Theodora Ramantani

**Title:** Collaborative Teaching Staff (Assistant Lecturer) / Junior in Chinese system

**Affiliation:** Department of Chemical Engineering, University of Patras, 1 Caratheodory Str., University Campus, 26504, Greece

**Date of birth:** December 5, 1992

**Place of birth:** Athens, Greece

**Address:** Selinountos 11, GR 26442, Patras

**E-mail:** ramantani@chemeng.upatras.gr

https://scholar.google.com/citations?user=dCl8hWIAAAAJ&hl=el

# Theodora Ramantani graduated from the Department of Chemical Engineering, University of Patras (ChemEngUP), Greece in 2015. She holds a PhD (2023) and an MSc (2017) from ChemEngUP and she currently is a Postdoctoral Researcher at the Laboratory of Heterogeneous Catalysis. She has served as a teaching assistant in *Organic Chemistry*, *Polymers Laboratory,* and *Chemical Engineering Process Laboratory II* undergraduate courses in ChemEngUP, and co-advised more than fourteen (14) diploma theses in ChemEngUP. She has totally over 6 years’ experience in teaching and research.

# Her expertise covers the scientific field of Catalysis, with a specialty in the development and characterization of catalysts for hydrogen production by steam reforming of propane and LPG, as well as in the development of catalytic systems for CO2 hydrogenation to value-added products, such as methanol. Her technical skills include catalyst characterization techniques, such as BET, TEM, SEM, XRD, CO and H2 selective chemisorption, temperature-programmed desorption, reduction, oxidation, and surface reaction, and *in situ* FTIR spectroscopy. These techniques are used to determine the physicochemical characteristics of catalysts and to understand how these characteristics affect their catalytic behavior. She has great experience in catalytic performance and stability tests applying gas chromatography.

# She participates as post-doc researcher in the “PERFORMANCE” project in the frame of the 3rd proclamation for post-doctoral researchers of the HFRI and participated as a Ph.D. student in 2 other funded research projects. She has authored and co-authored 9 papers in international peer-reviewed journals (citation index: 77, h-index: 5, Google Scholar/17-02-2024). She has 3 presentations at international conferences and 11 presentations at national conferences and workshops.

# An important distinction of her academic career is the Limmat Foundation Scholarship award of excellence related to her academic performance in her postgraduate studies (MSc) in ChemEngUP. In addition, she has been awarded for two publications at national conferences.

# JOURNAL PUBLICATIONS

1. Effect of the nature of the support, operating and pretreatment conditions on the catalytic performance of supported Ni catalysts for the selective methanation of CO, Catal. Today, 355 (2020) 832-843.
2. Propane Steam Reforming over Catalysts derived from Noble Metal (Ru, Rh)-substituted LaNiO3 and La0.8Sr0.2NiO3 Perovskite Precursors, Nanomaterials, 11 (2021) 1931.
3. Effect of Support on the Reactive Adsorption of CO from Low CO Concentration Streams on the Surface of Pd based Catalysts, Ind. Eng. Chem. Res., 60 (2021) 18722-18738.
4. Effect of Operating Conditions on the Performance of Rh/TiO2 Catalyst for the Reaction of LPG Steam Reforming, Catalysts, 11 (2021) 374.
5. Hydrogen Production by Steam Reforming of Propane and LPG over supported metal catalysts, Appl. Catal. B, 306 (2022) 121129.
6. Rethinking the molecular structures of WVIOx sites dispersed on titania: distinct mono-oxo configurations at 430 °C and temperature-dependent transformations, Dalton Transactions, 51 (2022) 7455-7475.
7. Catalytic performance and in situ DRIFTs studied of propane and simulated LPG steam reforming reactions on Rh nanoparticles dispersed on composite MxOy-Al2O3 (M: Ti, Y, Zr, La, Ce, Nd, Gd) supports, Appl. Catal. B, 316 (2022) 121668.
8. Steam reforming of butanol-ethanol mixture for H2 production over Ru catalysts, Applied Catalysis A General, 664 (2023) 119347.
9. Optimization of MxOy (La2O3 or Gd2O3) content in Rh/MxOy-Al2O3 catalyst formulation for the propane steam reforming reaction, Journal of Environmental Chemical Engineering, 11 (2023) 111059.

# CONFERENCE PUBLICATIONS

1. Catalyst’s preparation for methanol synthesis from CO2 hydrogenation, 14th Panhellenic Symposium of Catalysis, 2016, Patras.
2. Methanol production by CO2 hydrogenation over CuO/ZnO/MxOy catalysts, 5th Panhellenic Conference Green Chemistry and Sustainable Development, 2017, Patras.
3. Methanol production by hydrogenation of carbon dioxide over mixed oxides catalysts, 11th Panhellenic Scientific Conference on Chemical Engineering, 2017, Thessaloniki.
4. Catalytic performance of Cu/ZnO/MxOy catalysts (M=Al, Zr, Ga) for the CO2 hydrogenation, 15th Panhellenic Symposium of Catalysis, 2018, Ioannina.
5. CO2 hydrogenation over supported Pd catalysts, 15th Panhellenic Symposium of Catalysis, 2018, Ioannina.
6. Hydrogenation of carbon dioxide over supported Pd catalysts, 4th Workshop of Graduates and Postdocs in Chemical Engineering Sciences, 2018, Patras.
7. Steam reforming of propane over supported noble metal catalysts, 12th Panhellenic Scientific Conference on Chemical Engineering, 2019, Athens.
8. Propane steam reforming over supported noble metal catalysts, 5th Workshop of Graduates and Postdocs in Chemical Engineering Sciences, 2019, Patras.
9. Hydrogen production by steam reforming of propane over supported noble metal catalysts, 11th International Conference on Environmental Catalysis, 2020, Manchester.
10. Propane steam reforming over Ni-based perovskite oxides, 1st Online Symposium of Young Scientists on «Mineral Resources-Environment-Chemical Engineering», 2021.
11. Noble metal-substituted La0.8Sr0.2NixM1-xO3 (M: Ru, Rh) perovskite catalysts for propane steam reforming, World Sustainable Energy Days 2022, 2022, Wels.
12. Hydrogen production by steam reforming of LPG over supported catalysts Rh and Ru”, 13th Panhellenic Scientific Conference on Chemical Engineering, 2022, Patras.
13. LaSrNiXO3 (X: Zn, Mg, Fe, Co, Al, Cu, Ga) as heterogeneous persulfate activators for Losartan degradation in aqueous media, 11th European Conference on Pesticides and Related Organic Micropollutants in the Environment & 17th Symposium on Chemistry and Fate of Modern Pesticides, 2022, Ioannina.
14. Steam reforming of LPG over Ni-based perovskite oxide catalysts, 16th Panhellenic Symposium of Catalysis, 2022, Chania.