

# Politakos Nikolaos

(email: [npolitak@cc.uoi.gr](mailto:npolitak@cc.uoi.gr) & [nikolaos.politakos@ehu.es](mailto:nikolaos.politakos@ehu.es) )

## *Personal information*

Date of birth: October 12<sup>th</sup> 1982

Place of birth: Athens, Greece

Nationality: Greek

---

## **Education**

- 2000: Graduated from 12<sup>th</sup> High school in Peristeri, Athens with the grade of “Very Good” (17 and 6/12 out of 20).
- 2000 – 2005: Diploma in “Materials Science and Engineering” from the Department of Materials Science and Engineering, University of Ioannina, with the grade of “Very Good” (7,61/10). Undergraduate Thesis title: “Synthesis, Molecular and Morphological Characterization, Application of Linear Copolymers of the Type A-b-B, Polystyrene (A) and Polydimethylsiloxane (B), (PS-b-PDMS), by Anionic Polymerization”. Supervisor: Associate Professor Apostolos Avgeropoulos
- November 2005: First Year of Graduate Studies in the “Chemistry and Technology of Materials” in the Department of Materials Science and Engineering at the University of Ioannina, aiming for a Master’s Degree and PhD.
- November 2007: **MSc Diploma awarded** in Graduate Studies in the “Chemistry and Technology of Materials” in the Department of Materials Science and Engineering at the University of Ioannina entitled: “Synthesis and Characterization of Linear and Cyclic Homopolypeptides”. Supervisor: Associate Professor Apostolos Avgeropoulos.
- November 2006 – June 2010: PhD candidate. Thesis title: “Synthesis, Molecular and Morphological Characterization, Copolymers of Different Architectures, Where the one Block is Polydimethylsiloxane (PDMS) or Polydiene (Polybutadiene, PB or Polyisoprene, PI) of Different Microstructures” Supervisor: Associate Professor Apostolos Avgeropoulos.
- December 2010- : Postdoctoral researcher at the University of the Basque Country (Universidad del Pais Vasco, UPV) Supervisor: Professor Inaki Mondragon.

## **Languages**

- Greek (Native Language)
- English (Excellent Knowledge)

Certificates: “Certificate of Proficiency in English”, University of Michigan March 2006.

- Spanish (Good Knowledge)

## **Visits to Foreign Universities and Institutions**

- Oakridge National Lab (ORNL), at the Center For Nanophase Materials Science (CNMS), January-February 2008, Supervisor: Professor J. W. Mays and Dr. J. Messman (doing advanced characterization for the linear and cyclic homopolypeptides synthesized during my MSc Thesis).
- Cornell University, Department of Materials Science & Engineering, March 2008, Supervisor: Professor C. K. Ober (doing modification reactions and molecular-morphological characterization via  $^1\text{H-NMR}$  spectroscopy, FT-IR spectroscopy, AFM, TEM and SAXS for the diblock copolymers of the PS- $b$ -PB $_{1,2}$  diblock sequence synthesized during my PhD Thesis).

## **Additional Knowledge**

- Microsoft Windows Operating System.
- Programs: Microsoft Office, AutoCAD, Mathematica and Origin Lab.
- Programming Languages: FORTRAN 77 and C.

## **Educational Experience**

*2005-to date (5 semesters in total):* Teaching Assistant, “Materials Laboratory V (Polymeric Materials)” in the Polymeric Materials Laboratory, Department of Materials Science & Technology, University of Ioannina.

## **Participation in Scientific Projects**

1. **Hellenic Ministry of National Education & Religious Affairs, Managing Authority of Operational Programme “Education and Initial Vocational Training” PITHAGORAS II (1/4/2005-31/12/2007), title: “Synthesis and**

Theoretical Study of Linear and Complex Architecture Polypeptides”, *as Researcher* total budget: 50.000 € Scientific Coordinator: Associate Professor A. Avgeropoulos.

**2. Hellenic Republic Ministry Of Development General Secretariat For Research & Technology International S & T Cooperation Directorate Bilateral Relations Division (1/11/2006 -31/3/2008), title: “Structure Formation and Structure-Property Relations in Self-Organized Block**

Copolymer/Nanoparticle Composite Materials”, *as Researcher* total budget: 60.000 € Scientific Coordinator: Associate Professor A. Avgeropoulos.

**3. Bilateral Agreement of Participation (1/1/2008-29/2/2008) between the University of Ioannina (Department of Materials Science & Engineering) and the OakRidge National Laboratory (Center for Nanophase Materials Science) entitled: “Characterization in Solution and in Bulk of Linear and Cyclic Low Molecular Weight Homopolypeptides and Copolypeptides for Biomedical Applications” , *as Researcher* total budget: 4.000 US \$, Scientific Supervisors: Associate Professor A. Avgeropoulos and Professor J. W. Mays.**

**4. European Union Financed Program (17 partners, total budget required from the European Union.: 5.524.450 €, General P.I.: J. Barriga - PhD, TEKNIKER, Vittoria, Spain and duration 1/11/2008-31/10/2012), entitled: “Carbon Nanotube Confinement Strategies to Develop Novel Polymer Matrix Composites” with short name “POCO”, *as Researcher*, total budget for the Greek side: 340.200 € Scientific Coordinator for the Greek side: Associate Professor A. Avgeropoulos.**

## **Participation in Conferences**

**20<sup>th</sup> International Symposium in Polymer Analysis and Characterization, (ISPAC-2007, Agios Nikolaos, Crete, Greece, September 30 – October 3, 2007)**

- “*Synthesis, Molecular and Morphological Characterization of High Molecular Weight Linear Diblock Copolymers of Polystyrene (PS) and Poly(Dimethylsiloxane)*”

Politakos N., Ntoukas E., Avgeropoulos A., Krikorian V., Pate B. D. and Thomas E. L

**42<sup>nd</sup> World Polymer Conference (MACRO-2008) (Taipei, June 29-July 4, 2008)**

Oral Presentation (A. Avgeropoulos):

- “*Synthesis and Molecular Characterization of Novel Linear and Cyclic Poly(amino acids) from o-Benzyl-L-Tyrosine*”  
A. Avgeropoulos, N. Politakos, J. M. Messman, D. Pickel and J. W. Mays  
**7<sup>th</sup> Panhellenic Polymers Conference** (Ioannina, Greece, September 28 – October 1, 2008)

- “*Synthesis, molecular and morphological characterization of modified diblock copolymers with organic acid chloride derivatives*”  
N. Politakos, C.J. Weinman, C.K. Ober, A. Avgeropoulos  
**235<sup>th</sup> American Chemical Society (ACS) National Meeting**, (New Orleans, Louisiana, USA, April 6-10, 2008).

Oral Presentation (M. R. Bockstaller):

- “*Effect of Chain Architecture on Particle Miscibility in Block Copolymer-Nanoparticle Blends*”  
Listak J., Ryu H. –J., Rangou S., Politakos N., Misichronis K., Avgeropoulos A. and Bockstaller M. R.

## **Publications in Peer Reviewed Journals**

1. “*Effect of Chain Architecture on the Compatibility of Block Copolymer Nanoparticle Blends*”

Listak J., Ryu H. –J., Rangou S., Politakos N., Misichronis K., Avgeropoulos A.\* and Bockstaller M. R.\*

**Macromolecules**, **2009**, 42, 5766.

2. “*Strongly Segregated Cubic Microdomain Morphology Consistent with the Double Gyroid Phase in High Molecular Weight Diblock Copolymers of Polystyrene and Poly(dimethylsiloxane)*”

Politakos N., Ntoukas E., Avgeropoulos A.\*, Krikorian V., Bate B. D., Thomas E. L. and Hill R. M.

**Journal of Polymer Science Part B: Polymer Physics**, **2009**, 47, 2419.

3. “*A Mechanistic Study of  $\alpha$ -(Amino acid)-N-Carboxyanhydride Polymerization: Comparing Initiation and Termination Events in High-Vacuum and Traditional Polymerization Techniques*”

Pickel D. L., Politakos N., Avgeropoulos A., Messman J.M.\*

*Macromolecules*, **2009**, 42, 7781.

4. “*Synthesis, molecular, and morphological characterization of initial and modified diblock copolymers with organic acid chloride derivatives*”

Politakos N., Weinman C. J., Paik M. Y., Sundaram H.S., Ober C.K. \*, Avgeropoulos A.\*

*Journal of Polymer Science Part A: Polymer Chemistry*, **2011**, 49, 4292

Additionally one more manuscript is under preparation and will be submitted to high impact factor journals for possible publication which is entitled as follows:

“A Comparative Physicochemical Study of Humic Acids from Soils and

Lignites: NICA-Donnan Modeling” Drosos M., Jerzykiewicz M., Politakos

N., Avgeropoulos A. and Deligiannakis Y.

*Under preparation – Submission to Journal of Colloid and Interface Science*