

CURRICULUM VITAE

Dr. Konstantinos N. Raftopoulos Physicist

Personal Details

Birth Date 17-01-1980
Birth Place Athens, Greece
Nationality Greek
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Education

- 10/2005 – 05/2011 Doctorate Diploma in Physics
National Technical University of Athens
School of Applied Mathematics and Physics
Physics Department
Advisor: Prof. Lazaros Apekis
Title: “Structure – properties relationships studies in nanostructured polymeric materials”
- 9/2003 – 6/2005 Post-graduate degree in “Energy Production and Management”
National Technical University of Athens
General grade: 8.22/10
Post graduate Thesis
Title: “Electrochemical Devices in Energy Production and Storage. Theory- Modeling”
Duration: 7/2004 – 5/2005
Advisor: Prof. Nikolaos Chatziargyriou
Grade: 10/10
- 9/1997 – 1/2003 Diploma in Physics. University of Athens
General Grade: Very good [7.63/10]
Specialization: Solid State Physics and Materials Science
Diploma Thesis
Title: “Broadband Dielectric Relaxation Spectroscopy and hydration properties of segmental polyurethanes”
Duration: 9/2001 – 1/2003
Advisor: Associate Prof. Aglaia Vassilikou-Dova
Grade: 10/10
- 9/1994 – 6/1997 Empeirikeion Lyceon Andros (Senior High School)
General Grade.: Excellent [19.00/20]

Skills

Experimental Techniques:	Dielectric Relaxation Spectroscopy (DRS) Thermally Stimulated Depolarization Currents (TSDC) Differential Scanning Calorimetry (DSC) Temperature Modulated DSC (MDSC) Atomic Force Microscopy (AFM) Scanning Electron Microscopy (SEM)
IT skills	Microcal Origin®, Novocontrol WinDeta® DRS data acquisition software, Perkin Elmer® and TA® proprietary DSC data acquisition and analysis software. Open Office and Microsoft Office (writer, spreadsheet, presentation), LaTeX, All major browser and e-mail software.

Research experience

1/1/2010 – 31/12/2010	Open Laboratory in NaPolyNet framework, junior researcher
1/1/2007 – 31/12/2007	Research program “Pythagoras II”, research assistant
1/5/2005 – 31/12/2005	Research program “Pythagoras II”, research assistant

Teaching experience

2005 – 2010	Teaching assistant for Introductory level laboratory courses in Physics for students of Applied Mathematics and Physics, Electrical Engineering, Chemical Engineering, Mechanical Engineering, NTUA.
2008 – 2009	Teaching assistant in “methods for characterization of materials” courses (differential scanning calorimetry) for 8 th semester students of Applied Mathematics and Physics, NTUA.
2009 – 2010	Teaching assistant in “advanced laboratory courses” (differential scanning calorimetry and dielectric relaxation spectroscopy) for students of “materials science and technology” post graduate program, NTUA.
2009 – 2010	Teaching assistant in “experimental techniques for nanomaterials” (dielectric relaxation spectroscopy) for students of “microsystems and nanodevices” post graduate program, NTUA.
2005 – 2010	Guidance of 6 diploma and master's theses in the field of molecular mobility and hydration properties of polymers and polymeric nanocomposites.

Seminars

1. NaPolyNet and COST action FA0904 technological seminar “Polymer nanomaterials for food packaging. Characterization needs, safety and environmental issues”, 1-2 September 2010, London, United Kingdom.
2. NaPolyNet technical seminar and standardization workshop for “temperature calibration on fast scanning calorimeters”, 30 October 2009, Berlin Germany
3. NaPolyNet demonstration course “Characterization methodology and tools for new polymer nanostructured materials”, 13-15 May 2009, NaPolyNet, Athens, Greece
4. Nanofun-Poly NoE fourth short course “Relaxation Phenomena in Nanomaterials” 1-2 September 2006, Poznan, Poland
5. Summer School: "Program for information on advanced materials" 14-18 July 2003. Materials Science Institute, NCSR “Democritos”, Athens, Greece

Languages

1. Greek [Mother Tongue]
2. English [Very fluent]
3. German [Basic]

Publications (in refereed journals & conference proceedings)

1. G. M. Turkey, A. M. Ghoneim, A. Kyritsis, K. Raftopoulos and M. A. Moussa, "Dielectric dynamics of some Nylon 6/CaCO₃ composites using broadband dielectric Spectroscopy" *Journal of Applied Polymer Science*, 2011, DOI:10.1002/app.34166
2. K. Raftopoulos, B. Janowski, L. Apekis, P. Pissis, K. Pielichowski "Polyurethane-POSS organic-inorganic hybrid materials. The effect of soft segment length and nanoparticle content on the molecular dynamics" *Modern Polymeric Materials for Environmental Applications, Vol 3, 2008, 209*
3. K.N. Raftopoulos, Ch. Pandis, L. Apekis, P. Pissis, B. Janowski, K. Pielichowski, J. Jaczewska "Polyurethane-POSS hybrids: Molecular dynamics studies" *Polymer*, 51, 709-718, 2010
4. A. Kyritsis, K. Raftopoulos M.A. Rehim, Sh. Said Shabaan, A. Ghoneim, and G. Turkey "Structure and molecular dynamics of hyperbranched polymeric systems with urethane and urea linkages" *Polymer*, 50, 4039-4047, 2009
5. K. Raftopoulos, Ch. Pandis, L. Apekis, P. Pissis, K. Pielichowski, B. Janowski "Molecular dynamics studies in Polyurethane-POSS nanocomposites" *Modern Polymeric Materials for Environmental Applications Vol 3, 2008, 209*
6. S.Kosma, K. Raftopoulos, P. Pissis, A. Strachota, L. Matejka, F. Ribot, J. Nedbal "Molecular mobility of stannoxane modified epoxy resins" *Journal of Nanostructured Polymers and Nanocomposites*, 3/4 , 144-156, 2007
7. K. Raftopoulos, I. Zegkinoglou, A. Kanapitsas, S. Kripotou, I. Christakis, A. Vassilikou-Dova, P. Pissis, Y. Savelyev "Dielectric & hydration properties of segmental polyurethanes" *e-Polymers 043[2004]*

Oral Presentations

1. "Polyurethane-POSS organic-inorganic hybrid materials. The effect of soft segment length and nanoparticle content on the molecular dynamics " K. Raftopoulos, B. Janowski, L. Apekis, P. Pissis, K. Pielichowski 4th International Seminar on Modern Polymeric Materials for Environmental Applications, Krakow, Poland, 1-3 December 2010.
2. "Studies of molecular mobility in Polyurethane – POSS organic-inorganic hybrid polymers" K.N. Raftopoulos, B. Janowski, L. Apekis, P. Pissis, K. Pielichowski XII Polish Ukrainian Symposium "Theoretical and experimental studies of interfacial phenomena and their technological applications" / 2nd COMPOSITUM conference "Hybride nanocomposites and their applications" Kielce, Poland, 24-28 August 2010
3. "Molecular Dynamics Studies in Polyurethane – POSS Nanocomposites" K. Raftopoulos, C. Pandis, L. Apekis, P. Pissis, K. Pielichowski, B. Janowski 3rd International Seminar of Modern Polymeric Materials for Environmental Applications,

- Krakow, Poland, 14-16 May, 2008
4. "Dielectric & Hydration Properties of Segmental Polyurethanes"
K.Raftopoulos, I. Zegkinoglou, A. Kanapitsas, S.Kriptou, I. Christakis, A.Vassilikou-Dova, P.Pissis, Y.Savelyev
Polychar – 11 World Forum on Polymer Applications & Theory
University of North Texas, Denton, USA, 2003
 5. "Dielectric and Water Sorption/Diffusion Studies in Polyurethanes"
I.Zegkinoglou, K.Raftopoulos, A. Kanapitsas, S.Kriptou, P.Pissis, A.Vassilikou-Dova, Y.Savelyev
2nd International Conference on Broadband Dielectric Spectroscopy and its applications,
Leipzig, Germany, 2002
 6. "Hydration Effects on the Electrical & Dielectric Properties of Polyurethane Copolymers"
A.Vassilikou-Dova, K.Raftopoulos, I.Zegkinoglou, P.Pissis, A. Kanapitsas, Y.Savelyev
Polychar – 10 World Forum on Polymer Applications & Theory
University of North Texas, Denton, USA, 2002

Poster presentations

1. "Dielectric and thermal studies of the molecular dynamics of PMMA/Silica nanocomposites synthesized by sol-gel technique"
K. Kyriakos, K. Raftopoulos, P. Pissis, F. Naether, L. Haeusler, D. Pospiech
International workshop "Safe nanostructured polymer materials: characterization and new processing technologies", Pozzuoli (Naples), Italy, 2011
2. "Molecular mobility studies in Oligourethaneacrylate-MMT nanocomposites"
A. Malamou, K.N. Raftopoulos, A. Kyritsis, A.N. Gonchar, Yu.V. Savelyev, P. Pissis
Technological seminar "Polymer nanomaterials for food packaging. Characterization needs, safety and environmental issues", London, United Kingdom 2010
3. "Molecular mobility and hydration properties of Polyurethane-Polysaccharide nanocomposites"
D. Aravopoulou, K. Raftopoulos, A. Kyritsis, E.A. Mishchuk, T.V. Travinskaya, Yu.V. Savelyev and P. Pissis.
Technological seminar "Polymer nanomaterials for food packaging. Characterization needs, safety and environmental issues", London, United Kingdom 2010
4. "Molecular dynamics of hyperbranched polymers with urethane and urea linkages"
K. Raftopoulos, A. Kyritsis, M.A. Rehim, Sh.S. Shabaan, A. Ghoneim, G. Turkey
6th International Discussion Meeting on Relaxation in Complex Systems. New results, Directions and Opportunities, Rome, Italy, 2010
5. "A thermal and dielectric study of molecular dynamics in polyurethane-poss hybrids"
K. Raftopoulos, C. Pandis, L. Apekis, B. Janowski, K. Pielichowski, P. Pissis
7th Hellenic Polymer Conference, Ioannina, Greece, 2008
6. "Dielectric Studies of Molecular Mobility of Linear-Hyperbranched Polyimide Blends"
K. Raftopoulos, S. Kriptou, L. Apekis, P. Pissis, V. Beshtein, P. Sysel
European Polymer Congress, Portoroz, Slovenia, 2007
7. "Molecular Mobility of Stannoxane Modified Epoxy Resins"
S.Kosma, K.Raftopoulos, P.Pissis, A.Strachota, L.Matejka, F.Ribot
3rd International Symposium on "Nanostructured and Functional Polymer-based Materials and Nanocomposites", Corfu, Greece, 2007
8. "Fullerene in Polymer Matrices. A thermal and Dielectric Study"
A.D. Pyrdas, K.Raftopoulos, S.V. Gladchenko, G.A.Polotskaya, V.P. Malinovskaya, C.Christodoulides and P. Pissis
IDS & DRP Conference of the International Dielectric Society. Poznan, Poland, 2006
9. "Dielectric Studies of Segmental Polyurethanes"

K.Raftopoulos, I.Zegkinoglou, M.Roussos, A.Vassilikou-Dova, A.Kanapitsas, P.Pissis, Y.Savelyev

CMD20 Conference of the Condensed Matter Division of the European Physical Society.
Prague, Czech Republic, 2004

Awards

1. Scholarship by the Department of Physics, NTUA (2006 – 2009)
2. Scholarship by the State Scholarship Foundation, Athens, Greece (1999)
3. Scholarship by the Kydoniefs foundation, Andros, Greece (1999)

International scientific visits

- 12/2010 Department of Chemistry and Technology of Polymers, Krakow University of Technology, Poland. Within the COST framework.
- 06-08/2010 Institute of surface chemistry, National Academy of Sciences, Kiev, Ukraine. In the frame of COMPOSITUM European collaboration.
- 09/2008 Leibnitz Institute for Polymer Research, Dresden Germany. In the frame of IKYDA bilateral scientific cooperation program.
- 4/2008 Institute of microwave physics and dielectrics, National Research Center, Cairo, Egypt. In the frame of bilateral scientific cooperation program, General Secretariat of Research and Technology of Greece.
- 9/2007 Department of physics, University of Rostock, Germany. Within the COST framework.

Other activities

1. Member of organizing committee of Demonstration Course “Characterization methodology and tools for new polymer nanostructured materials”, 13-15 May 2009, Athens, Greece. In the frame of European network “NaPolyNet”.
2. 2006 – 2009 graduate student representative in the administration board of School of Applied Mathematics and Physics, NTUA.