad. Stab. 2020;179:109283, doi: 10.1016/j.polymdegradstab.2020.109283 (IF 5.030)
34. Luyt* AS, Malik S, Gasmi S, Porfyris A, Andronopoulou A, Korres DM, Vouyiouka* S, Grosshauer M, Pfaendner R, Brull R, Papaspyrides C. Halogen-free flame-retardant compounds. Thermal decomposition and flammability behavior for alternative polyethylene grades. Polymers 2019;11(9):1479, doi: 10.3390/polym11091479 (IF 4.329)
33. Douka A, Vouyiouka* S, Papaspyridi L-M, Papaspyrides CD. A review on enzymatic polymerization to produce polycondensation polymers: The case of aliphatic polyesters, polyamides and polyesteramides. Prog. Polym. Sci. 2018;79:1-25, doi: 10.1016/j.progpolymsci.2017.10.001 (IF 29.190)
32. Porfyris A, Vasilakos S, Zotiadis Chr, Papaspyrides C, Moser K, Van der Schueren L, Buyle G, Pavlidou S, Vouyiouka* S. Accelerated ageing and hydrolytic stabilization of poly(lactic acid) (PLA) under humidity and temperature conditioning. Polymer Testing 2018;68:315-332, doi: 10.1016/j.polymertesting.2018.04.018 (IF 4.282)
31. Kamtsikakis A, Kavetsou E, Chronaki K, Kiosidou E, Pavlatou E, Karana A, Papaspyrides C, Detsi A, Karantonis A, Vouyiouka* S. Encapsulation of antifouling organic biocides in poly(lactic acid) nanoparticles. Bioengineering 2017:4(4):81, doi: 10.3390/bioengineering4040081
30. Kesente M, Kavetsou E, Roussaki M, Blidi S, Loupassaki S, Chanioti S, Siamandoura P, Stamatogianni C, Philippou E, Papaspyrides C, Vouyiouka S, Detsi* A. Encapsulation of olive leaves extracts in biodegradable PLA nanoparticles for use in cosmetic formulation. Bioengineering 2017;4(3):75, doi: 10.3390/bioengineering4030075
29. Kotronia M, Kavetsou E, Loupassaki S, Kikionis S, Vouyiouka S, Detsi* A. Encapsulation of oregano (Origanum onites l.) essential oil in β-cyclodextrin (β-CD): Synthesis and characterization of the inclusion complexes. Bioengineering 2017;4(3):74, doi: 10.3390/bioengineering4030074
28. Zerva A, Manos N, Vouyiouka S, Christakopoulos P, Topakas* E. Bioconversion of biomass-derived phenols catalyzed by Myceliophthora thermophila laccase. Molecules 2016;21(5):550, doi: 10.3390/molecules21050550 (IF 4.412)

27. Papaspyrides* C, Vouyiouka S, Georgousopoulou I-N, Marinkovic S, Estrine B, Joly C, Dole P. Feasibility of solid-state postpolymerization on fossil- and bio-based poly(butylene succinate) including polymer upcycling routes. Ind. Eng. Chem. Res. 2016;55(20):5832-5842, doi: 10.1021/acs.iecr.6b00588 (IF 3.720)
26. Jbilou F, Georgousopoulou I-N, Marinkovic S, Vouyiouka S, Papaspyrides C, Estrine B, Dole P, Cottaz A, Joly* C. Intelligent monitoring of solid state polymerization via molecular rotors: the case of poly(butylene succinate). Europ. Polym. J. 2016;78:61-71, doi: 10.1016/j.eurpolymj.2016.03.005 (IF 4.598)
25. Porfyris A, Vouyiouka S, Papaspyrides* C, Rulkens R, Grolman E, Poel GV. Investigating alternative routes for semi-aromatic polyamide salt preparation: The case of tetramethylenediammonium terephthalate (4T salt). J. Appl. Polym. Sci. 2016;133(13):42987, doi: 10.1002/app.42987 (IF 3.125)
24. Papaspyrides* C, Porfyris A, Vouyiouka S, Rulkens R, Grolman E, Poel G. Solid state polymerization in a micro-reactor: the case of poly(tetramethylene terephthalamide). J. Appl. Polym. Sci. 2016;133(14):43271, doi: 10.1002/app.43271 (IF 3.125)
23. Georgousopoulou I-N, Vouyiouka* S, Dole P, Papaspyrides C. Thermo-mechanical degradation and stabilization of poly(butylene succinate). Polym. Degrad. Stab. 2016;128:182-192, doi: 10.1016/j.polymdegradstab.2016.03.012 (IF 5.030)
22. Filgueiras V, Vouyiouka* S, Konstantakopoulou M, Boussia A, Papaspyrides C, Lima E-L, Pinto J-C. Modelling of polyamide 66 solid state polymerization: Drawing a chemical reaction scheme. Macromol. React. Eng. 2015;9(2):65-89, doi: 10.1002/mren.201400033 (IF 1.54)
21. Roussaki M, Gaitanarou A, Diamanti P, Vouyiouka S, Papaspyrides C, Kefalas P, Detsi* A. Encapsulation of the natural antioxidant aureusidin in biodegradable PLA nanoparticles. Polym. Degrad. Stab. 2014;108:182-187, doi: 10.1016/j.polymdegradstab.2014.08.004 (IF 5.030)
20. Kanelli M, Douka A, Vouyiouka S, Papaspyrides* C, Topakas E, L.-M. Papaspyridi L.-M, Christakopoulos P. Production of biodegradable polyesters via enzymatic polymerization and solid state finishing. J. Appl. Polym. Sci. 2014;131(19):40820, doi: 10.1002/app.40820 (IF 3.125)
19. Vouyiouka* S, Topakas E, Katsini A, Papaspyrides C, Christakopoulos P. A green route for the preparation of aliphatic polyesters via lipase-catalyzed prepolymerization and low-temperature post polymerization. Macromol. Mater. Eng. 2013;298(6):679-689, doi: 10.1002/mame.201200188 (IF 4.367)
18. Vouyiouka S, Theodoulou P, Symeonidou A, Papaspyrides* C, Pfaendner R. Solid state polymerization of poly(lactic acid): Some fundamental parameters. Polym. Degrad. Stab. 2013;98(12):2473-2481, doi: 10.1016/j.polymdegradstab.2013.06.012 (IF 5.030)
17. Boussia A, Vouyiouka S, Papaspyrides* C. Applying the traditional solution melt polymerization for the in situ intercalation of polyamide 6.6-clay nanocomposites. Macromol. Mater. Eng. 2012;297(1):68-74, doi: 10.1002/mame.201100087 (IF 4.367)
16. Boussia A, Konstantakopoulou M, Vouyiouka S, Papaspyrides* C. Catalytic performance and nanoclay effects on post-solid-state polyamidation: The case of polyamide 6,6 nanocomposites. J. Appl. Polym. Sci. 2012;125(Suppl. 1):E320-E326, doi: 10.1002/app.35657 (IF 3.125)
15. Vouyiouka S, Filgueiras V, Papaspyrides* C, Lima E, Pinto JC. Morphological changes of poly(ethylene terephthalate-co-isophthalate) during solid state polymerization. J. Appl. Polym. Sci. 2012;124(6):4457-4465, doi: 10.1002/app.35452 (IF 3.125)
14. Hatzigrigoriou N, Vouyiouka S, Joly C, Dole C, Papaspyrides* C. Temperature-humidity superposition in diffusion phenomena through polyamidic materials. J. Appl. Polym. Sci. 2012;125(4):2814-2823, doi: 10.1002/app.36279 (IF 3.125)
13. Boussia A, Konstantakopoulou M, Vouyiouka S, Papaspyrides* C. Nanocatalysis in polyamide 6.6 solid-state polymerization. Macromol. Mater. Eng. 2011;296(2):168-177, doi: 10.1002/mame.201000325 (IF 4.367)

12. Filgueiras V, Vouyiouka* S, Papaspyrides C, Lima E, Pinto JC. Solid-state polymerization of poly(ethylene terephthalate): The effect of water vapor in the carrier gas. Macromol. Mater. Eng. 2011;296(2):113-121, doi: 10.1002/mame.201000201 (IF 4.367)
11. Boussia A, Vouyiouka S, Porfyris A, Papaspyrides* C. Long-aliphatic-segment polyamides: Salt preparation and subsequent anhydrous polymerization. Macromol. Mater. Eng. 2010;295(9):812-821, doi: 10.1002/mame.201000057 (IF 4.367)
10. Boussia A, Damianou C, Vouyiouka S, Papaspyrides* C. Potential in situ preparation of aliphatic polyamide-based nanocomposites: The organoclay-polyamide salt interaction. J. Appl. Polym. Sci. 2010;116(6):3291-3302, doi: 10.1002/app.31753 (IF 3.125)
9. Papaspyrides C, Pavlidou S, Vouyiouka S. Development of advanced textile materials: Natural fibre composites, anti-microbial, and flame-retardant fabrics. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 2009;223(2):91-102, doi: 10.1243/14644207JMDA200
8. Vouyiouka S, Koumantarakis G, Papaspyrides* C. Preparation and solid-state polyamidation of hexamethylenediammonium adipate: The effect of sodium 5-sulfoisophthalic acid. J. Appl. Polym. Sci. 2007;104(3):1609-1619, doi: 10.1002/app.25762 (IF 3.125)
7. Vouyiouka S, Papaspyrides* C, Weber J, Marks D. Solid state post-polymerization of PA 6,6: The effect of sodium 5-sulfoisophthalic acid. Polymer 2007;48(17):4982-4989, doi: 10.1016/j.polymer.2007.06.031 (IF 4.430)
6. Vouyiouka S, Papaspyrides* C, Pfaendner R. Catalyzed solid-state polyamidation. Macromol. Mater. Eng. 2006;291(12):1503-1512, doi: 10.1002/mame.200600254 (IF 4.367)
5. Papaspyrides* C, Vouyiouka S, Bletsos J. New aspects on the mechanism of the solid state polyamidation of PA 6,6 salt. Polymer 2006;47(4):1020-1027, doi: 10.1016/j.polymer.2005.12.041 (IF 4.430)
4. Vouyiouka S, Papaspyrides* C, Weber J, Marks D. Polyamide solid state polymerization: Evaluation of pertinent kinetic models. J. Appl. Polym. Sci. 2005;97(2):671-681, doi: 10.1002/app.21811 (IF 3.125)
3. Vouyiouka S, Karakatsani E, Papaspyrides* C. Solid state polymerization. Prog. Polym. Sci. 2005;30(1):10-37, doi: 10.1016/j.progpolymsci.2004.11.001 (IF 29.190)
2. Papaspyrides* C, Vouyiouka S, Bletsos J. Preparation of polyhexamethyleneadipamide prepolymer by a low-temperature process. J. Appl. Polym. Sci. 2004;92(1):301-306, doi: 10.1002/app.13704 (IF 3.125)
1. Papaspyrides* C, Vouyiouka S, Bletsos J. New process for the production of dry hexamethylenediammonium adipate. J. Appl. Polym. Sci. 2003;88(5):1252-1257, doi: 10.1002/app.11795 (IF 3.125)

Conference Papers and Papers in Technical Journals

4. Gountela Chr, Markoulakis D, Korres D, Vouyiouka* S. Evaluation of the parameters of poly(butylene succinate) enzymatic polymerization. Mater. Proc. 2021;7(1):11, doi: 10.3390/IOCPS2021-11274
3. Panagiotopoulos Chr, Korres D, Vouyiouka* S. Vitrimerization of poly(butylene succinate) by reactive melt mixing using Zn(II) epoxy-vitrimer chemistry. Mater. Proc. 2021;7(1):10, doi:10.3390/IOCPS2021-11588
2. Vouyiouka* S, Papaspyrides C. Post-polymerization in the solid state of modified PA 66 prepolymers. Chemical Fibers International. 2008;58(4):226-228
1. Vouyiouka* S, Papaspyrides C. Development of polyamide salt preparation method under low temperature and in the absence of water. Plastics Chronicles 2003;153:12-14

International Patents

2. Pfaendner R, Papaspyrides C, Diamanti P-C, Vougiouka S, Chronaki K, Porfyris A. Method for manufacturing aliphatic polyesters and use of phosphorus-containing organic additives. Fraunhofer-Gesellschaft, WO2018224672, 2018, pp 24.
1. Pfaendner R, Fink J, Simon D, Papaspyrides C, Vougiouka S. Process for the preparation of polyamides in the presence of a phosphonate. Ciba Specialty Chemicals Lampertheim GmbH, WO2007/006647, 2007, pp.36.

Selected International Conferences (*speaker in oral presentation, years 2012-present)

24. Zotiadis Chr, Korres D, Vouyiouka* S. Investigation of in situ polymerization key process parameters for poly(urea-formaldehyde)-based encapsulation systems. International Polymer Process Innovation Conference - PPI202 ONLINE (Invited), 14-15 December 2021
23. Zotiadis* Chr, Patrikalos I, Loukaidou V, Korres D, Karantonis A, Vouyiouka S. Tailor-made epoxy loaded poly(urea-formaldehyde) microcapsules for self-healing coatings. Polyconf13. 13th Hellenic Polymer Society International Conference-ONLINE, 12-16 December 2021, Athens, Greece
22. Porfyris* A, Vouyiouka S, Luyt A, Korres D, Malik S, Gasmi S, Grosshauser M, Pfaendner R, Papaspyrides C. Weathering resistant flame retarded polyethylene compounds for outdoor applications. Polyconf13. 13th Hellenic Polymer Society International Conference-ONLINE, 12-16 December 2021, Athens, Greece
21. Gkountela Chr, Korres D, Vouyiouka S. A green enzyme-based process for the production of poly(butylene succinate). Polyconf13. 13th Hellenic Polymer Society International Conference-ONLINE, 12-16 December 2021, Athens, Greece (poster)
20. Panagiotopoulos Chr, Porfyris A, Korres D, Vouyiouka S. Feasibility of solid state polymerization as an alternative route to synthesize fossil- and bio-based vitrimers from commercially available polyesters. Polyconf13. 13th Hellenic Polymer Society International Conference-ONLINE, 12-16 December 2021, Athens, Greece (poster)
19. Zotiadis Chr, Porfyris A, Korres D, Vouyiouka S. Poly(urea-formaldehyde) microcapsules for self-lubricating applications. Polyconf13. 13th Hellenic Polymer Society International Conference-ONLINE, 12-16 December 2021, Athens, Greece (poster)
18. Panagiotopoulos* Chr, Porfyris A, Korres D, Vouyiouka S. Vitrimers from engineering thermoplastics: an answer to polymer performance and recyclability challenges. SmartFan-Final Conference on smart and intelligent composite structure for innovative industrial applications (Invited). Lavrion, Greece, 8-10 December 2021
17. Porfyris* A, Gkountela Ch, Politidis C, Messaritakis G, Orfanoudakis P, Pavlidou S, Korres D, Kyritsis A, Vouyiouka S. Halogen-free flame retarded PP compounds designated for cable protection conduits. Fire Resistance in Plastics, 30 November-2 December 2021, Düsseldorf, Germany
16. Zotiadis Chr, Korres D, Karantonis A, Vouyiouka S. Self-healing protective coatings based on epoxy-loaded polymeric microcapsules. 3rd Coatings and Interfaces Conference, 24-26 November 2021. Book of abstracts p.29 (poster)
15. Gkountela Chr, Markoulakis D, Korres D, Vouyiouka S. Evaluation of the parameters of poly(butylene succinate) enzymatic polymerization. The 2nd International Online Conference on Polymer Science - Polymers and Nanotechnology for Industry 4.0-ONLINE, 01-15 November 2021 (poster)
14. Porfyris A, Gkountela C, Korres D, Vouyiouka S. Polypropylene compounds for Halogen-free low smoke (HFLS) conduits. European Meeting on Fire Retardant Polymeric Materials (FRPM21), 29 August-1 September 2021, Budapest, Hungary (poster)

13. Chronaki K, Korres D, Detsi A, Vouyiouka* S, Papaspyrides C. Poly(lactic acid) microcapsules: Tailoring properties via solid state polymerization, 7th International Conference on Biobased and Biodegradable Polymers, BIOPOL 2019, 17-19 June 2019, Stockholm, Sweden
12. Porfyris A, Chronaki K, Diamanti P, Pfaendner R, Vouyiouka S, Papaspyrides C. Phosphorous-containing additives catalyzing the solid state polymerization of poly(lactic acid), 7th International Conference on Biobased and Biodegradable Polymers, BIOPOL 2019, 17-19 June 2019, Stockholm, Sweden (poster)
11. Klonos P, Chronaki K, Vouyiouka S, Papaspyrides C, Kyritsis A. Thermal transitions and molecular dynamics in biodegradable PLA-based microcapsules, 7th International Conference on Biobased and Biodegradable Polymers, BIOPOL 2019, 17-19 June 2019, Stockholm, Sweden (poster)
10. Porfyris* A, Andronopoulou A, Korres D, Shahid S, Gasmi S, Vouyiouka S, Luyt A, Pfaendner R, Papaspyrides C. Value-added green polyolefin formulations: Halogen-free flame retardants. European Polymer Congress, EPF 2019, 9-14 June 2019, Heraklion, Crete, Greece
9. Porfyris A, Vasilakos S, Zotiadis Chr, Papaspyrides C, Pavlidou S, Vouyiouka* S. Poly(lactic acid) materials for durable applications: focus on hydrolytic stabilization, 12th Hellenic Polymer Society International Conference, 30 September – 3 October 2018, Ioannina, Greece
8. Tzavidi S, Porfyris A, Papaspyrides C, Korres D. Vouyiouka S. Poly(urea-formaldehyde) microcapsules for self-healing coatings. 12th Hellenic Polymer Society International Conference. Ioannina, Greece, 30 October – 3 October 2018 (poster), Book of Abstracts p.173
7. Chronaki K, Papaspyrides C, Vouyiouka S. Solid state polymerization as post-encapsulation modification technique, 12th Hellenic Polymer Society International Conference, 30 September – 3 October 2018, Ioannina, Greece (poster)
6. Georgousopoulou I-N, Vouyiouka* S, Papaspyrides C. Study of solid state polymerization for promising biopolyesters: the case of PBS, 11th Hellenic Polymer Society International Conference, 3-5 November 2016, Heraclion Crete, Greece
5. Georgousopoulou* I-N, Vouyiouka S, Papaspyrides C, Marinkovic S, Estrine B, Dole P, Joly C. Implementation of a solid-state polymerization step in the production scheme of poly(butylene succinate). Polymers and Organic Chemistry 2014, POC2014, Timisoara, Romania, 11-13 June 2014 (IUPAC Conference), Book of Abstracts p.35
4. Georgousopoulou I-N, Vouyiouka* S, Papaspyrides C, Dole P, Joly C. Mechanical recycling of poly(butylene succinate) through the remelting-restabilization technique. 8th International Conference on Modification, Degradation and Stabilization of Polymers, MoDeSt 2014, 31 August-4 September 2014, Portoroz, Slovenia
3. Georgousopoulou I-N, Vouyiouka* S, Papaspyrides C, Marinkovic S, Estrine B, Dole P, Joly C. Assessment of solid state polymerization effectiveness for poly(butylene succinate) production. 4th International Conference on Biodegradable and Biobased Polymers, BIOPOL 2013, 1-3 October 2013, Rome, Italy
2. Kanelli M, Douka A, Vouyiouka S, Papaspyrides C. Production of biodegradable polyesters via enzymatic polymerization and solid state finishing, 4th International Conference on Biodegradable and Biobased Polymers, BIOPOL 2013, 1-3 October 2013, Rome, Italy (poster)
1. Vouyiouka* S, Theodoulou P, Simeonidou A, Papaspyrides C, Pfaendner R. Solid state polymerization of poly(lactic acid): critical process parameters, 7th International Conference on Modification, Degradation and Stabilization of Polymers, MoDeSt 2012, 2-6 September 2012, Prague, Czech Republic

Memberships and Reviewing Activities

2017 – today Evaluator, General Secretariat for Research and Technology, Greece

2015 – today Evaluator, Qatar National Research Fund

2013 – today Member, Hellenic Polymer Society

2010 – today Member, Society on Modification, Degradation and Stabilization of Polymers

2004 – today Reviewer for over 20 international journals in Citation Index
Journal of Applied Polymer Science, Journal of Polymer Science, Part A: Polymer Chemistry, Polymer Chemistry, Macromolecular Reaction Engineering, Polymer Engineering & Science, European Polymer Journal, Macromolecular Symposia, Industrial & Engineering Chemistry Research, Molecules, Materials, Colloids and Surfaces A: Physicochemical and Engineering Aspects, Polymers, Composites Science and Technology, Langmuir, Polymer Engineering & Science, Journal of Advanced Research, Crystals, Journal of Thermal Analysis and Calorimetry, Applied Sciences, Toxological and Environmental Chemistry, Asian Journal of Organic Chemistry, Environmental Engineering Science, Food and Bioproducts Processing, Iranian Polymer Journal, The Canadian Journal of Chemical Engineering

2011, 2014 **Reviewer of Book Proposals**
Farinola G-M (ed). John Wiley & Sons, Inc. Functionalized Conjugated Polymers: Materials for Advanced Organic- and Bio-Electronics; Achilias D. Polymer Science through exercises and answers (Kallipos)

Teaching Activities

2019 – today Associate Professor - School of Chemical Engineering, NTUA, Greece. Courses taught:
- Polymer Production Engineering (undergraduate)
- Advanced Laboratory Exercises in Material Science (postgraduate)

2014 – 2019 Assistant Professor - School of Chemical Engineering, NTUA. Courses taught:
- Polymer Engineering (undergraduate)
- Polymer Science and Technology (undergraduate)
- Advanced Laboratory Exercises in Material Science (postgraduate)
- Polymer Laboratory Methods for the course "Introduction to Polymer Engineering/Polymer Engineering" (undergraduate, Chemical Engineering Program, Texas A&M University at Qatar): Polymerization Mechanisms and Techniques; Polymer Extrusion Molding, Summer School CHEN 451-641, 2017 (Professor I. Economou)

2009 – 2014 Lecturer – School of Chemical Engineering, NTUA, Greece.
- Polymer Engineering (undergraduate)
- Polymer Science and Technology (undergraduate)
- Environmental Management of Polymeric Materials (postgraduate)

Supervision of Undergraduate and Graduate Students

2009 – today Supervision/Cosupervision of 8 Doctoral Dissertations and 9 MSc Theses, School of Chemical Engineering, NTUA, Greece.

Supervision of more than 50 Undergraduate Diploma Theses including 2 Erasmus Research Projects

PhD theses:

8. Panagiotopoulos Christos. Design and production of advanced polymeric materials via solid state polymerization (Advisor). October 2020-today

7. Gkountela Christina. Development of environmentally friendly polymerization processes (Advisor). April 2019-today.

6. Zotiadis Christos. Design of microcapsule-based polymeric encapsulation systems via in situ polymerization (Advisor). November 2018-today.

5. Chronaki Konstantina. Solid state polymerization as a post-treatment tool for polymers upgrade (Advisor). March 2017-today.

4. Mytara Angeliki. Optimization of solid state polymerization processes in polycondensates. May 2017-today. (Cosupervision, Advisor: C. Papaspyrides)

3. Georgousopoulou I-N. Development of biodegradable polycondesation polymers. (2013-2016). (Cosupervision, Advisor: C. Papaspyrides)

2.Porfyris A. Production of innovative polymeric structures. (2009-2017). (Cosupervision, Advisor: C. Papaspyrides)

1.Boussia A. Synergistic effects of nanotechnology and solid state polymerization for polyamide properties optimization. (2005-2011). (Cosupervision, Advisor: C. Papaspyrides)

Fellowships and Awards

2021- **COST Action CA20101 Plastics monitoring detection RemediaTion recovery**
https://e-services.cost.eu/action/CA20101/working-groups/view/1ec30033-b276-6c7e-bd3d-0a58a9feac02
Member, Working groups 2 (Monitoring and sampling MPs), 3 (Instrumentation, modelling, data evaluation, software and analytical procedures), 5 (Remediation, recovery and development of sustainable alternative to plastic materials)

2021 **Best Presentation Award**, 2nd International Online Conference on Polymer Science - Polymers and Nanotechnology for Industry 4.0, 1-15 November 2021 (Polymers, MDPI)
https://iocps2021.sciforum.net/#BestPresentationAwards

2020 – 2021 **Guest Editor, Materials - Special Issue "Advances in Polycondensates Polymerization Processes", MDPI**
https://www.mdpi.com/journal/materials/special_issues/Polycondensates_Polymerization

2015 **Best Diploma Thesis Award, Sector IV, School of Chemical Engineering, NTUA**
Kamtsikakis A, *Encapsulation of Antifouling agents in PLA microcapsules* (Advisor: S. Vouyiouka)

2012 **Best Diploma Thesis Award at NTUA**
Best Diploma Thesis Award in the School of Chemical Engineering, NTUA
Kanelli M, *Enzymatic synthesis of polyesters* (Advisor: S. Vouyiouka)

2007 **Third Place Award** for Best Oral Presentation
ICSAM-2007, The International Conference of Structural Analysis of Advanced Materials (Patras, 2-6 Sept 2007)

2005 **Post-Doctoral Research Scholarship,** Hellenic Scholarship Foundation

2003,2004,2005 Award D. Thomaidi, Contribution to Science and Art Progress

Research Grants

Project Title	Funding source	Period	Role
PRecycling: Plastics recycling from and for home appliances, toys and textile	HORIZON	2022-2026	Scientific Supervisor
SucciVitr: Comprehending and controlling the dynamics of the adaptable network in biobased vitrimers	PEVE 2020 – NTUA	2020-2023	Scientific Supervisor
FUVPP: Flame-retarded and UV-Protected Polypropylene HFLS Pipes	EPAnEK 2014-2020, GSRT	2020-2023	Scientific Supervisor
HYSELFDROPS: Hybrid thermal spray coatings with self-lubricant properties for wear protection of Internal Combustion Engine piston rings	EPAnEK 2014-2020, GSRT	2020-2023	Scientific Supervisor
Encapsulation of Active Agents in Polymeric Microcapsules: Tailoring properties via Solid State Polymerization	EPAnEK 2014-2020, GSRT	2020-2021	Research Associate
BIOICEP: Bio Innovation of a Circular Economy for Plastics	Horizon 2020	2020-2024	Research Associate
Applied Research in Polymers	Industrial Funding	2019-today	Scientific Supervisor
Sustainable packaging for the beverage industry	Coca-Cola Hellenic Bottling Company	2018-2019	Principal Investigator
NANOARTHRITIS: Multifunctional nanosystems with natural therapeutic agents to treat osteoarthritis	Operational Program "Competitiveness, Entrepreneurship &Innovation»	2018-2021	Research Associate
Value-added green polyolefin formulations with extended service lifetime	Qatar National Research Fund	2016-2019	Research Associate
BIO4SELF: Biobased self-functionalised self-reinforced composite materials based on high performance nanofibrillar PLA fibres	Horizon 2020	2016-2019	Research Associate
SUCCIPACK: Development of active, intelligent, and sustainable food packaging using polybutylene succinate	FP7	2012-2015	Principal Investigator