DEPARTMENT OF CHEMICAL ENGINEERING – UNIVERSITY OF WESTERN MACEDONIA

Name and Surname:	Nikolaos D. Charisiou	
Specialization/Position:	Assistant Professor, Department of Chemical Engineering, UOWM	
Brief CV:	Dr Nikolaos D. Charisiou (ORCID: 0000-0001-6339-4535) is an Assistant Professor at the Department of Chemical Engineering of the University of Western Macedonia (UOWM), Greece. He is also a member of the Laboratory of Alternative Fuels and Environmental Catalysis. He holds a BSc in Environmental Management and Sustainability from the Manchester Metropolitan University (2000), and an MSc in Environmental Engineering (2002) from the Department of Mechanical Engineering of the University of Manchester. He obtained his PhD in the Utilization of Biomass in 2017 from the University of Patras. He is the author of **86 manuscripts** that have been published in peer reviewed international journals. The total impact factor (IF) of these publications is **IF = 528.624** (Scopus), giving him an average IF/paper = **6.147**. His work has attracted more than **3327 citations** (Scopus, 3977 in Google Scholar), and his **Hirsch index (h-index) is 31** (Scopus, 33 in Google Scholar). Dr Nikolaos Charisiou publication record also includes 2 book chapters (Wiley) and 203 publications in peer reviewed international (141/195) and national (62/195) conference proceedings. His research activities are focused on the field of Heterogeneous Catalysis and, especially, in materials synthesis and characterization, catalyst development and evaluation, and investigation of reaction kinetics and mechanisms. Of particular interest is the investigation of the surface chemistry and structure of dispersed metallic systems and of reducible metal oxides and their mixtures. Materials are characterized using a combination of physicochemical techniques, including selective chemisorption of probe molecules, temperature programmed desorption, reduction and oxidation (TPR, TPO and TPD), FT-IR, Raman, XPS and XRD. In parallel to catalyst development and testing, fundamental studies are made to identify the surface parameters, which determine the catalytic performance. Identification of reaction pathways and mechanisms is accomplished with the combined use of in situ FT-IR spectroscopy and transient mass spectrometry.	
Publications 2018-2023	1. Alkhoori A.A., et al., Charisiou N.D., Goula M.A., Efstathiou A.E., Polychronopoulou K., Mechanistic Features of the CeO_2-Modified Ni/Al_2O_3 Catalysts for the CO_2 Methanation Reaction: Experimental and Ab Initio Studies. *ACS Appl. Energ. Mater.* 6 (16) (2023) 8550-8571. [IF=6.959] 2. Harkou E., Hafeez S., Adanou P., Tsiotsias A.I., Charisiou N.D., Goula M.A., et al., Different reactor configurations for enhancement of CO_2 methanation. *Environ. Res.* 236 (1) (2023) 116760. [IF=8.431] 3. Latsiou A.I, Charisiou N.D., Frontistis Z., Bansode A., Goula M.A., CO_2 hydrogenation for the production of higher alcohols: Recent trends, challenges and opportunities. *Catal. Today* 420 (2023) 114179. [IF = 6.766] 4. Rudolph B., Tsiotsias A., et. al., Charisiou N.D., Goula M.A., Mascotto S., Nanoparticle exsolution from nanoporous perovskites for highly active and stable biogas dry reforming catalysts. *Advanced Science* 10 (2023) 2205890. [IF=17.521] 5. Tsiotsias A., Charisiou N.D., et al., Goula M.A., Enhancing CO_2 methanation over Ni catalysts supported on sol gel derived Pr_2O_3-CeO_2: An experimental and theoretical investigation. *Appl. Catal. B: Environ.* 318 (2022) 121836. [IF=24.319]	
Distinctions:	1. Included in the top 2% of scientists worldwide in 2020 and 2021, for his impact in the scientific field Energy/Physical Chemistry (Baas, Boyak, Ioannidis, 2021; University of Stanford). 2. Guest Editor for: (i) Discover Chemical Engineering (Springer), (ii) Nanomaterials (MDPI), (iii) Catalysts (MDPI), (iv) Energies (MDPI) και (v) Materials (MDPI). 3. Peer Reviewer in >50 international journals	