

PARASKEVI PANAGIOTOPOULOU

Associate Professor
School of Chemical and Environmental Engineering
Technical University of Crete
GR-73100 Chania, Greece
Tel: (+30) 2821037770
e-mail: ppanagiotopoulou@tuc.gr

EDUCATION

- 2001-2006: Ph.D. in Chemical Engineering, University of Patras, Greece, degree: excellent.
Subject: "Development and characterization of novel catalytic materials for the Low temperature Water-Gas Shift reaction and kinetic study". Supervisor: D.I. Kondarides.
- 2001-2006: MSc. in Chemical Engineering, University of Patras, Greece, degree: excellent.
Subject: "Energy and Environment". Supervisor: D.I. Kondarides.
- 1996-2001: Diploma of Chemical Engineer, University of Patras, Greece, degree: 7.39 (advance).

PROFESSIONAL EXPERIENCE

- 2021-today: Associate Professor, School of Chemical and Environmental Engineering, Technical University of Crete.
- 2014-2020: Assistant Professor, School of Environmental Engineering, Technical University of Crete.
- 2012-2014: Senior Postdoctoral Researcher, Catalysis Center for Energy Innovation (CCEI), Department of Chemical and Biomolecular Engineering, University of Delaware, USA.
- 2006-2012: Post-doctoral Fellow – Researcher, Department of Chemical Engineering, University of Patras, Greece
- 2007-2009: Employee-Researcher at the HELBIO S.A. Hydrogen and Energy Production Systems (HELBIO is a Greek company, with expertise in the development, design and commercialisation of hydrogen, electricity and heat production systems using fuel cells).

EDUCATIONAL EXPERIENCE

- 2014-2021: Assistant and Associate Professor, School of Chemical and Environmental Engineering, Technical University of Crete (Teaching of the courses: "Thermodynamics", "Reaction Engineering (Chemical and Biochemical Processes)", "*Chemical Process Analysis and Design II*", "*Environmental Catalysis*", "*Gas-Emissions Treatment Technology*", "Field Studies I", "Special Topics of Catalytic surfaces and Catalytic Processes for Environmental Applications", "Advanced air pollutant treatment technologies").

- 2017-2021 : Collaborating Educational Staff at the School of Science and Technology of the & 2011-2013 Open Hellenic University. (Supervisor of five diploma thesis as a part of the Postgraduate Program “Catalysis and Environmental Protection”).
- 2011-2012: Adjunct Lecturer, Department of Chemistry, University of Patras (Teaching of two courses: (a) Physical Processes of Chemical Technology and (b) Chemical Processes).
- 2010-2011: Adjunct Lecturer, Department of Business Administration of Food and Agricultural Enterprises, University of Western Greece (Teaching of the course: General and Inorganic Chemistry).
- 2002-2004: Teaching of two courses (“Physical Chemistry” and “Process Dynamics and Control”) during the Ph.D. studies, at the Department of Chemical Engineering of the University of Patras.

RESEARCH INTERESTS AND ACTIVITIES

Research activities are focused in the fields of Heterogeneous Catalysis and, especially, in materials synthesis and characterization, catalyst development and evaluation, and investigation of reaction kinetics and mechanisms, with emphasis given in environmental and energy-related applications. Particular interest is given to the investigation of the surface chemistry and structure of dispersed metallic systems and of reducible metal oxides and their mixtures, with the aim of identifying the catalyst properties that determine catalytic performance. Materials are characterized using a combination of physicochemical techniques, including N₂ adsorption, XRD, selective chemisorption of H₂ or CO, temperature programmed desorption, reduction and oxidation (TPD, TPR and TPO), FT-IR, SEM-EDS and TEM. In parallel to catalyst development and evaluation, fundamental studies are conducted to explore the reaction mechanism using a combination of mass spectrometry (MS) and infrared spectroscopy (FTIR) techniques.

Primary goals in the field of *Heterogeneous Catalysis* are:

- Production of hydrogen via propane and LPG steam reforming for fuel cells applications.
- Dry reforming of methane towards syngas production.
- Propylene production through the CO₂-assisted oxidative dehydrogenation of propane.
- Hydrogenation of CO₂ for methane production.
- Production of hydrogen for fuel cells, by reformation of biomass-derived ethanol.
- Development and evaluation of water-gas shift (WGS) catalysts for fuel processors used in proton exchange membrane (PEM) fuel cell systems.
- Removal of carbon monoxide from hydrogen-rich reformat streams via selective methanation of CO.

Laboratorial experience

- Design, construction and operation of experimental apparatuses and reactors for the investigation of reactions under steady state and transient conditions.
- Preparation and characterization of catalytic and solid materials employing various techniques.

- Analytical techniques:
 - ✓ Gas Chromatography (GC)
 - ✓ Mass Spectrometry (MS)
 - ✓ UV/Visible Spectroscopy
 - ✓ Fourier Transform Infrared Spectroscopy (FTIR)
 - ✓ Diffuse Reflectance Spectroscopy (DRS)
 - ✓ Gas Chromatography/Mass Spectrometry (GC-MS)
 - ✓ X-ray Diffraction (XRD)
 - ✓ Temperature programmed desorption, reduction and oxidation (TPR, TPO and TPD)
 - ✓ Kinetic measurements
 - ✓ Techniques of measurement of total and exposed metallic surface area (BET method, selective chemisorption of gases)
 - ✓ Techniques of analytical chemistry
 - ✓ Operation and usage of laboratorial and mechanical equipment

FUNDED RESEARCH

Coordinator of **2** research project and member of the research group in **11** projects funded by EU and GSRT/HELLAS:

- “Advanced Nanostructured Materials for Sustainable Growth: Green Energy Production/Storage, Energy Saving and Environmental Remediation (GREENMAT)”, Flagship Actions, Institutional budget 600,000 € (Total 2.456.404€, GSRT-Greece), 2023-2025
- “Propylene (C₃H₆) production via oxidative dehydrogenation of propane (C₃H₈) with carbon dioxide (CO₂) ODP-CO₂” Financed by Hellenic Foundation for Research & Innovation (H.F.R.I.) Budget: € 195.000, 2022-2024. (Principal Investigator)
- “Development and pilot scale demonstration of an innovative, effective and eco-friendly process for the production of clean hydrogen and electrical power generation from biogas” (project code:T1EDK-00955) Co-financed by the European Union and Greek national funds through the Operational Program Competitiveness, Entrepreneurship and Innovation, under the call RESEARCH–CREATE–INNOVATE, Budget: € 208.000/€ 1.000.000, 2021-2024
- “Development and demonstration of complete process for the production of electrical energy from fuel cells through intermediate production of H₂ via LPG steam reforming” (project code:T1EDK-02442) Co-financed by the European Union and Greek national funds through the Operational Program Competitiveness, Entrepreneurship and Innovation, under the call RESEARCH–CREATE–INNOVATE, Budget: € 150.000/ € 674.854,93 2018-2021 (Coordinator/ Principal Investigator)
- “Production of clean hydrogen for fuel cells by reformation of bioethanol” (BIO-H2). ENERGY. Contract No.:ERK6-CT99-00012 (01.05.2001 – 31.07.2001).
- “Optimization of catalytic units of a novel process for the production of electricity from biomass for stationary applications” (PENED 2001). Contract No.: 01ED561 (2001-2005).

- “POMA-Proficient methods of liquid wastes process and gas pollutants inactivation”. Contract No.: 03EAD13 (2003-2004).
- “Production of bio-fuels and energy with fuel cells via hydrogen”. Contract No.: DEL23, (2000-2006).
- “Biomass Resource Use, Innovation and Efficiency-BRIE”, Interreg III C-East, RFO, INNOREF.
- “BIOELECTRICITY: Efficient and clean production of electricity from biomass via pyrolyses oil and hydrogen utilizing fuel”. Contract No.: ENK5-CT2002-00634 (2002-2005).
- “Development and Pilot Plant Demonstration of Hydrogen Production from Solar Energy and Biomass (Waste) Compounds and Derivatives at Ambient Conditions Mediated by Nanostructured Photocatalysts”. E.ON Research Initiative, Contract No.: 2008/24_DCE-UoPatras (Feb2009 – Jan 2012).
- “Production of Energy Carriers from Biomass By-Products. Glycerol Reforming for the production of Hydrogen, Hydrocarbons and higher Alcohols”. Operational Program "Education and Lifelong Learning" of the National Strategic Reference Framework (NSRF)-Research Funding Program: Thales. Investing in knowledge society through the European Social Fund (2011-2015).
- “New catalytic processes for the production of second generation biofuels” Operational Program "Education and Lifelong Learning" of the National Strategic Reference Framework (NSRF)-Research Funding Program: Thales. Investing in knowledge society through the European Social Fund (2011-2015).

PUBLICATIONS

- | | |
|---|----|
| • International Refereed Journals | 68 |
| https://www.scopus.com/authid/detail.uri?authorId=6507232857 | |
| • Book Chapters | 2 |
| • Translation supervision of the scientific book <i>Fundamentals of Thermodynamics</i> , C. Borgnakke & R.E. Sonntag | |
| • Presentations in International Conferences: | 52 |
| • Presentations in National Conferences | 39 |

CITATIONS

- | | |
|--|------|
| • Number of citations (<i>Source: Scopus</i>): | 6134 |
| • Hirsch index (<i>h</i> parameter) | 37 |

REFeree IN INTERNATIONAL SCIENTIFIC JOURNALS

- Referee in 30 international scientific journals (more than 160 articles), including Applied Catalysis B: Environmental, Applied Catalysis A: General, Fuel Processing Technology, Journal of Chemical Technology & Biotechnology, Water, Air and Soil

Pollution, Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry, Catalysis Today, ACS catalysis, Environmental Science and Technology, Catalysis Communications, Fuel, International Journal of Hydrogen Energy, Chemical Reviews, Water Science and Technology, *Progress in Energy and Combustion Science* (PECS), The Journal of Physical Chemistry, The Journal of Physical Chemistry Letters, Catalysis Science & Technology, Journal of Molecular Catalysis A: Chemical, Surfaces and Interfaces, Journal of Catalysis, Journal of Applied Chemistry, Industrial & Engineering Chemistry Research, Chemical Engineering Journal, Journal of CO₂ Utilization.

REFEREE IN NATIONAL/INTERNATIONAL CONFERENCES PROCEEDINGS

- EUROPACAT-IX, Salamanca, Spain, August 30- September 4, 2009
- 1st Online Conference of Young Scientists "on" Mineral Resources-Environment-Chemical Engineering, Kozani, 26-28 February 2021
- 13th Pan-Hellenic scientific conference of Chemical Engineering, Patras, 02-04 June, 2022.
- 16th Panhellenic Catalysis Symposium, Chania, 20-22 October, 2022.
- 15th Pan-Hellenic scientific conference of Chemical Engineering, Thessaloniki, 29-31 May, 2024.

MEMBERSHIPS OF EDITORIAL BOARDS

- Editorial Board Member of the journal *Catalysts*
- Guest Editor for the Special Issue on the "Advances in Biorefinery" of BioMed Research International.
- Guest Editor for the following Special Issues on Nanomaterials.
 - (i) Nanocatalysis for Environmental Protection, Energy, and Green Chemistry
 - (ii) Nanocatalysis for Environmental Protection, Energy, and Green Chemistry, 2nd Edition

SEMINARS – INVITED LECTURES

- Catalytic Transfer Hydrogenation for Upgrade of Furans, Web-Seminar, November 13, 2013, Catalysis Center for Energy Innovation, University of Delaware, Newark, Delaware, U.S.A.
- Development of catalysts and integrated process for hydrogen production from biomass, School of Environmental Engineering, Technical University of Crete, Greece 2015.
- Hydrogen production via steam reforming of propane and liquefied petroleum gas (LPG), Department of Chemical Engineering, University of Patras, Greece, 2022.

SUPERVISION OF M.Sc./Ph.D THESES

- (a) Supervision of three Ph.D thesis of the Postgraduate Studies Program of the School of Chemical and Environmental Engineering, Technical University of Crete:

1. **Alice Koka**, "Hydrogen production through catalytic steam reforming of liquefied petroleum gas (LPG)" (January 2017-2023).
2. **Athanasios Androulakis**, "Catalytic processes of dry CH₄ reforming and enrichment of syngas in H₂ via the Water-gas Shift reaction" (December 2020-2025).
3. **Alexandra Florou**, "Propylene (C₃H₆) production via oxidative dehydrogenation of propane (C₃H₈) with carbon dioxide (CO₂)" (2022-today)

(b) Supervision of Master of Science (M.Sc.)

Diploma theses of the Postgraduate Studies Program of the School of Chemical and Environmental Engineering, Technical University of Crete:

1. **Alice Koka**, "Synthseis, characterization and application of nitrogen- and silver-promoted TiO₂ catalysts" (2015-2017).
2. **Maria Chatzisymeon**, "Catalytic hydrogenation of CO₂ over supported Ru and Ni catalysts" (2017-today).

Diploma theses of the Postgraduate Studies Program "Catalysis and Environmental Protection" of the School of Science and Technology of the Hellenic Open University:

1. **Ioanna Kostoudi**, "Current developments in hydrogen storage in carbonaceous adsorbents" (2011-2012).
2. **Chrystalla Papakonstantinou**, "Development of methods which rely on technology of membranes for the separation of CO₂ from other gases" (2012-2013).
3. **Eleni Tsantefski**, "Anti-pollution technologies for the elimination of the emission of gaseous pollutants and suspended particles produced by the combustion of lignite in power plants" (2017-today).
4. **Spyridon Tsihlias**, "The effect of aerosols as formation of secondary atmospheric particles and ions and as effective catalysts in atmospheric chemical processes and pollution" (2018-2019).
5. **Anastasios Karatasos**, "Presentation of an integrated hydrogen production unit through steam reforming of natural gas" (2019-2020).

SUPERVISION OF DIPLOMA THESES

(a) Supervision of Diploma Theses elaborated at the School of Chemical and Environmental Engineering, Technical University of Crete:

1. **Ioanna-Idyli Betsi-Argyropoulou**, "Structural characterization and reducibility of platinum and nickel catalysts supported on mixed oxides for the reaction of selective oxidation of carbon monoxide in excess of hydrogen" (2015).
2. **Valeria Stefanidi**, "Effect of operating parameters on the photocatalytic degradation of emerging micro-contaminants contained in wastewater streams with the use of silver-promoted TiO₂ catalysts" (2018).
3. **Chariton Kapenekakis**, "Investigation of CO₂ methanation reaction over supported Ru and Ni catalysts"(2018).
4. **Christos Valiatzas**, "Hydrogen production via steam reforming of propane over supported metal catalysts" (2018).
5. **Konstantina Tsatsalidi**, "Effect of the nature of the support, metal and metallic particle size on the catalytic performance for the reaction of propane steam reforming" (2020).

6. **Alexandra Florou**, «Propane steam reforming over supported Ru and Rh catalysts» (2021).
7. **Konstantinos Marmanidis**, «Effect of the nature of the support and operating parameters on the production of hydrogen (H₂) via propane steam reforming reaction» (2021).
8. **Ovakoglou Evaggelos**, «Hydrogen production via dry methane reforming and propane steam reforming over supported Rh and Ru catalysts» (2022).
9. **Besi Nefeli**, «Investigation of the Water Gas Shift Reaction over Promoted Pt Catalysts» (2023).
10. **Christos Tsokanis**, Oxidative dehydrogenation of propane with carbon dioxide over composite metal oxides (2023).
11. **Georgios Antonakos**, Propylene production via oxidative dehydrogenation of propane with CO₂ over modified metal oxides catalysts (2025).
12. **Zaharias Karanastasis**, Investigation of the reaction of dry methane reforming over supported Ni catalysts.
13. **Myrto Keramopoulou**, Oxidative dehydrogenation of propane with CO₂ over alkaline earth promoted metal oxides, (2025-today).
14. **Konstantina Theofanidou**, Dry methane reforming over Ni catalysts supported on composite metal oxides (2025-today).
15. **Despoina Donta**, Hydrogenation of CO₂ over Ni catalysts supported on composite metal oxides (2026-today).

MEMBER SELECT COMMITTEE

- **Member of a seven-member committee of three (3)** Ph.D. thesis elaborated at (a) the Department of Chemical Engineering, University of Patras and (b) the Department of Chemical Engineering of the University of Western Macedonia.
- **Member of a five-member committee of two (2)** Ph.D. theses elaborated at the Department of Chemical Engineering (School of Chemical Sciences/ Agricultural Technical School) of the University of Castilla-La-Mancha, Ciudad Real, Spain.
- **Member of a three-member committee of five (7)** Ph.D. theses which are elaborated at the School of Chemical and Environmental Engineering, Technical University of Crete
- **Member of a three-member committee of twenty (20)** M.Sc theses elaborated at (a) the School of Chemical and Environmental Engineering, Technical University of Crete and (b) the School of Science and Technology of the Hellenic Open University.
- **Member of a three-member committee of forty eight (56) Diploma** theses elaborated at the School of Chemical and Environmental Engineering, Technical University of Crete

PARTICIPATION IN SEMINARS:

- 2nd EFCATS School on Catalysis, «New Approaches on Catalysis Research and Catalyst Application» Tihany, Hungary, 25-29 September 2002.
- «Production of Hydrogen from conventional fuels and renewable sources», Patras, Greece, 3-11 May 2004.
- «Fuel Cells in mobile and stationary applications», Patras, Greece, 13-21 May 2004.

- “Production of Hydrogen from bio-gas, and combustion of it by using fuel cells, for production of electricity with zero emissions”, Patras, Greece, 21-27 May 2004.
- “Catalytic and Photocatalytic Methods for the decomposition of liquid and gas environmental pollutants”, Patras, Greece, 14-25 June 2004.
- Workshop: “Nanostructured Oxide Catalysts Prepared by Non-conventional Methods and Their Characterization”, Valencia, Spain, 4-5 June 2004.
- “Exploitation of research and technological (R&T) knowledge” (PENED 2001 of GSRT/HELLAS), Patras, Greece 21 March-14 June, 2005.
- “Applications of photocatalysis and electrocatalysis on energy and environmental applications”, Patras, Greece, January 2008.

LANGUAGES:

- English (First Certificate in English of University of Cambridge)

COMPUTER KNOWLEDGE

- Certificate of computer knowledge ECDL Hellas A.E (Microsoft Word XP, Microsoft Excel XP, Internet).

PROFESSIONAL MEMBERSHIPS

- Member of the Technical Chamber of Greece (T.C.G.).

LIST OF PUBLICATIONS

A. INTERNATIONAL REFEREED JOURNALS

- A1. **P. Panagiotopoulou**, D.I. Kondarides, “Effect of morphological characteristics of TiO₂-supported noble metal catalysts on their activity for the Water-Gas Shift Reaction”, *Journal of Catalysis* 225 (2004) 327-336.
<https://doi.org/10.1016/j.jcat.2004.04.030>
- A2. **P. Panagiotopoulou**, D.I. Kondarides, “Effect of the nature of the support on the catalytic performance of noble metal catalysts for the Water-Gas Shift Reaction”, *Catalysis Today* 112 (2006) 49-52.
<https://doi.org/10.1016/j.cattod.2005.11.026>
- A3. **P. Panagiotopoulou**, A. Christodoulakis, D.I. Kondarides, S. Boghosian, “Particle size effects on the reducibility of titanium dioxide and its relation to the Water-Gas Shift activity of Pt/TiO₂ catalysts”, *Journal of Catalysis* 240 (2006) 114-125.
<https://doi.org/10.1016/j.jcat.2006.03.012>
- A4. **P. Panagiotopoulou**, D.I. Kondarides, “A comparative study of the water-gas shift activity of Pt catalysts supported on single (MO_x) and composite (MO_x/Al₂O₃, MO_x/TiO₂) metal oxide carriers”, *Catalysis Today* 127 (2007) 319-329.
<https://doi.org/10.1016/j.cattod.2007.05.010>

- A5. **P. Panagiotopoulou**, J. Papavasiliou, G. Avgouropoulos, T. Ioannides, D.I. Kondarides, "Water-gas Shift activity of doped Pt/CeO₂ catalysts", *Chemical Engineering Journal* 134 (2007) 16-22.
<https://doi.org/10.1016/j.cej.2007.03.054>
- A6. **P. Panagiotopoulou**, D.I. Kondarides, X.E. Verykios, "Selective methanation of CO over supported noble metal catalysts: Effects of the nature of the metallic phase on catalytic performance", *Applied Catalysis A: General* 344 (2008) 45-54.
<https://doi.org/10.1016/j.apcata.2008.03.039>
- A7. **P. Panagiotopoulou**, D.I. Kondarides, "Effects of alkali additives on the physicochemical characteristics and chemisorptive properties of Pt/TiO₂ catalysts", *Journal of Catalysis*, 260 (1) (2008) 141-149.
<https://doi.org/10.1016/j.jcat.2008.09.014>
- A8. A.C. Basagiannis, **P. Panagiotopoulou**, X.E. Verykios, "Low temperature steam reforming of ethanol over supported noble metal catalysts", *Topics in Catalysis* 51(1-4) (2008) 2-12.
<https://doi.org/10.1007/s11244-008-9130-z>
- A9. **P. Panagiotopoulou**, D.I. Kondarides, X.E. Verykios, "Selective methanation of CO over supported Ru catalysts", *Applied Catalysis B: Environmental* 88 (2008), 470-478.
<https://doi.org/10.1016/j.apcatb.2008.10.012>
- A10. C.M. Kalamaras, **P. Panagiotopoulou**, D.I. Kondarides, A.M. Efstathiou, "Kinetic and mechanistic studies of the water-gas shift reaction on Pt/TiO₂ catalyst", *Journal of Catalysis* 264 (2009) 117-129.
<https://doi.org/10.1016/j.jcat.2009.03.002>
- A11. **P. Panagiotopoulou**, D.I. Kondarides, "Effects of alkali-promotion of TiO₂ on the chemisorptive properties and water-gas shift activity of supported noble metal catalysts", *Journal of Catalysis* 267 (2009) 57-66.
<https://doi.org/10.1016/j.jcat.2009.07.014>
- A12. **P. Panagiotopoulou**, M. Antoniadou, D.I. Kondarides, P. Lianos, "Aldol condensation products during photocatalytic oxidation of ethanol in a photoelectrochemical cell", *Applied Catalysis B: Environmental* 100 (2010) 124-132.
<https://doi.org/10.1016/j.apcatb.2010.07.021>
- A13. V. Jiménez, P. Sánchez, **P. Panagiotopoulou**, J.L. Valverde, A. Romero, "Methanation of CO, CO₂ and selective methanation of CO, in mixtures of CO and CO₂, over ruthenium carbon nanofibers catalysts", *Applied Catalysis A: General* 390 (2010) 35-44.
<https://doi.org/10.1016/j.apcata.2010.09.026>
- A14. **P. Panagiotopoulou**, D.I. Kondarides, "Effects of promotion of TiO₂ with alkaline earth metals on the chemisorptive properties and water-gas shift activity of supported platinum catalysts", *Applied Catalysis B: Environmental* 101 (2011) 738-746.
<https://doi.org/10.1016/j.apcatb.2010.11.016>

- A15. **P. Panagiotopoulou**, D.I. Kondarides, X.E. Verykios, "Chemical reaction engineering and catalysis issues in future distributed power generation systems", *Industrial and Engineering Chemistry Research* 50 (2011) 523-530.
<https://doi.org/10.1021/ie100132g>
- A16. **P. Panagiotopoulou**, D.I. Kondarides, X.E. Verykios, "Mechanistic study of the selective methanation of CO over Ru/TiO₂ catalyst: Identification of active surface species and reaction pathways", *The Journal of Physical Chemistry C* 115 (2011) 1220-1230.
<https://doi.org/10.1021/jp106538z>
- A17. V. Jiménez, P. Sánchez, **P. Panagiotopoulou**, J.L. Valverde, A. Romero, "Synthesis and characterization of ruthenium supported on carbon nanofibers with different graphitic plane arrangements", *Chemical Engineering Journal*, 168 (2011) 947-954.
<https://doi.org/10.1016/j.cej.2011.02.024>
- A18. V.M. Daskalaki, **P. Panagiotopoulou**, D.I. Kondarides, "Production of peroxide species in Pt/TiO₂ suspensions under conditions of photocatalytic water splitting and glycerol photoreforming", *Chemical Engineering Journal*.170 (2011) 433-439.
<https://doi.org/10.1016/j.cej.2010.11.093>
- A19. **P. Panagiotopoulou**, D.I. Kondarides, X.E. Verykios, "Mechanistic aspects of the selective methanation of CO over Ru/TiO₂ catalyst", *Catalysis Today* 181 (2012) 138-147.
<https://doi.org/10.1016/j.cattod.2011.05.030>
- A20. H. Dimitroula, V.M. Daskalaki, Z. Frontistis, D.I. Kondarides, **P. Panagiotopoulou**, N.P. Xekoukoulotakis, D. Mantzavinou, "Solar photocatalysis in Pt/TiO₂ suspensions for the abatement of emerging micro-contaminants in wastewater", *Applied Catalysis B: Environmental* 117-118 (2012) 283-291.
<https://doi.org/10.1016/j.apcatb.2012.01.024>
- A21. M. Antoniadou, **P. Panagiotopoulou**, D.I. Kondarides, P. Lianos, "Photocatalysis and photoelectrocatalysis using nanocrystalline titania alone or combined with Pt, RuO₂ or NiO co-catalysts", *Journal of Applied Electrochemistry* 42 (9) (2012) 737-743.
<https://doi.org/10.1007/s10800-012-0408-2>
- A22. **P. Panagiotopoulou**, X.E. Verykios, "Mechanistic aspects of the low temperature steam reforming of ethanol over supported Pt catalysts", *International Journal of Hydrogen Energy*, 37 (21) (2012) 16333-16345.
<https://doi.org/10.1016/j.ijhydene.2012.02.087>
- A23. J. Sutton, **P. Panagiotopoulou**, X. Verykios, D.G. Vlachos, "Combined DFT, Microkinetic, and Experimental Study of Ethanol Steam Reforming on Pt", *The Journal of Physical Chemistry C* 117 (9) (2013) 4691-4706.
<https://doi.org/10.1021/jp312593u>
- A24. **P. Panagiotopoulou**, E.E. Karamerou, D.I. Kondarides, "Kinetics and mechanism of glycerol photo-oxidation and photo-reforming reactions in aqueous TiO₂ and Pt/TiO₂ suspensions". *Catalysis Today* 209 (2013) 91-98.
<https://doi.org/10.1016/j.cattod.2012.09.029>

- A25. **P. Panagiotopoulou**, C. Papadopoulou, H. Matralis, X. Verykios, "Production of renewable hydrogen by reformation of biofuels", Wiley Interdisciplinary Reviews: Energy and Environment, 3 (3) (2014) 231-253.
<https://doi.org/10.1002/wene.93>
- A26. **P. Panagiotopoulou**, N. Martin, D.G. Vlachos, "Effect of hydrogen donor on liquid phase catalytic transfer hydrogenation of furfural over a Ru/C catalyst", Journal of molecular catalysis A: Chemical 392 (2014) 223-228.
<https://doi.org/10.1016/j.molcata.2014.05.016>
- A27. S.S. Akarmazyan, **P. Panagiotopoulou**, A. Kambolis, C. Papadopoulou and D.I. Kondarides, "Methanol dehydration to dimethylether over Al₂O₃ catalysts". Applied Catalysis B: Environmental 145 (2014) 136-148.
<https://doi.org/10.1016/j.apcatb.2012.11.043>
- A28. G.N. Nomikos, **P. Panagiotopoulou**, D.I. Kondarides and X.E. Verykios, "Kinetic and mechanistic study of the photocatalytic reforming of methanol over Pt/TiO₂ catalyst", Applied Catalysis B: Environmental 146 (2013) 249-257.
<https://doi.org/10.1016/j.apcatb.2013.03.018>
- A29. **P. Panagiotopoulou**, D.G. Vlachos, Liquid Phase Catalytic Transfer Hydrogenation of Furfural Over Ru/C Catalyst, Applied Catalysis A: General 480 (2014) 17-24.
<https://doi.org/10.1016/j.apcata.2014.04.018>
- A30. M. Kourtelesis, **P. Panagiotopoulou**, S. Ladas, X.E. Verykios "Influence of the support on the reaction network of ethanol steam reforming at low temperatures over Pt catalysts". Topics in Catalysis 58 (18) (2015) 1202-1217.
<https://doi.org/10.1007/s11244-015-0485-7>
- A31. A.V. Mironenko, M.J. Gilkey, **P. Panagiotopoulou**, G. Facas, D.G. Vlachos, B. Xu "[Ring Activation of Furanic Compounds on Ruthenium-Based Catalysts](#)" J. Phys. Chem. C, 2015, 119 (11), pp 6075–6085.
<https://doi.org/10.1021/jp512649b>
- A32. [I. V. Yentekakis](#), [G. Goula](#), **P. Panagiotopoulou**, [A. Katsoni](#), E. Diamadopoulos, D. Mantzavinos, A. Delimitis "Dry Reforming of Methane: Catalytic Performance and Stability of Ir Catalysts Supported on γ -Al₂O₃, Zr_{0.92}Y_{0.08}O_{2- δ} (YSZ) or Ce_{0.9}Gd_{0.1}O_{2- δ} (GDC) Supports". Topics in Catalysis 58 (18) (2015) 1228-1241.
<https://doi.org/10.1007/s11244-015-0490-x>
- A33. M.J. Gilkey, **P. Panagiotopoulou**, A.V. Mironenko, G.R. Jenness, D.G. Vlachos, B. Xu "[Mechanistic Insights into Metal Lewis Acid-Mediated Catalytic Transfer Hydrogenation of Furfural to 2-Methylfuran](#)" ACS catalysis 5 (2015) 3988-3994.
<https://doi.org/10.1021/acscatal.5b00586>
- A34. **P. Panagiotopoulou**, N. Martin, D.G. Vlachos "Liquid phase catalytic transfer hydrogenation of furfural over homogeneous Lewis acid-Ru/C catalysts" ChemSusChem, 8 (12) (2015) 2046-2054.
<https://doi.org/10.1002/cssc.201500212>

- Panagiotopoulou, P.**, Martin, N. and Vlachos, D. G. (2015), Inside Cover: Liquid-Phase Catalytic Transfer Hydrogenation of Furfural over Homogeneous Lewis Acid–Ru/C Catalysts (ChemSusChem 12/2015). ChemSusChem, 8: 1990. doi:10.1002/cssc.201500748
<https://doi.org/10.1002/cssc.201500748>
- A35. M.Kourtelesis, **P. Panagiotopoulou**, X.E. Verykios “Influence of structural parameters on the reaction of low temperature ethanol steam reforming over Pt/Al₂O₃ catalysts” Catalysis Today 258 (2015) 247-255.
<https://doi.org/10.1016/j.cattod.2014.12.035>
- A36. I.V. Yentekakis, G. Goula, **P. Panagiotopoulou**, S. Kampouri, M.J. Taylor, G. Kyriakou, R.M. Lambert “Stabilization of catalyst particles against sintering on oxide supports with high oxygen ion lability exemplified by Ir-catalyzed decomposition of N₂O” Applied Catalysis B: Environmental 192 (2016) 357-364.
<https://doi.org/10.1016/j.apcatb.2016.04.011>
- A37. **P. Panagiotopoulou**, “Hydrogenation of CO₂ over supported noble metal catalysts” Applied Catalysis A: General 542 (2017) 63-70.
<https://doi.org/10.1016/j.apcata.2017.05.026>
- A38. **P. Panagiotopoulou**, X.E. Verykios, “Mechanistic Study of the Selective Methanation of CO over Ru/TiO₂Catalysts: Effect of Metal Crystallite Size on the Nature of Active Surface Species and Reaction Pathways” The Journal of Physical Chemistry C 121 (9) (2017) 5058–5068.
<https://doi.org/10.1021/acs.jpcc.6b12091>
- A39. M.A Goula, N.D. Charisiou, G. Siakavelas, L. Tzounis, I. Tsiaoussis, **P. Panagiotopoulou**, G. Goula, I.V. Yentekakis “Syngas production via the biogas dry reforming reaction over Ni supported on zirconia modified with CeO₂ or La₂O₃ catalysts, ”, International Journal of Hydrogen Energy 42 (19) (2017) 13724-13740.
<https://doi.org/10.1016/j.ijhydene.2016.11.196>
- A40. I. V. Yentekakis, G. Goula, S. Kampouri, I. Betsi-Argyropoulou, **P. Panagiotopoulou**, M. J. Taylor, G. Kyriakou, R. M. Lambert “Ir-Catalysed Nitrous oxide (N₂O) Decomposition: Effect of Ir Particle Size and Metal–Support Interactions” Catalysis Letters 148 (1) (2017) 341-347 .
<https://doi.org/10.1007/s10562-017-2233-z>
- A41. A. Petala, **P. Panagiotopoulou** “Methanation of CO₂ over alkali-promoted Ru/TiO₂ catalysts: I. Effect of alkali additives on catalytic activity and selectivity”, Applied Catalysis B: Environmental 224 (2018) 919-927.
<https://doi.org/10.1016/j.apcatb.2017.11.048>
- A42. **P. Panagiotopoulou** “Methanation of CO₂ over alkali-promoted Ru/TiO₂ catalysts: II. Effect of alkali additives on the reaction pathway”, Applied Catalysis B: Environmental 236 (2018) 162-170.
<https://doi.org/10.1016/j.apcatb.2018.05.028>

- A43. T. Makropoulou, **P. Panagiotopoulou**, D. Venieri “N-doped TiO₂ photocatalysts for bacterial inactivation in water” *Journal of Chemical Technology and Biotechnology* 93 (9) (2018) 2518-2526.
<https://doi.org/10.1002/jctb.5639>
- A44. A. Kokka, T. Ramantani, A. Petala, **P. Panagiotopoulou** “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”, *Catalysis Today* 355 (2020) 832-843.
<https://doi.org/10.1016/j.cattod.2019.04.015>
- A45. G. Bampos, P. Bika, **P. Panagiotopoulou**, X.E. Verykios “Reactive adsorption of CO from low CO concentrations streams on the surface of Pd/CeO₂ catalysts”, *Applied Catalysis A: General* 588 (2019) 117305.
<https://doi.org/10.1016/j.apcata.2019.117305>
- A46. A. Kokka, A. Katsoni, I.V. Yentekakis, **P. Panagiotopoulou** “Hydrogen production via steam reforming of propane over supported metal catalysts” *International Journal of Hydrogen Energy*, 45(29) (2020) 14849-14866.
<https://doi.org/10.1016/j.ijhydene.2020.03.194>
- A47. M. Hatzisymeon, A. Petala, **P. Panagiotopoulou** “Carbon dioxide hydrogenation over supported Ni and Ru catalysts” *Catalysis Letters*, 151 (2021) 888-900.
<https://doi.org/10.1007/s10562-020-03355-0>
- A48. A. Kokka, T. Ramantani, **P. Panagiotopoulou**, Effect of operating conditions on the performance of Rh/TiO₂ catalyst for the reaction of LPG steam reforming, *Catalysts*, 11 (03) (2021) pp.1-21, 374.
<https://doi.org/10.3390/catal11030374>
- A49. I.V. Yentekakis, **P. Panagiotopoulou**, G. Artemakis, A review of recent efforts to promote dry reforming of methane (DRM) to syngas production via bimetallic catalyst formulations, *Applied Catalysis B: Environmental* 296 (2021) 120210
<https://doi.org/10.1016/j.apcatb.2021.120210>
- A50. A. Kokka, A. Petala, **P. Panagiotopoulou**, Support effects on the activity of Ni catalysts for the propane steam reforming reaction, *Nanomaterials*, 11(8) (2021) 1931.
<https://doi.org/10.3390/nano11081931>
- A51. G. Bampos, T. Ramantani, **P. Panagiotopoulou**, X.E. Verykios, Effect of Support on the Reactive Adsorption of CO from Low CO Concentration Streams on the Surface of Pd Based Catalysts, *Industrial and Engineering Chemistry Research*, (2021) *In press*.
<https://doi.org/10.1021/acs.iecr.1c02710>
- A52. E. Nikolaraki, G. Goula G., **P. Panagiotopoulou**, M.J. Taylor M.J., K. Kousi, G. Kyriakou, D.I. Kondarides, R.M. Lambert, I.V. Yentekakis, Support induced effects on the ir nanoparticles activity, selectivity and stability performance under CO₂ reforming of methane, *Nanomaterials*, 11(11) (2021) 2880
<https://doi.org/10.3390/nano11112880>

- A53. A. Kokka, T. Ramantani, I.V. Yentekakis, **P. Panagiotopoulou**, Catalytic performance and in situ DRIFTS studies of propane and simulated LPG steam reforming reactions on Rh nanoparticles dispersed on composite $M_xO_y-Al_2O_3$ (M: Ti, Y, Zr, La, Ce, Nd, Gd) supports, *Applied Catalysis B: Environmental*, 2022, 316, 121668, <https://doi.org/10.1016/j.apcatb.2022.121668>
- A54. A. Kouroumidis, G. Bampos, **P. Panagiotopoulou**, D.I. Kondarides, Performance of Particulate and Structured Pt/TiO₂-Based Catalysts for the WGS Reaction under Realistic High- and Low-Temperature Shift Conditions, *Catalysts* **2023**, 13(2), 372, <https://doi.org/10.3390/catal13020372>
- A55. A. Kokka, T. Ramantani, I.V. Yentekakis, **P. Panagiotopoulou**, 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(5) (2023) 111059. <https://doi.org/10.1016/j.jece.2023.111059>.
- A56. A. Rontogianni, N. Chalmpes, E. Nikolaraki, G. Botzolaki, A. Androulakis, A. Stratakis, P. Zygouri, D. Moschovas, A. Avgeropoulos, M.A. Karakassides, D.P. Gournis, S. Tsatsos, G. Kyriakou, N.K. Boukos, **P. Panagiotopoulou**, I.V. Yentekakis, Efficient CO₂ hydrogenation over mono- and bi-metallic RuNi/MCM-41 catalysts: Controlling CH₄ and CO products distribution through the preparation method and/or partial replacement of Ni by Ru, *Chemical Engineering Journal*, 474 (2023) 145644 <https://doi.org/10.1016/j.cej.2023.145644>
- A57. A. Androulakis, I.V. Yentekakis, **P. Panagiotopoulou**, Dry reforming of methane over supported Rh and Ru catalysts: Effect of the support (Al₂O₃, TiO₂, ZrO₂, YSZ) on the activity and reaction pathway, *International Journal of Hydrogen Energy*, 48 (87) (2023) 33886-33902, <https://doi.org/10.1016/j.ijhydene.2023.03.114>
- A58. **P. Panagiotopoulou**, I.V. Yentekakis, Nanocatalysis for Environmental Protection, Energy, and Green Chemistry, *Nanomaterials* 2023, 13, 2958. <https://doi.org/10.3390/nano13222958>
- A59. A. Florou, G. Bampos, P. D. Natsi, A. Kokka, **P. Panagiotopoulou**, Propylene production via oxidative dehydrogenation of propane with carbon dioxide over composite M_xO_y -TiO₂ catalysts, *Nanomaterials* 2023, 14 (1), 86. <https://doi.org/10.3390/nano14010086>
- A60. A. Androulakis, E. Nikolaraki, C. Drosou, K.M. Papazisi, S. Balomenou, D. Tsiplakides, K.G. Froudas, P.N. Trikalitis, D.P. Gournis, **P. Panagiotopoulou**, I. V. Yentekakis, Water-Gas Shift over Pt Nanoparticles Dispersed on CeO₂ and Gadolinium-Doped Ceria (GDC) Supports with Specific Nano-Configurations, *Nanomaterials* 14 (2024) 1928. <https://doi.org/10.3390/nano14231928>.
- A61. A. Florou, G. Bampos, P.D. Natsi, A. Kokka, **P. Panagiotopoulou**, Support induced effects on the activity and stability of Ga₂O₃ based catalysts for the CO₂-assisted oxidative dehydrogenation of propane, *Journal of Environmental Chemical Engineering* 2024, 12 (6). <https://doi.org/10.1016/j.jece.2024.114603>
- A62. A. Florou, A. Kokka, G. Bampos, **P. Panagiotopoulou**, CO₂-assisted oxidative dehydrogenation of propane to propylene over modified SiO₂ based Catalysts, *Catalysts* 2024, 14 (12), 933. <https://doi.org/10.3390/catal14120933>

- A63. G. Bampos, **P. Panagiotopoulou**, E.A. Kyriakidou, Catalytic Reforming and Hydrogen Production: From the Past to the Future. *Catalysts* **2025**, *15*, 332. <https://doi.org/10.3390/catal15040332>
- A64. A. Florou, G. Bampos, P.D. Natsi, A. Kokka, **P. Panagiotopoulou**, Effect of Ga₂O₃ content on the activity of Al₂O₃-supported catalysts for the CO₂-assisted oxidative dehydrogenation of propane, *Nanomaterials* **2025**, *15* (13), 1029. <https://doi.org/10.3390/nano15131029>
- A65. E. Nikolaraki, C. Drosou, C.K. Mytafides, K.M. Papazisi, S. Balomenou, D. Tsiplakides, K.G. Froudas, P.N. Trikalitis, P. Panagiotopoulou, D.P. Gournis, I.V. Yentekakis, Shape-controlled CeO₂ and GDC nanostructured supports turn iridium to an efficient and highly selective CO₂ methanation catalyst, *Journal of Environmental Chemical Engineering*, **13** (5) (2025) 117434. <https://doi.org/10.1016/j.jece.2025.117434>
- A66. G. Bampos, P., Natsi, P., Panagiotopoulou, Unveiling the Role of Ga- and Cr-Based Catalysts in CO₂-Assisted Oxidative Dehydrogenation of Propane: Mechanistic and Support-Acid/Base Perspectives, *Catalysts* **16**(2) (2026) 163. <https://doi.org/10.3390/catal16020163>
- A67. A. Androulakis, A., Kokka, I.V., Yentekakis, P., Panagiotopoulou, Effect of metal nature and operating conditions on activity, deactivation pathway and reaction mechanism of Al₂O₃-supported catalysts in methane dry reforming, *Molecular Catalysis* **598** (2026) 115994. <https://doi.org/10.1016/j.mcat.2026.115994>
- A68. G. Bampos; P. Panagiotopoulou; E.A. Kyriakidou, Catalytic Reforming and Hydrogen Production: From the Past to the Future, 2nd Edition, *Catalysts* **16** (4) (2026) 2026, 290. <https://doi.org/10.3390/catal16040290>

Notes

Article A1 was among the 25 Hottest Articles of Journal of Catalysis for the period of July-September 2004.

<http://top25.sciencedirect.com/subject/chemical-engineering/5/journal/journal-of-catalysis/00219517/archive/1/>

Article A2 was among the Most Cited Articles of Catalysis Today for various periods.

Article A3 και A10 were among the 25 Hottest Articles of Journal of Catalysis for the period of April-September 2009.

<http://top25.sciencedirect.com/subject/chemical-engineering/5/journal/journal-of-catalysis/00219517/archive/22/>

Article A4 was among the 25 Hottest Articles of Chemical Engineering Journal for the period of October-December 2007.

<http://top25.sciencedirect.com/subject/chemical-engineering/5/journal/chemical-engineering-journal/13858947/archive/14/>

Article A17 was among the Top Cited Papers of Chemical Engineering Journal for 2011 and 2012

<http://www.journals.elsevier.com/chemical-engineering-journal/highlighted-articles/congratulations-to-our-most-cited-authors-2011-2012cej/>

Article A28 was among the 25 Hottest Articles of Applied Catalysis A for the period of July-September 2014.

<http://top25.sciencedirect.com/subject/chemical-engineering/5/journal/applied-catalysis-a-general/0926860X/archive/53/>

Article A37 was among the Most Cited Papers of Applied Catalysis A for 2019 and 2020.

B. BOOK CHAPTERS

- B1. **P. Panagiotopoulou**, C. Papadopoulou, H. Matralis and X. Verykios (2016) Production of Renewable Hydrogen by Reformation of Biofuels, in *Advances in Bioenergy: The Sustainability Challenge* (eds P. D. Lund, J. Byrne, G. Berndes and I. A. Vasalos), John Wiley & Sons, Ltd, Oxford, UK.
<https://doi.org/10.1002/9781118957844.ch9>
- B2. **Paraskevi Panagiotopoulou** and Xenophon E. Verykios, Metal–support interactions of Ru-based catalysts under conditions of CO and CO₂ hydrogenation , in *Catalysis: Volume 32*, 2020, pp. 1-23 ((eds James Spivey, Yi-Fan Han, Dushyant Shekhawat))
DOI: [10.1039/9781788019477-00001](https://doi.org/10.1039/9781788019477-00001) . From Book Series: [SPR - Catalysis](#)

C. PRESENTATIONS IN INTERNATIONAL CONFERENCES

- C1. P.C. Panagiotopoulou and D.I. Kondarides, “Noble Metal-Based Water Gas Shift Catalysts for Fuel Cell Applications”, EUROPACAT-VI, Innsbruck, Austria, August 31 – September 04, 2003.
- C2. P. Panagiotopoulou and D.I. Kondarides, “Effects of Physicochemical and Morphological Properties of Supported Noble Metal Catalysts on their Activity for the Water-Gas Shift Reaction”, 13th International Congress on Catalysis, Paris, 11-16 July 2004.
- C3. P. Panagiotopoulou and D.I. Kondarides, “Effect of the nature of the support on the catalytic performance of noble metal catalysts for the Water-Gas Shift Reaction”, 1st Conference of the Coordination Action CONCORDE, CO-ordination of Nanostructured Catalytic Oxides Research and Development in Europe, Louvain-la-Neuve (Belgium), January 26-28, 2005.
- C4. P. Panagiotopoulou and D.I. Kondarides, “Development of efficient low-temperature Water-Gas Shift catalysts suitable for fuel cell applications”, The Hydrogen Power Theoretical and Engineering Solutions International Symposium, HYPOTHESIS VI, Habana City, Cuba, 08-12 May, 2005.
- C5. P. Panagiotopoulou and D.I. Kondarides, “Investigation of the Water-Gas Shift reaction over alkali-promoted Pt/TiO₂ catalysts”, EUROPACAT-VII, Sofia, Bulgaria, 28 August – 1 September, 2005.
- C6. P. Panagiotopoulou, A. Christodoulakis, D.I. Kondarides, S. Boghosian, “Effect of crystallite size of titanium dioxide on the reducibility of Pt/TiO₂ catalysts studied by TPR and in-situ Raman techniques”, 2nd Conference of the Coordination Action

- CONCORDE, "CO-ordination of Nanostructured Catalytic Oxides Research and Development in Europe", Thessaloniki, January 26-28, 2006.
- C7. P. Panagiotopoulou, J. Papavasiliou, G. Avgouropoulos, T. Ioannides, D.I. Kondarides, "Water-gas shift activity of doped Pt/CeO₂ catalysts", XVII International Conference on Chemical Reactors (CHEMREACTOR-17), May 15-19, 2006, Athens-Crete, Greece.
- C8. P. Panagiotopoulou and D.I. Kondarides, "A comparative study of the water-gas shift activity of Pt catalysts supported on single (MO_x) and composite (MO_x/Al₂O₃, MO_x/TiO₂) metal oxide carriers", Hydrocarbon Catalysis and Catalytic Engineering: Present Status and Perspectives, Sifnos, Greece, June 29-30, 2007.
- C9. P. Panagiotopoulou and D.I. Kondarides, "Identification of Key Physicochemical Parameters which Determine the Water-Gas Shift Activity of Oxide-Supported Platinum Catalysts", EUROPACAT VIII, Turku, Finland, August 26-31, 2007.
- C10. P. Panagiotopoulou, D.I. Kondarides and X.E. Verykios, "Selective Methanation of CO over Supported Noble Metal Catalysts", EUROPACAT VIII, Turku, Finland, August 26-31, 2007.
- C11. P. Panagiotopoulou, D.I. Kondarides, X.E. Verykios, "Selective Methanation of CO over Supported Noble Metal Catalysts", 5th International Conference on Environmental Catalysis. Belfast, Northern Ireland, August 31-September 3, 2008.
- C12. P. Panagiotopoulou, D.I. Kondarides, X.E. Verykios, "Selective methanation of CO over supported noble metal catalysts", EUROPACAT IX, Salamanca, Spain, Aug. 30 – Sep.4, 2009.
- C13. P. Panagiotopoulou, X.E. Verykios, "WGS reaction in a membrane reactor" EUROPACAT-IX, Salamanca, Spain, Aug. 30 – Sep.4, 2009.
- C14. P. Panagiotopoulou, D.I. Kondarides, X.E. Verykios "Chemical Reaction Engineering & Catalysis in Future Distributed Power Generation Systems" New Frontiers in Chemical & Biochemical Engineering in Honor of Professors Anastasios Karabelas and Stavros Nychas, Thessaloniki, Greece, November 26-27, 2009.
- C15. V.M. Daskalaki, P. Panagiotopoulou, D.I. Kondarides, X.E. Verykios, "Production of hydrogen by photocatalytic reforming of biomass components and derivatives in aqueous Pt/TiO₂ suspensions", Catalysis for renewable sources: Fuel, Energy, Chemicals, St. Petersburg, Russia, June 28 - July 2, 2010.
- C16. P. Panagiotopoulou, D.I. Kondarides, X.E. Verykios "Low temperature steam reforming of ethanol over supported noble metal catalysts", International Conference on Hydrogen Production (ICH2P-2011), Thessaloniki, Greece, June 19 -22, 2011.
- C17. M. Antoniadou, P. Panagiotopoulou, D.I. Kondarides, P. Lianos, "Photocatalysis and photoelectrocatalysis using nanocrystalline titania alone or combined with Pt, RuO₂ or NiO co-catalysts", 9th European Symposium on Electrochemical Engineering (9th ESEE), Chania, Crete, Greece, June 19 - 23, 2011.
- C18. V. Jiménez, P. Sánchez, P. Panagiotopoulou, J.A. Diaz, J.L. Valverde, A. Romero, "Methanation of CO, CO₂ and selective CO methanation in mixtures of CO and CO₂, over catalysts based on ruthenium supported carbon nanofibres", EUROPACAT-X, Glasgow, Scotland, Aug. 28 – Sep, 2011.

- C19. P. Panagiotopoulou, D.I. Kondarides, X.E. Verykios, "Mechanistic aspects of the selective methanation of CO over Ru/TiO₂ catalyst", EUROPACAT-X, Glasgow, Scotland, Aug. 28 – Sep, 2011.
- C20. P. Panagiotopoulou, X.E. Verykios, "Efficient Production of Renewable Hydrogen by Reformation of Ethanol at Low Temperature", World Hydrogen Energy Conference 2012 Toronto, 3-7 June, 2012.
- C21. P. Panagiotopoulou, D.I. Kondarides, "Kinetics and mechanism of glycerol photo-oxidation and photo-reforming reactions in aqueous TiO₂ and Pt/TiO₂ suspensions" 7th European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications /SPEA7, Porto, Portugal, June 17-20, 2012.
- C22. M. Antoniadou, P. Panagiotopoulou, D.I. Kondarides, P. Lianos, "Photoelectrocatalysis using nanocrystalline titania alone or combined with various co-catalysts" 7th European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications /SPEA7, Porto, Portugal, June 17-20, 2012.
- C23. P. Panagiotopoulou, X.E. Verykios, "Low temperature steam reforming of ethanol over supported Pt catalysts", CAT4BIO Conference, Advances in catalysis for biomass valorization, Thessaloniki, July 8-11, 2012.
- C24. P. Panagiotopoulou, X.E. Verykios, "Low temperature steam reforming of ethanol over supported Pt catalysts", 7th International Conference on Environmental Catalysis, Lyon, France, September 2-6, 2012.
- C25. G.N. Nomikos, P. Panagiotopoulou, D.I. Kondarides, X.E. Verykios, "Kinetic and mechanistic study of the photocatalytic reforming of methanol over Pt/TiO₂ catalyst", 7th International Conference on Environmental Catalysis, Lyon, France, September 2-6, 2012.
- C26. P. Panagiotopoulou, X.E. Verykios, "Low temperature steam reforming of ethanol over supported noble metal catalysts", Catalysis Club of Philadelphia annual poster contest, October 18th, 2012, Wilmington, U.S.A.
- C27. P. Panagiotopoulou and D.G. Vlachos, "Liquid Phase Catalytic Transfer Hydrogenation of Furfural Over Ru/C Catalyst", Science for our Nation's Energy Future, Energy Frontier Research Centers Principal Investigator's Meeting, July 18-19, 2013, Washington, D.C., U.S.A.
- C28. P. Panagiotopoulou and D.G. Vlachos, Catalytic Transfer Hydrogenation for Upgrade of Furans, CCST Annual Research Review, October 10, 2013, University of Delaware, Newark, Delaware, U.S.A.
- C29. P. Panagiotopoulou and D.G. Vlachos, Liquid Phase Catalytic Transfer Hydrogenation of Furfural over Ru/C Catalyst, Catalysis Club of Philadelphia annual poster contest, October 24th, 2013, Wilmington, Delaware, U.S.A.
- C30. M. Kourtelesis, P. Panagiotopoulou and X.E. Verykios, Support and crystallite size effects of Pt catalysts for the low temperature steam reforming of ethanol, 13th International Conference on Clean Energy 2014 (ICCE 2014) June 8-12, 2014 Istanbul, Turkey.
- C31. P. Panagiotopoulou, X.E. Verykios, Structural and mechanistic aspects of low temperature steam reforming of ethanol over supported Pt catalysts. 8th International Conference on Environmental Catalysis (ICEC 2014), Asheville, North Carolina August 24-27 2014.
- C32. N. Martin, P. Panagiotopoulou and D.G. Vlachos, Liquid phase catalytic transfer hydrogenation of furfural over homogeneous Lewis acid-Ru/C catalysts, Catalysis Club of Philadelphia annual poster contest, October 16th, 2014, Wilmington, Delaware, U.S.A.

- C33. B. Xu, D.G. Vlachos, P. Panagiotopoulou and M. Gilkey, Mechanistic studies on hydrodeoxygenation of furfural to 2-Methyl furan via ring C-H bond activations, 14AIChE Annual Meeting, Atlanta, GA, USA November 16-21, 2014.
- C34. M.J. Gilkey, P. Panagiotopoulou, B. Xu, D.G. Vlachos, Mechanistic Investigation of the Hydrodeoxygenation of Furfural to 2-methylfuran over Ru/C Using Isotopic Labeling Techniques, 24th North American Catalysis Society Meeting, Pittsburgh, Pennsylvania. June 14-19, 2015.
- C35. R.E. Patet, P. Panagiotopoulou, S. Caratzoulas, D.G. Vlachos “Dehydration Reactions in Lewis Acidic Zeolites” 15AIChE Annual Meeting, Salt Lake City, UT, USA November 8-13, 2015.
- C36. M. Kourtelesis, P. Panagiotopoulou and X.E. Verykios, “Influence of the support on the reaction network of ethanol steam reforming at low temperatures over Pt catalysts”, French Conference on Catalysis (FCCat), 23-27 May 2016, Frejus, France.
- C37. M.A Goula, G. Siakavelas, K.N. Papageridis, N.D. Charisiou, P. Panagiotopoulou, and I.V. Yentekakis “Syngas production via the biogas dry reforming reaction over Ni supported on zirconia modified with CeO₂ or La₂O₃ catalysts” 21st World Hydrogen Energy Conference 2016, June 13-16, 2016 Zaragoza, Spain.
- C38. I.V. Yentekakis, G. Goula, P. Panagiotopoulou, S. Kampouri, M.J. Taylor, G. Kyriakou and R.M. Lambert, “Iridium catalyzed N₂O decomposition: Effect of the Iridium particle size and metal-support interactions” Crete 2016, September 27-30, 2016, Chania, Greece.
- C39. T. Makropoulou, P. Panagiotopoulou, D. Venieri “N-doped TiO₂ photocatalysts for bacterial inactivation in water” 5th European conference on environmental applications of advanced oxidation processes June 25-29, 2017, Prague, Czech Republic.
- C40.A. Kokka, **P. Panagiotopoulou**, E. Diamadopoulos, “Photocatalytic degradation of emerging organic contaminants over nitrogen and silver doped TiO₂ catalysts” 6th International Conference on Industrial and Hazardous Waste Management, September 4-7, 2018, Chania, Greece.
- C41. A. Kokka, **P. Panagiotopoulou**, “Hydrogen production via steam reforming of LPG over supported metal catalysts”, 14th European Congress on Catalysis, EuropaCat 2019, 18-23 August, 2019, Aachen, Germany.
- C42. A. Kokka, I.V. Yentekakis, **P. Panagiotopoulou**, “Effects of physicochemical properties of supported metal catalysts on their activity for the production of H₂ via steam reforming of propane”, 11th International Conference on Environmental Catalysis, 6-9 September 2020, Manchester, UK.
- C43. A. Kokka, **P. Panagiotopoulou**, “Effect of operating conditions on the catalytic performance of supported Rh catalysts for the reaction of LPG steam reforming”, 11th International Conference on Environmental Catalysis, 6-9 September 2020, Manchester, UK.
- C44. A. Kokka, T. Ramantani, I.V. Yentekakis and **P. Panagiotopoulou**, “A comparative study of propane and propane/butane steam reforming activity of Rh catalysts supported on composite M_xO_y-Al₂O₃ carriers” 5th EuChemS Conference on Green and Sustainable Chemistry, 26th – 29th September 2021 Virtual Conference.
- C45. A. Kokka, T. Ramantani, I.V. Yentekakis and **P. Panagiotopoulou**, “Effect of alkali promotion on the activity of ru/tio₂ catalysts for the production of H₂ via propane steam

reforming" 12th International Conference on Hydrogen Production, *Hydrogen for a green future* (ICH2P-2021 – On-line conference), September 19-23, 2021.

- C46. A. Kouroumlidis, G. Bampos, **P. Panagiotopoulou**, D.I. Kondarides, "Performance of Pt catalysts dispersed on modified TiO₂ supports for the water-gas shift reaction", Summer School, Catalysis: from understanding to applications, June 20-24, 2022 – Albi (France).
- C47.A. Florou, G. Bampos and **P. Panagiotopoulou**, "Propylene production via oxidative dehydrogenation of propane with carbon dioxide over composite metal oxides", 15th European Congress on Catalysis (EUROPACAT 2023), Prague, Czech Republic, August 27- September 1, 2023.
- C48. A. Florou, G. Bampos, A. Kokka and **P. Panagiotopoulou**, "Utilization of CO₂ as a mild oxidant for propylene production via oxidative dehydrogenation of propane", 3rd EURECA-PRO Conference on Responsible Consumption and Production, Chania, Greece, September 26-29, 2023.
- C49. A. Kokka, T. Ramantani, I.V. Yentekakis and **P. Panagiotopoulou**, "Hydrogen Production Via Propane Steam Reforming Reaction Over Alkali Promoted Ru/TiO₂ Catalysts" 3rd EURECA-PRO Conference on Responsible Consumption and Production, Chania, Greece, September 26-29, 2023.
- C50.A. Androulakis, E. Nikolaraki, I. Yentekakis, **P. Panagiotopoulou**, Effect Of Morphological Characteristics Of Supported Platinum Catalysts On Their Activity For The Water Gas Shift Reaction 3rd EURECA-PRO Conference on Responsible Consumption and Production, Chania, Greece, September 26-29, 2023.
- C51. A. Florou, G. Bampos, A. Kokka, **P. Panagiotopoulou**, "Propylene production through the CO₂-assisted oxidative dehydrogenation of propane over modified silica based catalysts" Crete Conference, 8th International Conference on Industrial and Hazardous Waste Management, 27-31 May, Chania, Greece.
- C52. A. Florou, G. Bampos, P.D. Natsi, A. Kokka, **P. Panagiotopoulou** "Effect of Ga₂O₃ content on the activity of Al₂O₃ supported catalysts for the CO₂-assisted oxidative dehydrogenation of propane", The 4th International Electronic Conference on Processes, Sustainable Process Design, Engineering, Control and Systems Innovation, 20–22 October 2025.

D. PRESENTATIONS IN NATIONAL CONFERENCES

- D1. P. Panagiotopoulou and D.I. Kondarides, "Development of novel catalytic materials for the Low temperature Water-Gas Shift reaction", 4th Pan-Hellenic scientific conference of Chemical Engineering, Patras, 29-31 May, 2003.
- D2. P. Panagiotopoulou and D.I. Kondarides, "Effect of Physicochemical characteristics of supported noble metal catalysts on their activity for the Water-Gas Shift reaction", 8th Pan-Hellenic Symposium of Catalysis, Agia Napa – Cyprus, 30 October - 1 November 2004.
- D3. P. Panagiotopoulou and D.I. Kondarides, "Kinetic study of the Water-Gas Shift reaction over Pt catalyst supported on TiO₂", 5th Pan-Hellenic scientific conference of Chemical Engineering, Thessalonica – Greece, 26-28 May, 2005.

- D4. P. Panagiotopoulou and D.I. Kondarides, "Effect of the addition of promoters over Pt/TiO₂ catalysts on their activity for the Water-Gas Shift reaction", 9th Pan-Hellenic Symposium of Catalysis, Lefkas – Greece, 6-7 October, 2006.
- D5. P. Panagiotopoulou, D.I. Kondarides, X.E. Verykios "Selective Methanation of CO over Supported Noble Metal Catalysts". 6th Pan-Hellenic scientific conference of Chemical Engineering, Athens – Greece, 31 May-2 June, 2007.
- D6. P. Panagiotopoulou, D.I. Kondarides, X.E. Verykios "Selective Methanation of CO over Supported Noble Metal Catalysts", 3rd National Conference of Hydrogen Technology, Patras– Greece, 19-20 November 2007.
- D7. P. Panagiotopoulou, D.I. Kondarides, X.E. Verykios "Selective Methanation of CO over Supported Noble Metal Catalysts", 10th Pan-Hellenic Symposium of Catalysis, Metsovo – Greece, 2-3 October, 2008.
- D8. P. Panagiotopoulou and X.E. Verykios, "WGS reaction in a membrane reactor", 7th Pan-Hellenic scientific conference of Chemical Engineering, Patras – Greece, 3-4 June, 2009.
- D9. P. Panagiotopoulou, D.I. Kondarides, X.E. Verykios "Mechanistic study of the selective methanation of CO over 5%Ru/TiO₂ catalyst", 11th Pan-Hellenic Symposium of Catalysis, Athens 22-23 October, 2010.
- D10. E. Filipaiou, P. Panagiotopoulou, D.I. Kondarides, "Photocatalytic activity of doped TiO₂ catalysts for the reactions of glycerol oxidation and reforming" 11th Pan-Hellenic Symposium of Catalysis, Athens 22-23 October, 2010.
- D11. S.S. Akarmazyan, P. Panagiotopoulou, A. Kambolis, Ch. Papadopoulou, D.I. Kondarides, "Methanol dehydration to dimethylether over Al₂O₃-based catalysts", 11th Pan-Hellenic Symposium of Catalysis, Athens 22-23 October, 2010.
- D12. A. Petala, P. Panagiotopoulou, D.I. Kondarides, M. Antoniadou, P. Lianos, "Photocatalysis and Photoelectrocatalysis of Nitrogen doped TiO₂ catalysts", 12th Panhellenic Catalysis Symposium, Chania 25-27 October, 2012.
- D13. P. Panagiotopoulou and D. G. Vlachos, "Liquid Phase Catalytic Transfer Hydrogenation of Furfural over a Ru/RuO₂/C Catalyst", 13th Panhellenic Catalysis Symposium, Palaios Agios Athanasios, 16-18 October, 2014.
- D14. M.Kourtelesis, P. Panagiotopoulou, X.E. Verykios, "Influence of structural parameters of Pt/Al₂O₃ catalyst on ethanol steam reforming reaction at low temperatures", 10th Pan-Hellenic scientific conference of Chemical Engineering, Patras, 4-6 June, 2015.
- D15. G. Goula, A. Katsoni, S. Fanouriakis, G. Palioudaki, C. Papageorgiou, P. Panagiotopoulou, E. Diamantopoulos, I. Yentekakis, "Dry biogas reforming: Effect of the nature of the support on the catalytic performance of single- and bi-metallic iridium catalysts", 10th Pan-Hellenic scientific conference of Chemical Engineering, Patras, 4-6 June, 2015.
- D16. M. Goula, G.I. Siakavelas, N.D. Charisiou K.N. Papageridis, D.G. Avraam, P. Panagiotopoulou, I.V. Yentekakis "Syngas production via the biogas dry reforming reaction over Ni supported on zirconia modified with CeO₂ or La₂O₃ catalysts. 14th Panhellenic Catalysis Symposium, Patras, 13-15 October, 2016.
- D17. I.V. Yentekakis, G. Goula, I. Betsi-Argyropoulou, M. Chatzisyneon, P. Panagiotopoulou, K. Kousi, D.I. Kondarides, M. Taylor, G. Kyriakou, R.M. Lambert, «Biogass reforming

- over supported Iridium catalysts: The effect of CeO₂ on the catalytic performance and stability”, 14th Panhellenic Catalysis Symposium, Patras, 13-15 October, 2016.
- D18. G. Goula, I. Betsi-Argyropoulou, M. Chatzisyneon, P. Panagiotopoulou, K. Kousi, D.I. Kondarides, M. Taylor, G. Kyriakou, R.M. Lambert, I.V. Yentekakis «Investigation of activity, stability and carbon deposition over Rh supported catalysts for the dry reforming of methane”, 14th Panhellenic Catalysis Symposium, Patras, 13-15 October, 2016.
- D19. P. Panagiotopoulou “Investigation of the effect of structural characteristics of metal for the reaction of carbon dioxide hydrogenation” 11th Pan-Hellenic scientific conference of Chemical Engineering, Thessaloniki, 25-27 May, 2017.
- D20. **P. Panagiotopoulou**, A. Petala «CO₂ methanation over alkali promoted Ru/TiO₂ catalysts: Effect of alkali addition on catalytic activity and reaction pathway» 15th Panhellenic Catalysis Symposium, Ioannina, 18-21 October, 2018.
- D21. M. Hatzisyneon, A. Petala, **P. Panagiotopoulou**, “Effect of the nature of the support on the activity of supported Ni catalysts for the CO₂ hydrogenation reaction” 15th Panhellenic Catalysis Symposium, Ioannina, 18-21 October, 2018.
- D22. A. Kokka, **P. Panagiotopoulou**, “Hydrogen production via propane steam reforming reaction over supported metal catalysts” 12^o Pan-Hellenic scientific conference of Chemical Engineering, Athens, 29-31 May, 2019.
- D23. A. Kokka, T. Ramantani, A. Petala, **P. Panagiotopoulou**, “Effect of the nature of the support, operating and pretreatment conditions on the catalytic performance of supported Ni catalysts for the reaction of the selective methanation of CO” 12^o Pan-Hellenic scientific conference of Chemical Engineering, Athens, 29-31 May, 2019.
- D24. A. Kokka, T. Ramantani, **P. Panagiotopoulou**, “Effect of operating parameters on the activity and stability of 0.5%Rh/TiO₂ in structured or not form for the reaction of LPG steam reforming”, 1st Online Conference of Young Scientists on "Mineral Resources-Environment-Chemical Engineering, 26-28 February 2021, Kozani.
- D25. A. Kokka, A. Petala, **P. Panagiotopoulou** “Effect of the nature of the support on the activity of supported Ni catalysts for the propane steam reforming reaction”, 13th Pan-Hellenic scientific conference of Chemical Engineering, Patras, 02-04 June, 2022.
- D26. A. Androulakis, I.V. Yentekakis, **P. Panagiotopoulou**, “Dry methane reforming for hydrogen production over supported metallic catalysts: effect of metal and support nature” 13th Pan-Hellenic scientific conference of Chemical Engineering, Patras, 02-04 June, 2022.
- D27. E. Nikolaraki, G. Goula, **P. Panagiotopoulou**, K. Kousi, G. Kyriakou, D. Kondarides, R.M. Lambert, I. Yentekakis “Effect of support on the activity, selectivity and stability of supported Ir nanoparticles during dry methane reforming” 13th Pan-Hellenic scientific conference of Chemical Engineering, Patras, 02-04 June, 2022.
- D28. A. Androulakis, I. Yentekakis, **P. Panagiotopoulou**, “Effect of the metal and support nature on the activity and mechanism of the reaction of dry methane reforming over supported metallic catalysts” 16th Panhellenic Catalysis Symposium, Chania, 20-22 October, 2022.
- D29. A. Florou, **P. Panagiotopoulou**, “ Production of C₃H₆ via oxidative dehydrogenation of C₃H₈ with CO₂ over M_xO_y-Al₂O₃ and M_xO_y-TiO₂ catalysts”, 16th Panhellenic Catalysis Symposium, Chania, 20-22 October, 2022.

- D30. A. Kokka, T. Ramantani, I. Yentekakis, **P. Panagiotopoulou**, "Investigation of the propane and LPG steam reforming over Rh/M_xO_y-Al₂O₃ (M: Ti, Y, Zr, La, Ce, Nd, Gd) catalysts" 16th Panhellenic Catalysis Symposium, Chania, 20-22 October, 2022.
- D31. G. Artemakis, E. Nikolaraki, **P. Panagiotopoulou**, I. Yentekakis, "A review of recent efforts to promote dry methane reforming via bimetallic catalysts containing nickel and neighboring transition metals" 16th Panhellenic Catalysis Symposium, Chania, 20-22 October, 2022.
- D32. G. Asimakopoulos, N. Chalbes, M. Baikousi, E. Nikolaraki, **P. Panagiotopoulou**, K. Salmas, M. Karakasides, D. Gournis, I. Yentekakis, "Mesoporous molecular sieves MCM-41 and their zinc, nickel and tin derivatives for H₂S adsorption" 16th Panhellenic Catalysis Symposium, Chania, 20-22 October, 2022.
- D33. K. Salmas, M. Baikousi, A. Bourlinos, A. Douvalis, M. Karakasides, E. Nikolaraki, **P. Panagiotopoulou**, D. Gournis, I. Yentekakis, "Utilization of byproducts and waste for the development of innovative materials for hydrogen sulfide adsorption", 16th Panhellenic Catalysis Symposium, Chania, 20-22 October, 2022.
- D34. A. Kouroumidis, G. Bampos, **P. Panagiotopoulou**, D.I. Kondarides, "Investigation of the Water-gas Shift reaction over modified Pt/TiO₂ catalysts" 16th Panhellenic Catalysis Symposium, Chania, 20-22 October, 2022.
- D35. A. Androulakis, I. Yentekakis, **P. Panagiotopoulou**, "Optimization of operating conditions for the dry reforming of methane reaction over supported Rh and Ru catalysts" 14th Pan-Hellenic scientific conference of Chemical Engineering, Thessaloniki, 29-31 May, 2024.
- D36. A. Florou, G. Bampos, P.D. Natsi, A. Kokka, **P. Panagiotopoulou**, "Effect of the nature of the support and operating conditions on the performance of supported Ga₂O₃ catalysts for the oxidative dehydrogenation of C₃H₈ with CO₂", 14th Pan-Hellenic scientific conference of Chemical Engineering, Thessaloniki, 29-31 May, 2024.
- D37. A. Florou, G. Bampos, P.D. Natsi, A. Kokka, **P. Panagiotopoulou**, "Production of Παράγωγη C₃H₆ via oxidative dehydrogenation of C₃H₈ with CO₂" over composite metal oxides M_xO_y-TiO₂", 14th Pan-Hellenic scientific conference of Chemical Engineering, Thessaloniki, 29-31 May, 2024.
- D38. A. Androulakis, I. Yentekakis, **P. Panagiotopoulou**. "Water-Gas shift reaction over Pt catalysts supported on CeO₂ and GDC of different nanostructures" 17th Panhellenic Symposium of Catalysis, Paphos, 8-10 October 2024.
- D39. A. Florou, G. Bampos, P. D. Natsi, A. Kokka, **P. Panagiotopoulou**, "CO₂-assisted oxidative dehydrogenation of propane over Ga₂O₃-SiO₂, Ga₂O₃-TiO₂ and Ga₂O₃-Al₂O₃ catalysts", 17th Pan-Hellenic Symposium on Catalysis, Paphos, Cyprus, October 8-10, 2024.