

Curriculum Vitae

Christos Pandis

Personal Information

Name: Christos
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Nationality: Greek
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Armed forces obligation: Supplemented

Education

2005-2010 PhD
Department of Physics, Faculty of Applied Mathematics and Physics, National Technical University of Athens (NTUA), Greece
Title of thesis: Development and study of polymeric materials for use in chemical sensors (supervisor: Prof. P.Pissis)

2003-2005 Master of Science (MSc),
National Technical University of Athens (NTUA), Athens, Greece
Title of MSc: Microsystems and Nanodevices
Title of MSc thesis: Study of electrical properties of ZnO thin films and devices deposited by the PLD method and their application for H₂ sensing (supervisor: Prof. D. Tsamakis)

1998-2003 Diploma in Physics,
Physics Department, University of Athens, Greece
Title of diploma thesis: The influence of thermal donors in the properties of vacancies of irradiated silicon (supervisor: Assistant Prof. H. Londos)

Professional Experience

2012-present Post Doc Research Fellow,
Centre for Biomaterials and Tissue Engineering, Polytechnic University of Valencia,
Valencia, Spain

2010-2012 Post Doc Research Fellow,
Department of Physics, Faculty of Applied Mathematics and Physics, National
Technical University of Athens (NTUA), Greece

2005-2009 Teaching Assistant, Physics Department, School of Applied Mathematics and
Physics, National Technical University of Athens (NTUA), Greece

Research activities

Biomaterials, Conducting polymers for sensor applications, Structural health monitoring of polymer composites, Hydration properties of hydrogels and hybrid materials, Dielectric/electrical properties of polymer nanocomposites, Thermomechanical properties of polymers and polymer nanocomposites

Referred Journal Publications

1. M. Kandyla, C. Pandis, S. Chatzandroulis, P. Pissis, I. Zergioti, Direct laser printing of thin-film polyaniline devices, *Applied Physics A: Materials Science and Processing*, 110(2013) 623-628.
2. P. Klonos, C. Pandis, S. Kriptou, A. Kyritsis, P. Pissis, Interfacial effects in polymer nanocomposites studied by dielectric and thermal techniques, *IEEE Transactions on Dielectrics and Electrical Insulation*, 19(2012) 1283-1290.
3. A. Kyritsis, A. Spanoudaki, C. Pandis, L. Hartmann, R. Pelster, N. Shinyashiki, et al., Thermal transitions and dynamics in nanocomposite hydrogels, *Journal of Thermal Analysis and Calorimetry*, 108(2012) 1067-1078.
4. A. Kyritsis, A. Spanoudaki, C. Pandis, L. Hartmann, R. Pelster, N. Shinyashiki, et al., Water and polymer dynamics in poly(hydroxyl ethyl acrylate-co-ethyl acrylate) copolymer hydrogels, *European Polymer Journal*, 47(2011) 2391-2402.
5. C. Pandis, E. Logakis, A. Kyritsis, P. Pissis, V. V. Vodnik, E. Džunuzović, et al., Glass transition and polymer dynamics in silver/poly(methyl methacrylate) nanocomposites, *European Polymer Journal*, 47(2011) 1514-1525.
6. C. Pandis, A. Spanoudaki, A. Kyritsis, P. Pissis, J. C. R. Hernández, J. L. Gómez Ribelles, et al., Water sorption characteristics of poly(2-hydroxyethyl acrylate)/silica nanocomposite hydrogels, *Journal of Polymer Science Part B: Polymer Physics*, 49(2011) 657-668.
7. E. Logakis, C. Pandis, P. Pissis, J. Pionteck, P. Pötschke, Highly conducting poly(methyl methacrylate)/carbon nanotubes composites: Investigation on their thermal, dynamic-mechanical, electrical and dielectric properties, *Composites Science and Technology*, 71(2011) 854-862.
8. M. Mičušík, M. Omastová, J. Pionteck, C. Pandis, E. Logakis, P. Pissis, Influence of surface treatment of multiwall carbon nanotubes on the properties of polypropylene/carbon nanotubes nanocomposites, *Polymers for Advanced Technologies*, 22(2011) 38-47.
9. E. Logakis, C. Pandis, A. Kyritsis, P. Pissis, M. Mičušík, M. Omastová, et al., Indirect methods for the determination of optimal processing conditions in conductive polypropylene/carbon nanotubes composites, *Chemical Physics Letters*, 498(2010) 125-128.
10. C. Boutopoulos, C. Pandis, K. Giannakopoulos, P. Pissis, I. Zergioti, Polymer/carbon nanotube composite patterns via laser induced forward transfer, *Applied Physics Letters*, 96(2010).
11. K. N. Raftopoulos, C. Pandis, L. Apekis, P. Pissis, B. Janowski, K. Pielichowski, et al., Polyurethane-POSS hybrids: Molecular dynamics studies, *Polymer*, 51(2010) 709-718.
12. E. Logakis, E. Pollatos, C. Pandis, V. Peoglos, I. Zuburtikudis, C. G. Delides, et al., Structure-property relationships in isotactic polypropylene/multi-walled carbon nanotubes nanocomposites, *Composites Science and Technology*, 70(2010) 328-335.
13. [13] E. Logakis, C. Pandis, V. Peoglos, P. Pissis, J. Pionteck, P. Pötschke, et al., Electrical/dielectric properties and conduction mechanism in melt processed polyamide/multi-walled carbon nanotubes composites, *Polymer*, 50(2009) 5103-5111.
14. M. Mičušík, M. Omastová, I. Krupa, J. Prokes, P. Pissis, E. Logakis, et al., A comparative study on the Electrical and mechanical behaviour of multi-walled carbon nanotube composites prepared by diluting a masterbatch with various types of polypropylenes, *Journal of Applied Polymer Science*, 113(2009) 2536-2551.
15. C. Pandis, E. Logakis, V. Peoglos, P. Pissis, M. Omastová, M. Mravčáková, et al., Morphology, microhardness, and electrical properties of composites based on polypropylene, montmorillonite, and polypyrrole, *Journal of Polymer Science, Part B: Polymer Physics*, 47(2009) 407-423.
16. E. Logakis, C. Pandis, V. Peoglos, P. Pissis, C. Stergiou, J. Pionteck, et al., Structure-property relationships in polyamide 6/multi-walled carbon nanotubes nanocomposites, *Journal of Polymer Science, Part B: Polymer Physics*, 47(2009) 764-774.
17. V. Peoglos, E. Logakis, C. Pandis, P. Pissis, J. Pionteck, P. Pötschke, et al., Thermal and electrical characterization of multi-walled carbon nanotubes reinforced polyamide 6 nanocomposites, *Journal of Nanostructured Polymers and Nanocomposites*, 3(2007) 116-124.
18. C. Pandis, N. Brilis, E. Bourithis, D. Tsamakis, H. Ali, S. Krishnamoorthy, et al., Low-temperature hydrogen sensors based on Au nanoclusters and Schottky contacts on ZnO films deposited by pulsed laser deposition on Si and SiO₂ substrates, *IEEE Sensors Journal*, 7(2007) 448-454.

19. C. Pandis, N. Brilis, D. Tsamakis, H. A. Ali, S. Krishnamoorthy, A. A. Iliadis, Role of low O₂ pressure and growth temperature on electrical transport of PLD grown ZnO thin films on Si substrates, *Solid-State Electronics*, 50(2006) 1119-1123.

Referred Conference Proceedings Publications

- G. Georgousis, C. Pandis, A. Kalamiotis, P. Georgiopoulos, A. Kyritsis, E. Kontou, et al., Strain Sensing in Polymer/Carbon Nanotube Composites by Electrical Resistance Measurement, *Procedia Engineering*, 47(2012) 774-777.
- C. Pandis, G. Georgoussis, V. Peoglos, A. Kyritsis, P. Pissis, P. Georgiopoulos, et al., Electrical resistance measurement for in situ health monitoring of carbon nanotube/polymer composites, *Emerging Technologies in Non-Destructive Testing V - Proceedings of the 5th Conference on Emerging Technologies in NDT*, 2012, 361-366.
- C. Pandis, G. Georgoussis, V. Peoglos, A. Kyritsis, P. Pissis, P. Georgiopoulos, et al., Strain and damage sensing in carbon fiber polymer-matrix composite by electrical resistance measurement, *Emerging Technologies in Non-Destructive Testing V - Proceedings of the 5th Conference on Emerging Technologies in NDT*, 2012, 367-372.
- C. Pandis, V. Peoglos, A. Kyritsis, P. Pissis, Gas sensing properties of conductive polymer nanocomposites, *Procedia Engineering*, 25(2011) 243-246.
- A. Kanapitsas, E. Logakis, Ch. Pandis, I. Zoubourtikoudis, P. Pissis C.G. Delidis, A. S. Vatalis. *Dielectric and thermomechanical properties of polypropylene/multi-walled carbon nanotubes nanocomposites*. Materials Research Society Symposium Proceedings 1056, pp. 411-417, 2008
- Ch. Pandis, E. Logakis, M. Chorianopoulos, A. Spanoudaki, A. Kyritsis, V. Peoglos, P. Pissis, M. Mičušík, I. Krupa, M. Omastová, J. Pionteck, and P. Pötschke, *Thermal and Electrical Characterization of Polypropylene/Carbon Nanotube Nanocomposites*, NSTI Nanotech 2007, Technical Proceedings 2, p. 166-169, 2007
- E. Logakis, Ch. Pandis, V. Peoglos, P. Pissis, A. Kanapitsas, J. Pionteck, P. Pötschke, M. Mičušík and M. Omastová, *Thermal and electrical properties of Polyamide/Multi-Walled Carbon Nanotubes nanocomposites*, NSTI Nanotech 2007, Technical Proceedings 2, p. 96-99, 2007
- Kanapitsas, C. Tsonos, E. Logakis, C. Pandis, P. Pissis, E. Kontou, , Y.P. Mamunya, , E.V. Lebedev, C.G. Delides, *PTC effect and structure of polymer composites based on polypropylene/co-polyamide blend filled with dispersed iron*, Proceedings of the International Conference on Microelectronics, ICM Volume 2006, p. 391-394, 2006

Conference Presentations

- C. Pandis, S. Madeira, J. Matos, A. Kyritsis, J.F. Mano and J.L. Gómez Ribelles, "Silica Reinforced Chitosan Scaffolds", European Chapter Meeting of the Tissue Engineering and Regenerative Medicine International Society, termis-eu 2013, Istanbul, Istanbul, Turkey, 17-20 June 2013
- C. Pandis, J. Matos, S. Madeira, , A. Kyritsis, J.F. Mano and J.L. Gómez Ribelles, "Poly(L-lactic acid) / silica hybrids produced by sol-gel", XVII International Sol-Gel Conference, Madrid, Spain, 25-30 August 2013
- C. Pandis, S. Madeira, J. Matos, A. Kyritsis, J.F. Mano and J.L. Gómez Ribelles, "Chitosan based hybrid composites", XVII International Sol-Gel Conference, Madrid, Spain, 25-30 August 2013
- C. Pandis, J. Matos, S. Madeira, S. Kriptomou, A. Kyritsis, J.F. Mano and J.L. Gómez Ribelles, "Preparation and characterization of poly(L-lactic acid) / silica hybrids", 25th European Conference on Biomaterials, ESB - 2013, Madrid, Spain, 8-12 September 2013
- D. Pospiech, A. Korwitz, J. Spitzel, H. Komber, B. Kretzschmar, B. Krause, P. Pötschke, C. Pandis, E. Logakis, P. Pissis, A. Wurm, C. Schick, *Polyester nanocomposites: In-situ synthesis and properties*, 9th International Eurofillers Conference 'EUROFILLERS 2011', Dresden, Germany, 21 – 25 August 2011.
- M. Kandyla, G. Tsekenis, P. Dimitrakis, S. Chatzandroulis, C. Pandis, I. Zergioti, *Fabrication of polyaniline biosensors using the laser induced forward transfer process*, E-MRS 2010 Spring Meeting Strasbourg, June 7-11, 2010

- C. Boutopoulos, C. Pandis, P. Pissis, I. Zergioti, V. Tsouti, S. Chatzandroulis, *Direct laser printing of polymers for gas sensing applications* COLA 10th annual Conference on Laser Ablation (COLA).2009, Singapore 22-27 November, 2009
- C. Pandis, E., Logakis,, V. Peoglos and P. Pissis, *Carbon nanotube/PMMA nanocomposites for gas-sensing applications*, ICNM 2009 First International Conference on Nanostructured Materials and Nanocomposites, Kottayam, India, 6-8 April 2009
- C. Pandis, A. Stathopoulos, P. Klonos, A Spanoudaki, A. Kyritsis, P. Pissis, M. Monleón Pradas, J. C. Rodríguez Hernández, J. L. Gómez Ribelles , *Hydration Properties of Nanostructured Hydrogels Based on Poly(2-hydroxyethyl acrylate) and Poly(2-hydroxyethyl-co-ethyl acrylate)* 7th Hellenic Polymer Conference , Ioannina, Sept 28 – Oct. 1, 2008
- K. Raftopoulos, C. Pandis, L. Apekis, B. Janowski, K. Pielichowski, P. Pissis, *A thermal and dielectric study of molecular dynamics in polyurethane-poly hybrids*, 7th Hellenic Polymer Conference, Ioannina, Sept 28 – Oct. 1, 2008
- E. Logakis, C. Pandis, V. Peoglos, P. Pissis, M. Micušková, M. Omastová, J. Pionteck, P. Pötschke, *Thermal and electrical properties of multi-walled carbon nanotube nanocomposites prepared by diluting a masterbatch with various types of modified and non-modified polypropylenes*, 7th Hellenic Polymer Conference, Ioannina, Sept 28 – 1, 2008
- Pandis Christos, Logakis Emmanuel, Peoglos Vassilios, Pissis Polycarpos and Pötschke Petra, *Electrical and dielectric properties of MWCNT reinforced PMMA nanocomposites* 2nd International Conference on Advanced Nano Materials, ANM2008, Aveiro, Portugal, June 22 -25, 2008
- Logakis Emmanuel, Pandis Christos, Koutras Nikolaos, Peoglos Vasilios, Pissis Polycarpos, Mičušík Matej and Omastová Maria, *Effect of processing and surface modification on the thermal and electrical properties of polymeric nanocomposites containing Multi-Walled Carbon Nanotubes* 2nd International Conference on Advanced Nano Materials, ANM2008, Aveiro, Portugal , June 22 -25, 2008
- K. Vartzeli-Nikaki, C. Pandis, A. Spanoudaki, A. Kyritsis, M. Monleon Pradas, J. L. Gomez Ribelles and P. Pissis, *Study of hydration and dielectric properties of nanostructured hydrogels based on PHEA*, International Materials Research Conference, IMRC 2008 Chongqing, China, June 9 - 12, 2008
- E. Logakis, Ch. Pandis, A. Kanapitsas, V. Peoglos, P. Pissis, J. Pionteck, P. Pötschke, M. Mičušík and M. Omastová, *Thermal transitions and electrical properties of polyamide/Carbon Nanotubes nanocomposites*, The International Conference on Structural Analysis of Advanced Materials (ICSAM-2007), Patras (Greece), 2-6 September, 2007
- Ch. Pandis, E. Logakis, M. Chorianopoulos, A. Spanoudaki, A. Kyritsis, V. Peoglos, P. Pissis, M. Mičušík, I. Krupa, M. Omastová, J. Pionteck and P. Pötschke, *Thermal transitions and dielectric properties of Carbon Nanotubes-filled polypropylene nanocomposites*, The International Conference on Structural Analysis of Advanced Materials (ICSAM-2007), Patras (Greece), 2-6 September, 2007
- C.G. Delides, I. Zuburtikudis, A. Kanapitsas, E. Logakis, Ch. Pandis, A.S.Vatalis and P. Pissis, *Structure-electromechanical properties of PP/MWCNTs nanocomposites*, The International Conference on Structural Analysis of Advanced Materials (ICSAM-2007), Patras (Greece), 2-6 September, 2007
- C. Pandis, N. Brilis, E. Bourithis, D. Tsamakis, H. A. Ali, S. Krishnamoorthy, A. A. Iliadis, M. Kompitsas, *Low-Temperature H₂ Sensors Based on Au Nanoclusters and Schottky Contacts on ZnO Films Grown by PLD on Si and SiO₂ Substrates*, Eurosensors XIX, Barcelona (Spain), 11-14 September, 2005

Conference and Workshop Participation

- Polymer 2013, 1st Early Stage Researchers Conference on Polymers, Barcelona, Spain, 7-11 November, 2013
- ESBS – 2013, 25th European Conference on Biomaterials, Madrid, Spain, 8-12 September, 2013
- termis-eu 2013, European Chapter Meeting of the Tissue Engineering and Regenerative Medicine International Society, Istanbul, Turkey, 17-20 June, 2013
- COST FA0904 International Conference, MC meeting + 3rd Table for Early Stage Researchers, Wädenswil, Switzerland, 21-21 March 2013

- COST FA0904, 'Development of new safe PNFP/ Development of new strategies to identify any critical interaction of PNFP with food', Valencia, Spain, 8-9 March 2012
- ETNDT5, 5th Conference on Emerging Technologies in Non-Destructive Testing, Ioannina, Greece, 19-21 September, 2011
- EUROSENSORS XXV, Athens, Greece, 4-7 September, 2011
- COST Action MP0701 Workshop, Nanoparticles Surface (Modified/Unmodified) as a base for the interaction with polymer matrix, Novi Sad, Serbia, 23-24 September, 2010
- ICNM 2009 First International Conference on Nanostructured Materials and Nanocomposites, Kottayam, India, April 6-8, 2009
- International Conference on Advanced Nano Materials, ANM2008, Aveiro, Portugal, June 22 -25, 2008
- 7th Hellenic Polymer Conference , Ioannina, Greece, September 28 – Oct. 1, 2008
- The International Conference on Structural Analysis of Advanced Materials (ICSAM-2007), Patras, Greece, 2-6 September, 2007
- NIST Nanotech 2007, Santa Clara, California, USA, May 20-24, 2007
- XXII Greek Conference in Solid State Physics, Patras, Greece, September 24-27, 2006
- International Conference on Synthetic Metals, ICSM, Trinity College, Dublin, Ireland, July 2-7, 2006
- International Conference 13th NID Workshop, NCSR Demokritos, Athens, February 4-6, 2004
- XIX Greek Conference in Solid State Physics, Thessaloniki, Greece, September 21-24, 2003

Participation in Scientific Courses and Training Schools

- Training School - COST FA0904: "Electrospinning nanofibres and food packaging", Valencia, Spain, 29 April, 2013
- Training School - COST FA0904: "Training School: Recent Advances in Polymer Nanomaterials for Food", Skopje, Former Yugoslav Republic of Macedonia, 3-5 November 2011
- Demonstration course: "Characterization methodology and tools for new polymer nanostructured materials", Athens, Greece, 13-15 May, 2009
- Seminar for new researchers "PENED 2003" on "Methodology and Practice for the handling of research, technology and innovation" (total duration 100 hours), National Technical University of Athens, Athens, Greece, April 3 – June 23, 2008
- The 2004 Lectures in Chemistry and Physics: The Nanotechnology Revolution, FORTH, Heraklion, 19-23 July, 2004

Participation in Research Programs

3/2012-present	NARGEL, "Nanoreinforced hydrogels for tissue engineering applications" PE5(2551), Program 'Supporting Postdoctoral Researchers' Greek General Secretariat for Research and Technology
1/2012-present	Bilateral (Greece - Slovakia) research program entitled: 'High performance sensors on the base of conducting polymers and composites'
7/2012-present	"Research and development of novel multifunctional polymer nanocomposites" program THALES - Greek General Secretariat for Research and Technology
04/2010–03/2012	<i>M-RECT, "Multiscale reinforcement of semi-crystalline thermoplastic sheets and honeycombs" FP7-NMP-2009-LARGE-3</i>
02/2009–present	COMPOSITUM, "Hybrid Nanocomposites and Their Applications" Marie Curie International Research Staff Exchange Scheme FP7-PEOPLE-IRSES-2008
01/2009–04/2009	EU research program Napolynet entitled: " <i>Napolynet, Setting up research-intensive clusters across the EU on characterization of polymer nanostructure</i> "
2007–2009	Bilateral (Greece – Germany) research program IKYDA 2007 entitled: " <i>Design and characterization of new nanostructured diblock copolymers</i> ".
11/2005–11/2008	Research program PENED 2003 entitled: " <i>Micromachined sensors for the assessment of food quality and safety</i> "
01/2005–09/2005	Bilateral (Greece - Slovakia) research program entitled: " <i>Polymer composites containing conductive fillers: Preparation and investigation of synthesis / morphology / electrical and dielectrical properties relationships</i> "

Scientific visits in other Laboratories

2007–2009	Several visits of two weeks or more in the Leibniz Institute of Polymer Research Dresden, Institute of Macromolecular Chemistry, Department of Polymer Structures, Dresden, Germany
11/2007	COST Short-term scientific mission (STSM) at the Center of Biomaterials, Polytechnic University of Valencia, Valencia, Spain
Other shorter visits:	Institute of Surface Chemistry of National Academy of Sciences of Ukraine, Kiev, Ukraine Polymer Institute, Slovak Academy of Sciences, Bratislava, Slovakia

Reviewer of International Scientific Journals

- Materials Chemistry and Physics
- Chemical Engineering Journal
- Journal of Applied Polymer Science
- Journal of The Electrochemical Society
- Physica E

Teaching Activities

Laboratory exercises (NTUA) 2005-2008

Guidance of 5 diplomas and 3 MSc theses supervised by Prof. P. Pissis

Guidance of 1 diploma and 1 MSc theses supervised by Prof. J.L. Gómez Ribelles

Languages

Greek: mother tongue

English: very good

Spanish: good

French: fair