

# CURRICULUM VITAE

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**Name** : Maria Vlachou  
**Year of Birth** : 1986  
**Nationality** : Greek  
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## **1. EDUCATION**

- Oct. 2017 – July 2018      MBA Studies: American College of Thessaloniki, Anatolia College, Greece  
MBA Thesis: *University based entrepreneurship: The case of Aristotle University of Thessaloniki*
- Oct. 2012 – June 2017      PhD Studies: Department of Chemistry, Aristotle University of Thessaloniki in Greece  
PhD Thesis: *Investigation of flow in boiling macro-structured/macro-porous channels*
- May 2012      Postgraduate Studies: Environmental and Sanitary Engineering, Technical University of Crete in Greece (Degree: 9.19/10)  
Master thesis: *Chromium (Cr<sup>6+</sup>) and nickel (Ni<sup>2+</sup>) removal from aquatic solutions by electrocoagulation*
- Oct. 2010 – Dec. 2011      Postgraduate Studies: Environmental and Sanitary Engineering, Technical University of Crete in Greece (Degree: 9.19/10)  
Master thesis: *Chromium (Cr<sup>6+</sup>) and nickel (Ni<sup>2+</sup>) removal from aquatic solutions by electrocoagulation*
- Oct. 2004 – Nov. 2009      Graduate Studies: Chemical and Process Engineering, Aristotle University of Thessaloniki in Greece (General degree: 8.28/10)  
Diploma thesis: *Bioreduction of Cr(VI) to Cr(III) by the microorganism Arthrobacter sp.*

### **Scholarships:**

- Graduate Studies:      Scholarship for the academic year 2008-9, School of Chemical Engineering, Division of Chemistry, Aristotle University of Thessaloniki
- Postgraduate Studies:      Scholarship for the academic year 2010-11, School of Environmental Engineering, Division of Toxic and Hazardous Waste Management, Technical University of Crete
- PhD studies:      IKY Fellowships of excellence for postgraduate studies in Greece – SIEMENS program 2012-2016, School of Chemistry, Division of Chemical Technology, Aristotle University of Thessaloniki

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## **2. FOREIGN LANGUAGES**

- English:      Certificate of Proficiency – University of Michigan (C2)
- German:      Zertifikat Neugnis – Goethe Institut (B1)
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### **3. WORK EXPERIENCE**

June 2022 – today	Post-doc researcher, Chemical and Environmental Technology lab,
July 2017 – Dec 2018	School of Chemistry, Aristotle University of Thessaloniki, Greece. <i>Research Funded Projects (ESA, ESPA etc.)</i>
Jan 2021 – today	Chief Technical Officer and Innovative Solutions Manager in Clockwork, Technical Company and Renewable Energy Construction Projects, Thessaloniki, Greece.
Dec 2018 – Jan 2021	Chemical Engineer in Sterimed S.A., Medical Waste Treatment plant, Sindos, Greece.
Sept 2009 – Nov 2009	Experimental work in the Particles, Polymers and Biomaterials Technology lab of Chemical Engineering Department, University of Coimbra (CIEPQPF), Portugal. <i>Project: Preparation and characterization of pectin-chitosan composite scaffolds for bone tissue Engineering</i>
Aug 2009 – Sept 2009	Chemical analysis in the laboratory of the winery «Domaine Gerovassiliou», Epanomi, Greece.
June 2008 – Aug 2008	Experimental work in the Colloidal Engineering lab of Chemical Engineering Department, Strathclyde University, Glasgow, Scotland. <i>Project: Engineering of sol-gel formation processes of nanoporous carbon aerogels</i>

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### **4. PUBLICATIONS**

#### **A. JOURNALS**

1. Xanthopoulou, Y., Vlachou, M.C., Kostoglou, M., & Karapantsios, T.D., Experimental study on subcooled flow boiling heat transfer of water-SDS mixtures in a vertical microchannel, *Experimental Thermal and Fluid Science*, 145, 110902, (2023).
  2. Kostoglou, M., Karapantsios, T.D., Chondrou, A.P., Vlachou, M.C., Towards an accurate size distribution of emulsion droplets by merging distributions estimated from different measuring methods, *Colloids and Interface Science Communications*, 46, (2022).
  3. Ntafalias, A., Tsakanikas, S., Skarvelis-Kazakos, S., Papadopoulos, P., Skarmeta-Gómez, A. F., González-Vidal, A., Tomat, V., Ramallo- González, A., Marin-Perez, R., & Vlachou, M. C., Design and implementation of an interoperable architecture for integrating building legacy systems into scalable energy management systems. *Smart Cities*, 5(4), 1421-1440, (2022).
  4. Maria C. Vlachou, Konstantinos A. Zacharias, Margaritis Kostoglou, Thodoris D. Karapantsios, Droplet size distributions derived from evolution of oil fraction during phase separation of oil-in-water emulsions tracked by electrical impedance spectroscopy, *Colloids and Surfaces A*, 586 (2020).
  5. Maria C. Vlachou, Chara Efstathiou, Aristomenis Antoniadis, Thodoris D. Karapantsios, Micro-grooved surfaces to enhance flow boiling in a macro-channel, *Experimental Thermal and Fluid Science*, 108, 61-74 (2019).
  6. M. Vlachou, J. Lioumbas, M. Kostoglou, K. David, D. Chasapis, C. Schwarz, J. van Loon, T. Karapantsios, "Subcooled flow boiling in horizontal and vertical macro-channel under Earth-gravity and hyper-gravity conditions", *International Journal of Heat and Mass Transfer*, 133, 36-51 (2018).
  7. M. Vlachou, T. Karapantsios, "Effect of channel inclination on heat transfer and bubble dynamics during subcooled flow boiling", *International Journal of Thermal Sciences*, 124, 484-495 (2018).
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8. M. Vlachou, J. Lioumbas, C. David, D. Chasapis, T. Karapantsios, "Effect of channel height and mass flux on highly subcooled horizontal flow boiling", *Experimental Thermal and Fluid Sciences*, 83, 157-168 (2017).
9. M. C. Vlachou, J. S. Lioumbas, T. D. Karapantsios, "Heat transfer enhancement in boiling over modified surfaces: A critical review", *Interfacial Phenomena and Heat Transfer*, 3 (4), 341-367 (2015).
10. M. Vlachou, J. Hahladakis, E. Gidarakos, "Effect of various parameters in removing Cr and Ni from model wastewater by using electrocoagulation", *GlobalNEST*, 15 (4), 494-503 (2013).

## B. CONFERENCES

1. Terzopoulou, Z., Kourtidou, D., Tarani, E., Vlachou, M. & Bikiaris, D. "Crosslinked polyethylene/expanded graphite composites for geothermal heating/cooling pipe applications", poster, *European Polymer Congress*, Hersonissos Heraklion Crete, Greece, June 9-14 (2019).
2. M. C. Vlachou, J. S. Lioumbas, C. David, D. Chasapis, T. D. Karapantsios, "The effect of increased gravitational acceleration on flow boiling incipience" oral, *11<sup>th</sup> International Conference on Two-phase Systems for Ground and Space Applications*, Marseille, France, September 26-29 (2016).
3. M. C. Vlachou, J. S. Lioumbas, T. D. Karapantsios, "Flow boiling incipience in macro-channels: Working conditions that maximize heat removal" oral, *Smart and Green Interfaces Conference & COST MP1106 Annual meeting*, Athens, Greece, May 4-6 (2016).
4. M. C. Vlachou, J. S. Lioumbas, T. D. Karapantsios, "Highly subcooled flow boiling in macro-channels: Effect of channel's height and orientation" poster, *Smart and Green Interfaces Conference & COST MP1106 Annual meeting*, Athens, Greece, May 4-6 (2016).
5. M. C. Vlachou, J. S. Lioumbas, C. David, T. D. Karapantsios, "Subcooled flow boiling in a rectangular macro-channel at high mass flow rates: Performance of horizontal and vertical orientation", poster & short oral, *International Symposium and School for Young Scientists Interfacial Phenomena and Heat Transfer*, Novosibirsk, Russia, March 2-4 (2016).
6. M. C. Vlachou, J. S. Lioumbas, C. N. David, D. Chasapis, T. D. Karapantsios, "Heat transfer characteristics during subcooled flow boiling: Influence of inclination angle" oral, *6<sup>th</sup> International Conference on Bubble and Drop interfaces*, Potsdam-Golm, Germany, July 6-10 (2015).
7. M. C. Vlachou, J. S. Lioumbas, T. D. Karapantsios, "Flow boiling heat transfer as means of cooling in a rectangular macrochannel" oral, *Smart and Green Interfaces Conference & COST MP1106 Annual meeting*, Belgrade, Serbia, March 30 – April 1 (2015).
8. M. Vlachou, J. Lioumbas, T. Karapantsios, "Device for the study of highly efficient flow boiling heat transfer in a macro-channel" poster, *5<sup>th</sup> International Conference on Heat Transfer and Fluid Flow in Microscale*, Marseille, France, April 22-24 (2014).

## 5. SEMINARS/ TAININGS

"Protection of inventions – From conceptual idea to commercialization", Dissemination Centre, Aristotle University of Thessaloniki, Greece, Nov. 1 (2016).

4-7 May 2015: "From Innovation to Entrepreneurship...", Dissemination Centre, Aristotle University of Thessaloniki, Greece.

16-18 July 2013: "Cultivating Entrepreneurial Ideas", Dissemination Centre, Aristotle University of Thessaloniki, Greece.

23-25 Apr. 2013: "A way to Smart Europe", University of Twente, Enschede, The Netherlands.

Feb-Apr. 2013 (Training program): Transferable/ Key Competences for Doctoral Candidates, Aristotle University of Thessaloniki, Greece.

“The contribution of Green Chemistry to the protection of the environment – Biofuels”, Hyatt Regency, Thessaloniki, Greece, Nov. 29 (2008)

14th Hellenic Medicinal Chemistry Symposium, Teloglion Foundation of Arts, Aristotle University of Thessaloniki, Greece, Apr. 23-25 (2010).

7th National Conference of Chemical Engineering, Conference and culture hall of University of Patras, Greece, June 3-5 (2009).

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