

# Curriculum Vitae

**Last Name:** Krasanakis

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## Education:

- **PhD from Chemistry Department, School of Sciences and Engineering, University of Crete (July 2015).**
- **Master of Science in Physical Chemistry from Chemistry Department, School of Sciences and Engineering, University of Crete (December 2008).**
- **Bachelor in Materials Science from Materials Science and Technology Department, School of Sciences and Engineering, University of Crete (March 2006).**

## Lab Experience:

- **Postdoctoral research (3/2019 – 12/2019)** in the framework of a research program entitled “Innovative polymer greenhouse films via application of functional coatings.”
  - Application of hydrophobic polymeric coatings on LDPE substrates for the development of self-cleaning polymeric films for greenhouse applications. Use of silica nanoparticles to enhance the roughness of the material.
  - Study of the hydrophobicity and the oleophobicity of the produced films as well as their contact angle hysteresis (roll off angle).
  - Study the effect of the coating to the thermal and optical properties of the initial film.
  - Use of Contact Angle, Profilometry, Zeta Potential, Scanning Electron Microscopy, UV – Visible Spectroscopy, Differential Scanning Calorimetry, Thermogravimetric Analysis and ATR-FTIR techniques.
  - Collaboration with Plastika Kritis S.A. (Heraklion, Crete) for the application of the laboratory results in industry.
- **Doctoral Dissertation (12/2010 – 06/2015)** with title “Formation of hybrid nano-colloidal dispersions with core - shell topology» (Supervisors: Prof. S. H. Anastasiadis – Ass. Prof. Maria Vamvakaki).
  - Synthesis by emulsion polymerization of homopolymeric microgels & copolymeric core - shell microgels which respond to pH and study of their properties.
  - Synthesis of platinum (optical properties, catalytic activity) and iron oxide (magnetic properties) metallic nanoparticles inside polymeric microgels and study the properties of the hybrid materials.
  - Incorporation of ionic surfactants to the polymeric microgels and study their release and uptake percentages. The study was used as a simulation of anionic drugs.
  - Synthesis of hollow capsules by emulsion polymerization with three different procedures and study of their properties.

- Use of Dynamic and Static Light Scattering, Transmission Electron Microscopy, Scanning Electron Microscopy, UV – Visible Spectroscopy, X-Ray Diffraction, Size Exclusion Chromatography and Pehametric Titration techniques.
- Use of Small Angle X-Ray Scattering technique in European Molecular Biology Laboratory (EMBL-Hamburg).
- **Master’s Thesis (03/2006 – 12/2008)** with title «Synthesis and characterization of nanohybrid materials based on block copolymers and clays» (Supervisors: Prof. A. K. Rizos – Ass. Prof. Maria Vamvakaki – Dr. Kiriaki Chrissopoulou).
  - Synthesis of the diblocks via Atom Transfer Radical Polymerization and development of the nanohybrid materials.
  - Use of Size Exclusion Chromatography, Nuclear Magnetic Resonance, X-Ray Diffraction, Small Angle X-Ray Scattering, Differential Scanning Calorimetry, IR Spectroscopy and Fluorescence Spectroscopy techniques.
- **Bachelor’s Thesis (04/2005 – 02/2006)** with title “Study of the effect of the structure on the properties of nanocomposite materials which synthesized by Melt Intercalation, In situ Polymerization and In Situ Grafting-Intercalating in melt” (Supervisors: Ass. Prof. Maria Vamvakaki – Dr. Kiriaki Chrissopoulou).
  - Synthesis of the polymers and the nanocomposite materials and functionalization of specific clays to become organophilic.
  - Use of Differential Scanning Calorimetry, Thermogravimetric Analysis, Size Exclusion Chromatography, X-Ray Diffraction and Melt Rheology techniques.
- **Dynamic and Static Light Scattering Experiments** for the project «Structural and dynamic study of thylakoid membrane proteome of unicellular green alga *Scenedesmus obliquus*» during postgraduate courses (Supervisor: Prof. A. K. Rizos).

### Work Experience:

- **Production Manager** at the **Plastic Packaging Products Light Industry “Μανελάκης Ιωάννης κ ΣΙΑ Ο.Ε.”**, Praitoria Monofatsiou, Heraklion Crete (**July – August 2010**).
  - Manager of production, quality and security in a production unit with 4 employees.
  - Development of resistant, low cost, polymeric films.
- **Chemist** at the **soap making workshop “Αρχοντική – Ρειζάκης Νικόλαος κ ΣΙΑ ΟΕ”**, Rethimno (**01/2016 – 08/2016**).
  - Development of new recipes and improvement of the existing ones for natural cosmetics and handmade soaps.
- **Chemist** at the company **“Πετροκόλυμπος ΜΟΝ. ΙΚΕ”** which **produces oils and pastes** from oily fruits (**04/2018 – 02/2019**).
  - Development of a patented cold pressing method for oily fruits, in order to produce cosmetic oils and pulps.

### Teaching Experience:

- *Teaching assistant at the course “Chemistry Laboratory”* spring semester 2002-2003 and 2003-2004 (Materials Science and Technology Department).

- *Teaching assistant at the course “Chemistry Laboratory”* winter semester 2007-2008 and spring semester 2007-2008 (*Chemistry Department*).
- *Teaching assistant at the course “Physical Chemistry Laboratory II”* spring semester 2010-2011 and 2011-2012 (*Chemistry Department*).

### Distinctions-Awards:

- Scholarship from the Institute of Electronic Structure and Laser (IESL) of the Foundation for Research and Technology (FORTH).
- Second best grade between the graduates of the same year of admission at the Materials Science and Technology Department.
- Best poster presentation award in the 9<sup>th</sup> Panhellenic Polymer Conference (Thessaloniki 2012).

### Publications:

- Kantzilakis K, Aivaliotis M., Kotakis C., Krasanakis F., Rizos A. K., Kotzabasis K., Tsiotis G., *Biochimica et Biophysica Acta*, **2007**, 1768, 2271.

### Conferences:

- XXIV Panhellenic **Conference on Solid State Physics and Materials Science** (Heraklion 2008).
- 5<sup>th</sup> Panhellenic **Symposium on Porous Materials** (Heraklion 2011).
- **MacroGroup UK International Conference** on Polymer Synthesis (London 2012).
- 9<sup>th</sup> Panhellenic **Polymer Conference** (Thessaloniki 2012).
- 10<sup>th</sup> Panhellenic **Polymer Conference** (Patras 2014).
- XXX Panhellenic **Conference on Solid State Physics and Materials Science** (Heraklion 2014).
- **QualityNano** Conference (Heraklion 2015).
- **European Polymer Congress** (Heraklion 2019).

### Other Skills:

- **Certificate in Cosmetology**
  - Production methods for cosmetics from natural products and plants. (*National and Kapodistrian University of Athens, October 2016*).
- **Computers:**
  - European Computer Driving License (*ECDL*).
  - *MS Office* (Word, Excel, PowerPoint, Access) & Internet.
  - *AutoCAD, Sketchup, Ultraclean, ORIGIN, ChemDraw & EndNote*.
- **Languages:**
  - *English* – First Certificate in English from Cambridge University (*Lower – Grade: B*)
- **Driving License:**
  - For Motorcycle (until 50 c.c.) and Car (B Category).