

MITZITHRA CHRISTINA

CHEMICAL ENGINEER

Birth Date: 14/8/1986 ♦ Email: mitzithra.christina@gmail.com ♦ Phone number: +30 - 2106503957 ♦

PROFESSIONAL EXPERIENCE

09/2019-Today: **Scientific Associate**

at Membranes and Materials for Environmental Separations Laboratory (MESL), Institute of Nanoscience and Nanotechnology (INN), National Centre for Scientific Research ‘Demokritos’(NCSR)

- Research area: Graphene derivatives, Nanocomposites, Metal Nanoparticles and Nanowires, Conductive Inks
- Participation in the research program: “Development of water based conductive inks based on graphene for gravure and flexography printing (GRAPHEIN)” (GSRT, RESEARCH – CREATE – INNOVATE (T1EDK-02093)).

03/2013-08/2019: **Scientific Associate**

at General Chemistry Laboratory, School of Chemical Engineering, National Technical University of Athens (NTUA)

- Research area: Semiconductor Chemistry, Cadmium Chalcogenides, Electrodeposition, Thin Films
- Participation in the research program: “Synthesis of new molecules similar to flavonoid molecules and study of the antioxidant and photoconductive behaviour.” (PEBE 2009(65/1796)), Organic Chemistry Laboratory, School of Chemical Engineering, NTUA).
- Co-supervision of six (6) Diploma theses (setup apparatus, running experiments and data processing).
- Assistance in teaching the laboratory exercises of “General Chemistry” (undergraduate) and “Semiconductor Photoelectrochemistry” (postgraduate) courses.
- Research proposal writing for funding.
- Handling and maintenance of laboratory scientific equipment, management of consumables and financial resources, market research of appropriate laboratory instruments and supplies.

10/2015-06/2017: **Chemistry Teacher**

at Prestige - Telis Kikeris, private institute of vocational training. Teaching the course “Materials Technology” to hairdressing students (surfactants, dye chemistry and cosmetics, protection measures etc.) - preparation for the certification examinations.

06/2012-09/2012: **Chemical Engineer**

at Hellenic Petroleum SA. Internship in the Supply and Trading Department in the industrial facilities of Aspropyrgos.

07/2008-09/2008: **Chemical Engineer**

at OSMO Vitali Bros & Co. Internship in the Water Treatment Department.

- Chemical analysis of water samples.
- Study and manufacture of technical projects related to water processing (filtration, desalination, disinfection, purification).

EDUCATION

Today: **Phd Candidate**

School of Chemical Engineering, NTUA

Dissertation Thesis: *Design, Development and Characterization of New Hybrid (Inorganic - Organic) Semiconductive Systems.*

2013: MSc in Automation Systems: Manufacturing and Production Systems & Control and Robotic Systems

School of Mechanical Engineering, NTUA

Diploma Thesis: *Polymeric nanoparticles for controlled anticancer drug delivery.*

2011: MEng and BSc in Chemical Engineering

School of Chemical Engineering, NTUA

Direction: Food - Biotechnology

Diploma Thesis: *CdSe semiconducting layers produced by pulse electrolysis.*

TRAINING

TOPAS Training Course (Bruker Axs Gmbh Karlsruhe, Germany): 4-6 May 2015, NTUA, Certificate of participation

TECHNICAL SKILLS AND COMPETENCES

Experienced in usage and application of:

- Electrochemical techniques (setting up of electrochemical apparatus, direct & pulse plating, electrochemical analysis, cyclic voltammetry).
- Electrical measurements by 4-point probe method using a Keithley precision source.
- Photoelectrochemical measurements using a photoelectrochemical cell (PEC).
- X-ray Diffraction Analysis (XRD), UV-Vis and FT-IR spectrometry, Thermogravimetric Analysis (TGA).
- Contact angle measurements.
- Chemical analyses, mainly by volumetric methods (acids, soap oils, pH, conductivity, water hardness, etc.), chromatographic separation methods.

OTHER SKILLS AND COMPETENCES

- ◆ **Languages**: English (Proficient user, C2)
- ◆ **Computer skills**: Experienced in using Windows and Microsoft Office Products (Word, Excel, Power Point, Outlook), Origin Lab, MathCad, Photoshop, Image J, Crystallographica, DIFFRAC.EVA.

MEMBERSHIPS

Technical Chamber of Greece

PUBLICATIONS

Co-author in **twelve (12)** publications in International Scientific Journals.

Eleven (11) announcements in National and International Conferences.

◆ **Scientific Journals**:

1. K. Milonakou-Koufoudaki, **C. Mitzithra**, S. Hamilakis, C. Kollia, Z. Loizos: «*Natural dyes in hybrid chalcogenide multi-layer thin films*», Bulletin of Materials Science **43** (2020) 140.

2. M. Yfanti-Katti, F. Prokopoulos-Chouliaras, K. Milonakou-Koufoudaki, **C. Mitzithra**, K. Kordatos, S. Hamilakis, C. Kollia, and Z. Loizos: «*Production and Identification of Highly Photoconductive CdSe-based Hybrid Organic-Inorganic Multi-Layer Materials*», Semiconductors **51** (2017) 1592–1596.
3. K. Milonakou-Koufoudaki, T. Lyros, **C. Mitzithra**, S. Hamilakis, C. Kollia, Z. Loizos: «*Development, characterization, and study of new (Cd,Zn)Se-based hybrid semiconductive systems*», Journal of Applied Electrochemistry **47** (2017) 1023-1033.
4. Z.A. Taha, A.K. Hijazi, T.S. Ababneh, I. Mhaidat, A.M. Ajlouni, K.A. Al-Hassan, **C. Mitzithra**, S. Hamilakis, F. Danladi, A.Y. Altalafha: «*Photophysical properties and computational study of newly synthesized lanthanide complexes with N-(2-carboxyphenyl) salicylideneimine Schiff base ligand*», Journal of Luminescence **181** (2017) 230-239.
5. S. Hamilakis, N. Gallias, **C. Mitzithra**, K. Kordatos, C. Kollia, Z. Loizos: «*Hexagonal, Electrodeposited CdSe in New Multi-Layer Hybrid Organic-Inorganic Semiconductive Systems with Remarkable High photoconductivity*», Materials Letters **143** (2015) 63-66.
6. S. Hamilakis, D. Balgis, K. Milonakou-Koufoudaki, **C. Mitzithra**, C. Kollia, Z. Loizos: «*Electrodeposition of CdSe Photoabsorber Thin Films in the Presence of Selected Organic Additives* », Materials Letters **145** (2015) 11-14.
7. S. Hamilakis, M. Roussaki, **C. Mitzithra**, M.M. Dardavila, C.P. Raptopoulou, V. Psycharis, C. Kollia, Z. Loizos: «*Study of the relation existing between photoresistivity and substituents characteristics of some coumarin derivatives*», Chemical Engineering Transactions **41** (Special Issue 2014) 265-270.
8. **C. Mitzithra**, E. Chountoulesi, S. Hamilakis, K. Kordatos, C. Kollia, Z. Loizos: «*Development of New CdTe Based Hybrid Semiconducting Layers Produced in One Step by Electro-Codeposition*», Semiconductors **47** (2013) 1303-1307.
9. E. Chountoulesi, **C. Mitzithra**, S. Hamilakis, K. Kordatos, C. Kollia, Z. Loizos: «*A Low Cost Synthesis of Fullerene Derivatives*», Synthetic Communications **43** (2013) 1-8.
10. E. Chountoulesi, **C. Mitzithra**, S. Hamilakis, K. Kordatos, C. Kollia, Z. Loizos: «*One-Step Electro-Codeposition for Developing New Hybrid Semiconductors*», Materials Letters **93** (2013) 45-48.
11. **C. Mitzithra**, S. Hamilakis, C. Kollia, Z. Loizos: «*CdSe Semiconducting Layers Produced by Pulse Electrolysis*», Semiconductors **46(5)** (2012) 615-618.
12. **C. Mitzithra**, V. Kaniaris, S. Hamilakis, K. Kordatos, C. Kollia, Z. Loizos: «*Development and Study of New Hybrid Semiconducting Systems Involving Cd Chalcogenide Thin Films Coated by a Fullerene Derivative*», Materials Letters **65** (2011) 1651–1654.

◆ **Announcements in International Conferences:**

1. **C. Mitzithra**, D. Giasafaki, V. Belessi, Th. Steriotis, G. Charalambopoulou: «*Electrical and Despersibility Properties of New rGO/AgNPs Hybrid Systems*», NANOCON 2021, Brno, Czech Republic, 20-22 October 2021.
2. D. Giasafaki, **C. Mitzithra**, V. Belessi, G. Charalambopoulou, Th. Steriotis: «*Development of Conductive and Hydrophilic rGO/AgNWs Composites for Electronic Applications*», NANOCON 2021, Brno, Czech Republic, 20-22 October 2021.
3. A. Koutsoukias, Th. Philippakopoulou, M. Anastasopoulou, D. Giasafaki, **C. Mitzithra**, Th. Steriotis, G. Charalambopoulou, V. Georgakilas, V. Belessi : «*Carbon Black and reduced Graphene Oxide water-based conductive inks*», IARIGAI 2021: 47th iarigai and 52nd International Circle Conference, Athens-Greece, 19-24 September 2021.
4. S. Hamilakis, M. Roussaki, **C. Mitzithra**, M. M. Dardavila, C. P. Raptopoulou, V. Psycharis, C. Kollia, Z. Loizos: «*Study of the Relation existing between Photoresistivity and Substituents Characteristics of some Coumarin Derivatives*», Chemical Engineering Transactions Vol. 41, 2014.
5. R. Papadakis, **C. Mitzithra**, K. Soumas, S. Hamilakis, C. Kollia, Z. Loizos & A. Tsolomitis: «*Synthesis and Photoelectrochemical Characterization of Semiconductive 4,4' bipyridine hexafluorophosphate Salts*», 8th International Conference on Instrumental Methods of Analysis, Thessaloniki, 15-19 September 2013.
6. E. Chountoulesi, **C. Mitzithra**, M. Dardavila, S. Hamilakis, K. Kordatos, C. Kollia, Z. Loizos: «*One-Step Electro-Codeposition for Developing Hybrid Semiconductors*», Materials Letters **93** (2013) 45-48.