Athanasia Petala

Professor Assistant

Department of Environment, Ionian University

PERSONAL

Date of birth	05.01.1988
Place of birth	Athens
Nationality	Greek
Current work address	Ionian University, Department of Environment, M. Minotou-Giannopoulou str. Panagoula, 29100 Zakynthos apetala@ionio.gr

EDUCATION

Diploma of Chemical Engineering (2011)
University of Patras, Greece, degree: 7.40 (advance).

MSc. in Chemical Engineering (2013)
University of Patras, Greece, degree: excellent.
Subject: "Development of visible light photocatalysts for energy and environmental applications".
Supervisor: D.I. Kondarides.

Ph.D. in Chemical Engineering (2017)
University of Patras, Greece, degree: excellent.
Subject: "Synthesis and characterization of photocatalytic materials with high response to solar irradiation for hydrogen production and pollutants degradation in the liquid phase".
Supervisor: D.I. Kondarides

Postdoctoral studies

- Laboratory of heterogeneous Catalysis, Department of Chemical Engineering, University of Patras (16.03.2017-31.08.2017) and (01.05.2019 – 15.03.2022)
- Laboratory of Advanced Oxidation Processes, Department of Chemical Engineering, University of Patras (01.03.2018-31.04.2019)

RESEARCH INTERESTS

My research activities are focused on the field of Heterogeneous Catalysis and especially Photocatalysis as well as in the field of Advanced Oxidation Processes. Special emphasis is given to the synthesis and characterization of innovative catalysts and their application in the fields of environmental protection and energy production, and in particular in:

- Development of photocatalytic and photoelectrochemical systems and processes for hydrogen production from water splitting using solar radiation.
- Photo-reforming of organic molecules for hydrogen production at ambient conditions.
- Degradation of non-biodegradable organic micropollutants in the liquid phase using solar radiation.
- Degradation of non-biodegradable organic micropollutants in the liquid phase using advanced oxidation processes (activation of persulfate ions, electrochemical oxidation, Fenton-type reactions, etc.).
- Study of the mechanism of non-biodegradable organic pollutants degradation reactions.
- Development of innovative photocatalysts with increased absorption in the visible range of the solar spectrum.
- Development of innovative catalytic materials for advanced oxidation processes.
- Development of catalytic materials immobilization methods on suitable substrates and their integration into suitable reactors.
- Synthesis and physicochemical characterization of new catalytic materials.
- Synthesis and characterization of innovative catalytic materials for environmental applications (Fenton-type reactions).
- Design, construction and operation of experimental devices and reactors for the study of reactions under static and dynamic conditions.

Analytical techniques:

- ✓ Gas chromatography (GC)
- ✓ Liquid Chromatography (HPLC)
- ✓ Mass spectroscopy (MS)
- ✓ Diffuse reflectance spectroscopy (UV/vis, DRS)
- ✓ Gas chromatography-Mass spectroscopy (GC-MS)
- ✓ X-Ray Diffraction (XRD)
- ✓ Scanning electron microscopy (SEM) and transmission electron microscopy (TEM)
- ✓ Total and exposed metal surface measurement techniques (BET method, selective gas chemisorption)
- ✓ Laboratory techniques of analytical chemistry
- ✓ Operation and use of laboratory and mechanical equipment

TEACHING ACTIVITIES

2011- 06.2021 Co-supervision of 16 undergraduate theses and 2 graduate theses

05.2021- 06/2021 KDBM Work Educational SA
Trainer in a training program with code 40364 and title “Environmental

Protection and Product Recycling"

02.2019-06.2020 PUBLIC VOCATIONAL TRAINING INSTITUTE OF PATRA (P.V.T.I.)
Specialty Pharmacy Assistant
Teaching Courses: Analytical Chemistry II (Theory), Chemical Technology
Specialty Technician of Pharmaceuticals, Cosmetics and Related Products
Teaching Courses: General Chemistry (Theory), Biochemistry, Organic Chemistry

02.2015 - 03.2015 Instructor of the course "Molecular spectroscopy", Open courses, University of Patras, Greece, Prof. in charge: D.I. Kondarides.

07.2015 - 08.2015 Undergraduate course-teachers assistant during Ph.D. studies, "Laboratory of analytical chemistry", Department of Chemical Engineering, University of Patras, Greece.

09.2012 - 12.2012 Undergraduate course-teachers assistant during Ph.D. studies, "Physical Chemistry", Department of Chemical Engineering, University of Patras, Greece.

10.2011 - 12.2011 Undergraduate course-teachers assistant during Ph.D. studies, "Laboratory of analytical chemistry", Department of Chemical Engineering, University of Patras, Greece.

PARTICIPATION IN RESEARCH PROGRAMMS

SCIENTIFIC PROJECT MANAGER OF RESARCH PROGRAMMS

1. 05.2019-15.03.2022 Title: "80801: Development and Demonstration of a Photocatalytic Process for removing Pathogens and Pharmaceuticals from wastewaters (2De4P)"
1st HFRI Announcement for the support of Postdoctoral Researchers-No. Project 889
Funding: GENERAL SECRETARIAT OF RESEARCH AND TECHNOLOGY - (GSRI)
Laboratory of Advanced Oxidation Processes and Laboratory of Heterogeneous Catalysis, Department of Chemical Engineering, Patras
Scientific project leader: Post-doctoral researchers: Z. Frontistis, A. Petalas (Interdisciplinary proposal)

PARTICIPATION IN RESEARCH PROGRAMS

1. 04.2020-15.03.2022 Title: "Development of an Innovative Biomass-Based Hybrid Electrochemical Process for the Removal of Endocrine Disruptors"(MIS) 5050535

Support for researchers with an emphasis on young researchers - cycle B', Greece-European Union co-financing
Scientific project manager: Asst. Prof. Zacharias Frontistis

2. 03.2018 – 04.2019

Title: “Research infrastructure for waste valorization and sustainable management of resources (INVALOR)” (MIS 5002495) (NSRF 2014-2020)
Funding: GENERAL SECRETARIAT OF RESEARCH AND TECHNOLOGY - (GSRI)
Laboratory of Advanced Oxidation Processes, Department of Chemical Engineering, Patras
Scientific project manager: Prof. Georgios Angelopoulos

3. 03.2017 – 08.2017

Title: "Photocatalytic water splitting for H_2 production, using CdZnS catalysts modified with metal phosphides"
IKY Excellence Scholarships for postgraduate studies in Greece – Siemens Program, acad. Years 2016-2017
Heterogeneous Catalysis Laboratory, Department of Chemical Engineering, Patras
Funding: IKY-Siemens
IKY Scholar: Athanasia Petala

4. 10.2015 – 09.2016

Title: “C.705.006: ASSOCIATION OF CHEMICAL ENGINEERS”
Department of Chemical Engineering, University of Patras
Scientific project manager: Prof. Dimitrios Mataras
Scientific supervisor of the sub-project: Prof. Dimitris I. Kondarides

5. 03.2015 - 09.2015

Title: “D.1016: (MIS 380405) THALIS: New catalytic processes for the production of second-generation biofuels. CAT-BIOFUEL”
Heterogeneous Catalysis Laboratory, Department of Chemical Engineering, Patras
Greece-European Union co-financing
Scientific manager: Prof. Angelos Lappas
Scientific manager of the University of Patras: Prof. D.I. Kondarides

6. 02.2012 – 02.2015

Title: “D.544: (MIS 379323) THALIS: Development of Innovative Photofuel Cells for the Production of Hydrogen and Electricity from the Oxidation of Organic Compounds Using Solar Radiation”
Heterogeneous Catalysis Laboratory, Department of Chemical Engineering, Patras
Greece-European Union co-financing
Scientific manager of the University of Patras: Prof. D.I.

Kondarides

7. 11.2011 – 12.2011 — Title: "C.705.006: ASSOCIATION OF CHEMICAL ENGINEERS"
Heterogeneous Catalysis Laboratory, Department of Chemical Engineering, University of Patras
Scientific project manager: Prof. Dimitrios Mataras
Scientific supervisor of the sub-project: Prof. Dimitris I. Kondarides

8. 03.2011 – 10.2011 — Title: "C.621: Application of nanotechnology in the energy business"
Funding: from various individuals
Heterogeneous Catalysis Laboratory, Department of Chemical Engineering, Patras
Scientific manager: Prof. Dimitris I. Kondarides

Synopsis of scientific research work

Publications at scientific journals with reviewers and citation index	37
Average citation index	7.3
First author	12
Corresponding author	7
Presentations in international conferences	27
Presentations in national conferences	23
Total citations in publications (scholar)	1067
h-index (scholar)	17
i10-index (scholar)	26
Total citations in publications (scopus)	940
h-index (scopus)	16

LIST OF PUBLICATIONS IN INTERNATIONAL REFEREED JOURNALS

A1 **Petala, A.**, Tsikritzis, D., Kollia, M., Ladas, S., Kennou, S., Kondarides, D.I., "Synthesis and characterization of N-doped TiO_2 photocatalysts with tunable response to solar radiation." (2014) Applied Surface Science 305, pp 281-291.
https://www.sciencedirect.com/science/article/pii/S016943321400590X

A2 **Petala, A.**, Ioannidou, E., Georgaka, A., Bourikas, K., Kondarides, D.I., "Hysteresis phenomena and rate

fluctuations under conditions of glycerol photo-reforming reaction over CuO_x/TiO_2 catalysts." (2015) Applied Catalysis B: Environmental 178, pp 201-209.
https://www.sciencedirect.com/science/article/pii/S0926337314005487

A3 **Petala, A.**, Frontistis, Z., Antonopoulou, M., Konstantinou, I., Kondarides, D.I., Mantzavinos, D. "Kinetics of ethyl paraben degradation by simulated solar radiation in the presence of N-doped TiO_2 catalysts." (2015) Water Research 81, pp 157-166.
https://www.sciencedirect.com/science/article/pii/S0043135415300403

A4 Frontistis, Z., Antonopoulou, M., **Petala, A.**, Venieri, D., Konstantinou, I., Kondarides, D.I., Mantzavinos, D.," Photodegradation of ethyl paraben using simulated solar radiation and Ag_3PO_4 photocatalyst." (2017) Journal of Hazardous Materials 323, pp 478-488.
https://www.sciencedirect.com/science/article/pii/S0304389416303582

A5 Taheri, M.E. **Petala, A.**, Frontistis, Z., Mantzavinos, D., Kondarides. D.I., "Fast photocatalytic degradation of Bisphenol A by Ag_3PO_4/TiO_2 composites under solar radiation." (2017) Catalysis Today 280, pp 99-107.
https://www.sciencedirect.com/science/article/pii/S0920586116304084

A6 **Petala, A.**,Bontemps, R., Spartatouille, A., Frontistis, Z., Antonopoulou, M., Konstantinou, I., Kondarides, D.I., Mantzavinos, D., "Solar light-induced degradation of ethyl paraben with $CuO_x/BiVO_4$: Statistical evaluation of operating factors and transformation by-products." (2017) Catalysis Today 280, pp 122-131.
https://www.sciencedirect.com/science/article/pii/S0920586116303972

A7 Kanigaridou, Y., **Petala, A.**, Frontistis, Z., Antonopoulou, M., Solakidou, M., Konstantinou, I., Deligiannakis, Y., Mantzavinos, D., Kondarides, D.I., "Solar photocatalytic degradation of bisphenol A with $CuO_x/BiVO_4$: Insights into the unexpectedly favorable effect of bicarbonates." (2017) Chemical Engineering Journal 318, pp 39-49.
https://www.sciencedirect.com/science/article/pii/S1385894716306052

A8 Repousi, V., **Petala, A.**, Frontistis, Z., Antonopoulou, M., Konstantinou, I., Kondarides, D.I., Mantzavinos, D., "Photocatalytic degradation of bisphenol A over Rh/TiO_2 suspensions photosensitized by humic acid." (2017) Catalysis Today 284, pp 59-66.
https://www.sciencedirect.com/science/article/pii/S0920586116306691

A9 Chalkias, D.A., Giannopoulos, D.I., Kollia, E., **Petala, A.**, Kostopoulos, V., Papanicolaou, GC., "Preparation of polyvinylpyrrolidone-based polymer electrolytes and their application by in-situ gelation in dye-sensitized solar cells." (2018) Electrochimica Acta 271, pp 632-640.
https://www.sciencedirect.com/science/article/pii/S0013468618307205

A10 **Petala, A.**, Panagiotopoulou, P., "Methanation of CO_2 over alkali-promoted Ru/TiO_2 catalysts: I. Effect of alkali additives on catalytic activity and selectivity." (2018) Applied Catalysis B: Environmental 224, pp 919-927.
https://www.sciencedirect.com/science/article/pii/S0926337317311141

A11 Grilla, E., **Petala, A.**, Frontistis, Z., Konstantinou, I.K., Kondarides, D.I., Mantzavinos, D., "Solar photocatalytic abatement of sulfamethoxazole over Ag_3PO_4/WO_3 composites." (2018) Applied Catalysis B: Environmental 231, pp 73-81.
https://www.sciencedirect.com/science/article/pii/S0926337318302017

A12 Chalkias, D.A., Laios, A.I., **Petala, A.**, Papanicolaou, G.C., "Evaluation of the limiting factors affecting large-sized, flexible, platinum-free dye-sensitized solar cells performance: a combined experimental and equivalent circuit analysis." (2018) Journal of Materials Science: Materials in Electronics 29, pp 9621-9634.
https://link.springer.com/article/10.1007/s10854-018-8998-z

A13 **Petala, A.**, Noe, A., Frontistis, Z., Drivas, C., Kennou, S., Mantzavinos, D., Kondarides, D.I., "Synthesis and characterization of $CoO_x/BiVO_4$ photocatalysts for the degradation of propyl paraben." (2018) Journal

of Hazardous Materials 372, pp 52-60.
https://www.sciencedirect.com/science/article/pii/S0304389418301523

A14 Matthaiou, V., Frontistis, Z., **Petala, A.**, Solakidou, M., Deligiannakis, D., Angelopoulos, G.N., Mantzavinos, D., "Utilization of raw red mud as a source of iron activating the persulfate oxidation of paraben." (2018) Process Safety and Environmental Protection 119, pp 311-319.
https://www.sciencedirect.com/science/article/pii/S0957582018303495

A15 **Petala, A.**, Spyrou, D., Frontistis, Z., Mantzavinos, D., Kondarides, D.I., "Immobilized Ag_3PO_4 photocatalyst for micro-pollutants removal in a continuous flow annular photoreactor." (2019) Catalysis Today 328, pp 223-229.
https://www.sciencedirect.com/science/article/pii/S0920586118311684

A16 Alexopoulou, C., **Petala, A.**, Frontistis, Z., Drivas, C., Kennou, S., Kondarides, D.I., Mantzavinos, D., "Copper phosphide and persulfate salt: A novel catalytic system for the degradation of aqueous phase micro-contaminants." (2019) Applied Catalysis B: Environmental 244, pp 178-187.
https://www.sciencedirect.com/science/article/pii/S0926337318311081

A17 Dimitriadou, S., Frontistis, Z., **Petala, A.,** Bampos, G., Mantzavinos, D., "Carbocatalytic activation of persulfate for the removal of drug diclofenac from aqueous matrices." (2019) Catalysis Today 355, pp 937-944.
https://www.sciencedirect.com/science/article/pii/S0920586119300586

A18 Tomara, T., Frontistis, Z., **Petala, A.**, Mantzavinos, D., "Photocatalytic performance of Ag_2O towards sulfamethoxazole degradation in environmental samples." (2019) Journal of Environmental Chemical Engineering 7, pp 103177.
https://www.sciencedirect.com/science/article/pii/S2213343719303008

A19 Gasparotto, A., Maccato, C., Sada, C., Carraro, G., Kondarides, D.I., Bebelis, S., **Petala, A.,** Porta L., A., Altantzis, T., Barreca, D., "Controlled Surface Modification of ZnO Nanostructures with Amorphous TiO_2 for Photoelectrochemical Water Splitting", (2019) Advanced Sustainable Systems 3, pp. 1900046.
https://onlinelibrary.wiley.com/doi/abs/10.1002/adsu.201900046

A20 Gasparotto, A., Maccato, C., **Petala, A.,** Bebelis, S., Sada, C., Kondarides, D.I., Barreca, D., "Nanoscale Mn_3O_4 thin film photoelectrodes fabricated by a vapor-phase route", (2019) ACS Applied Energy Materials 2, pp 8294–8302.
https://pubs.acs.org/doi/abs/10.1021/acsaem.9b01773

A21 Kokka, A., Ramantani, T., **Petala, A.**, Panagiotopoulou, P., "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." (2020) Catalysis Today 355, pp 832-843.
https://www.sciencedirect.com/science/article/pii/S0920586119301634

A22 **Petala, A.**, Kondarides, D.I., "Photocatalytic hydrogen production over mixed Cd-Zn sulfide catalysts promoted with nickel or nickel phosphide", (2020) Catalysis Today 355, pp. 851-859.
https://www.sciencedirect.com/science/article/pii/S0920586119301245

A23 Arvaniti, O.S., **Petala, A.**, Zalaora, A.A., Mantzavinos, D., Frontistis, Z., "Solar light induced photocatalytic degradation of methylparaben by g-C_3N_4 in different water matrices", (2020) Journal of Chemical Technology and Biotechnology 95, pp 2811-2821.
https://onlinelibrary.wiley.com/doi/abs/10.1002/jctb.6564

A24 **Petala, A.**, Nasiou, A., Mantzavinos, D., Frontistis, Z., "Photocatalytic evaluation of Ag_2CO_3 for ethylparaben degradation in different water matrices", (2020) Water 12, pp 1180.
https://www.mdpi.com/2073-4441/12/4/1180

A25 Ioannidi, A., Oulego, P., **Petala, A.**, Arniella, V., Frontistis, Z., Angelopoulos, G.N., Diaz, M., Mantzavinos,

D., “Persulfate activation by modified red mud for the oxidation of antibiotic sulfamethoxazole in water”, (2020) Journal of Environmental Management 270, pp 110820.
https://www.sciencedirect.com/science/article/pii/S0301479720307519

A26 **Petala, A.**, Arvaniti, O.S., Christofili, M., Safakas, A., Frontistis, Z., Mantzavinos, D., “Lanthanum Nickel Oxide: An Effective Heterogeneous Activator of Sodium Persulfate for Antibiotics Elimination”, (2020) Catalysts 10, pp.1373.
https://www.mdpi.com/2073-4344/10/12/1373

A27 Ioannidi, A., **Petala, A.**, Frontistis, Z., “Copper phosphide promoted $BiVO_4$ photocatalysts for the degradation of sulfamethoxazole in aqueous media”, (2020) Journal of Environmental Chemical Engineering 8, pp 104340.
https://www.sciencedirect.com/science/article/abs/pii/S2213343720306898

A28 Chatzisymeon, M., **Petala, A.**, Panagiotopoulou, P., “Carbon dioxide hydrogenation over supported Ni and Ru catalysts”, (2021) Catalysis Letters 151, pp 888–900.
https://link.springer.com/article/10.1007/s10562-020-03355-0

A29 Gkika, C., **Petala, A.**, Frontistis, Z., Bampos, G., Hela, D., Konstantinou, I., Mantzavinos, D., “Heterogeneous activation of persulfate by lanthanum strontium cobaltite for sulfamethoxazole degradation”, (2021) Catalysis Today 361, pp 130-138.
https://www.sciencedirect.com/science/article/pii/S092058612030050X

A30 **Petala, A.**, Mantzavinos, D., Frontistis, Z., “Impact of water matrix on the photocatalytic removal of pharmaceuticals by visible light active materials”, (2021) Current Opinion in Green and Sustainable Chemistry 28, pp. 100445.
https://www.sciencedirect.com/science/article/abs/pii/S2452223621000018

A31 Lalas, K., **Petala, A.**, Frontistis, Z., Konstantinou, I., Mantzavinos, D., “Sulfamethoxazole degradation by the CuO_x/persulfate system”, (2021) Catalysis Today 361, pp 139-145.
https://www.sciencedirect.com/science/article/pii/S0920586120300511

A32 Chalkias, D.A., Verykokkos, N.E., Kollia, E., **Petala, A.**, Kostopoulos, V., Papanicolaou, G.C., “High-efficiency quasi-solid state dye-sensitized solar cells using a polymer blend electrolyte with “polymer-in-salt” conduction characteristics”, (2021) Solar Energy 222, pp 35-47.
https://www.sciencedirect.com/science/article/abs/pii/S0038092X21003388#!

A33 Grilla, E., Kagialari, M.N., **Petala, A.**, Frontistis, Z., Mantzavinos, D., “Photocatalytic degradation of valsartan by MoS_2/BiOCl hetero-juctions”, (2021) Catalysts 11(6), pp 650.
https://www.mdpi.com/2073-4344/11/6/650

A34 **Petala, A.**, Arvaniti, O.S., Travlou, G., Mantzavinos, D., Frontistis, Z., “Solar light induced photocatalytic removal of sulfamethoxazole from water and wastewater using BiOCl photocatalyst”, (2021) Journal of Environmental Science and Health 56(9), pp 963-972.
https://www.tandfonline.com/doi/full/10.1080/10934529.2021.1948271

A35 Kokka, A., **Petala, A.**, Panagiotopoulou, P., “Support Effects on the Activity of Ni Catalysts for the Propane Steam Reforming Reaction”, (2021) Nanomaterials 11(8), pp 1948.
https://www.mdpi.com/2079-4991/11/8/1948

A36 Bampos, G., **Petala, A.**, Frontistis, Z., “Recent Trends in Pharmaceuticals Removal from Water Using Electrochemical Oxidation Processes”, (2021) Environments 8(8), pp 85.
https://www.mdpi.com/2076-3298/8/8/85

A37 **Petala, A.**, Bampos, G., Frontistis, Z, “Using Sawdust Derived Biochar as a Novel 3D Particle Electrode for Micropollutants Degradation”, (2022) Water 14(3), pp 357.
https://www.mdpi.com/2073-4441/14/3/357

PRESENTATIONS IN INTERNATIONAL CONFERENCES

B1 **Petala, A.**, Kondarides, D.I., Antoniadou, M., Lianos, P., "Photocatalysis and Photoelectrocatalysis with visible light responsive N-doped titania", 7th European meeting on solar chemistry and photocatalysis: environmental applications (SPEA7), Oporto 17-20 June 2012.

B2 **Petala, A.**, Kondarides, D.I., "Production of renewable hydrogen by photocatalytic reforming of biomass components and derivatives at ambient conditions", Fourth International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2013) and SECOTOX conference, Mykonos island June 24-28.

B3 Ioannidou, E., **Petala, A.**, Georgaka, A., Bourikas, K., Kondarides, D.I., "Hysteresis phenomena and rate fluctuations under conditions of glycerol photo-reforming reaction over CuO_x/TiO_2 catalyst", 8th European meeting on solar chemistry and photocatalysis: environmental applications (SPEA8), Thessaloniki 25-28 June 2014.

B4 **Petala, A.**, Tsikritzis, D., Ladas, S., Kennou, S., Verykios, X., Kondarides, D.I., "Synthesis, characterization and photocatalytic activity of N-doped TiO_2 photocatalysts with tunable response to solar irradiation", 8th European meeting on solar chemistry and photocatalysis: environmental applications (SPEA8), Thessaloniki, 25-28 June 2014.

B5 **Petala, A.**, Tsikritzis, D., Kollia, M., Ladas, S., Kennou, S., Kondarides, D.I., "Synthesis and characterization of N-doped TiO_2 photocatalysts with tunable response to solar irradiation", 13th International Conference on Clean Energy (ICCE 2014), Istanbul June 8-12 2014.

B6 Kanigaridou, Y., **Petala, A.**, Frontistis, Z., Kondarides, D.I., Mantzavinos D., "Degradation of Endocrine Disruptors using simulated solar irradiation and $Cu_2O/BiVO_4$", 4th European Conference on Environmental Applications of Advanced Oxidation Processes – EAAOP4 – Athens, Greece, on October 21-24 2015.

B7 **Petala, A.**, Bontemps, R., Spartatouille, A., Frontistis, Z., Kondarides, D.I., Mantzavinos, D., "Solar light induced degradation of ethyl parabens with $Cu_2O/BiVO_4$- Statistical evaluation of operating factors", 4th European Conference on Environmental Applications of Advanced Oxidation Processes – EAAOP4 – Athens, Greece, on October 21-24 2015.

B8 Taheri, M.E., **Petala, A.**, Frontistis, Z., Kondarides, D.I., Mantzavinos, D., "Fast degradation of Endocrine Disruptors by Ag_3PO_4/TiO_2 solar photocatalysis", 4th European Conference on Environmental Applications of Advanced Oxidation Processes – EAAOP4 – Athens, Greece, on October 21-24 2015.

B9 **Petala, A.**, Vasiliu, E., Kondarides, D.I., "Photocatalytic hydrogen production over Ni-promoted CdS-ZnS composites", 9th European meeting on solar chemistry and photocatalysis: environmental applications (SPEA9), Strasbourg, June 13-17 2016.

B10 Grilla, E., **Petala, A.**, Frontistis, Z, Kondarides, D.I., Mantzavinos, D., "Solar photocatalytic abatement of sulfomethoxazole by Ag_3PO_4", 9th European meeting on solar chemistry and photocatalysis: environmental applications (SPEA9), Strasbourg, June 13-17 2016.

B11 Koumaki, A., Kaliakatsos, A., **Petala, A.**, Kondarides, D.I., Venieri, V., "Pilot scale application of solar photocatalysis for wastewater disinfection", 5th European Conference on Environmental Applications of Advanced Oxidation Processes – EAAOP5 – Prague, Czech Republic, June 25-29 2017.

B12 **Petala, A.**, Kondarides, D.I., "Photocatalytic hydrogen production over Ni_2P-promoted CdS-ZnS composites", 13th European Congress on Catalysis, (EUROPACAT 2017) Florence, Italy, August 27-31 2017.

B13 **Petala, A.**, Spyrou, D., Frontistis, Z., Mantzavinos, D., Kondarides, D.I., "Supported Ag_3PO_4 photocatalyst for pharmaceuticals removal in a continuous flow annular photoreactor configuration", 10th European meeting on solar chemistry and photocatalysis: environmental applications (SPEA10), Almeria June 4-8 2018.

B14 Lalas, K., **Petala**, A., Frontistis, Z., Mantzavinos, D., "Sulfamethoxazole degradation in a continuous flow CuO_x/persulfate system", 6th European Conference on Environmental Applications of Advanced Oxidation Processes – EAAOP6 – Portorose, Slovenia, June 26 - 30 2019.

B15 Gkika, C., **Petala**, **A.**, Frontistis, Z., Bampos, G., Mantzavinos D., "Heterogeneous activation of persulfate by lanthanum strontium cobaltite", 6th European Conference on Environmental Applications of Advanced Oxidation Processes – EAAOP6 – Portorose, Slovenia, June 26-30 2019.

B16 Triantafillopoulou, N., Tzala, M., **Petala, A.**, Mantzavinos, D., Kondarides, D.I., "g-C_3N_4 photocatalysts modified with S, K or P for antibiotics removal", 6th European Conference on Environmental Applications of Advanced Oxidation Processes – EAAOP6 – Portorose, Slovenia, June 26-30 2019.

B17 Ioannidi, A., Oulego, P., Arniella, V., **Petala, A.**, Collado, S., Frontistis, Z., Diaz, M., Mantzavinos, D., "Persulfate activation by modified red mud for the oxidation of antibiotic sulfamethoxazole in water", 6th European Conference on Environmental Applications of Advanced Oxidation Processes – EAAOP6 – Portorose, Slovenia, June 26-30 2019.

B18 Ioannidi, A., **Petala, A.**, Mantzavinos, D., Frontistis, Z., "Photocatalytic performance of Cu_3P/$BiVO_4$ towards antibiotics degradation in water matrices", Protection and Restoration of the Environment July 7-10, 2020, Kalamata, Greece.

B19 Grilla, E., **Petala, A.**, Kagialari, M.N., Frontistsis, Z., Mantzavinos, D., "Photocatalytic degradation of valsartan by MoS_2/BiOCl heterojunctions" 1st International Conference on Environmental Design ICED 2020, Athens, Greece, October 24-25, 2020.

B20 Ioannidi, A., **Petala, A**., Mantzavinos, D., Frontistsis, Z., "Photocatalytic performance of Cu_3P/$BiVO_4$ towards antibiotics degradation in water matrices", 6th International Symposium on green chemistry sustainable development and circular economy, Thessaloniki, Greece, September 20-23, 2020

B21 Gasparotto, A., Maccato, C., Sada, C., **Petala, A.**, Bebelis, S., Kondarides, D.I., Barreca, D., "Nanoscale Mn_3O_4 photoelectrode materials fabricated by a vapor phase route", 6th Green and Sustainable Chemistry Conference, Online live and on-demand, November 16-18, 2021.

B22 Kouvelis, K., **Petala, A.**, Bampos, G., Kondarides, D.I., Mantzavinos, D., "Heterogeneous activation of persulfate by LaSrNiGaO3", 17th International Conference on Environmental Science and Technology, Athens, Greece, 1-4 September 2021.

B23 Kouvelis, K., **Petala, A.**, Frontistis, Z., Kondarides, D.I., "Solar photocatalytic degradation of pharmaceutical compounds using $ZnSnO_3$/CB composites", 17th International Conference on Environmental Science and Technology, Athens, Greece, 1-4 September 2021.

B24 Gasparotto, A., Maccato, C., Sada, C, **Petala, A**., Bebelis, S., Kondarides, D.I., Barreca, D., "Chemical vapor deposition of nanoscale α-Mn_3O_4 electrode materials for water splitting applications", European Materials Research Society Spring Meeting 2022 - Virtual Conference, 27 Maggio-3 Giugno 2022.

B25 Bampos, G., **Petala, A.**, Frontistis, Z., "Biochar Particles Derived from Sawdust as Novel 3D Particles Electrodes for Micropollutants Degradation", ISE-Regional meeting of the international society of electrochemistry, Prague, Czech Republic, from August 15 to 19, 2022.

B26 Kouvelis, K., Tzalia, A., Frontistis, Z., **Petala, A.**, "Solar light – driven photocatalytic degradation of

pharmaceutical compounds by Cu_3P / $ZnSnO_3$ composites", June 20-24, 2022, Albi, France.

B27 Kouvelis, K., Ramantani, T., Bampos, G., Frontistis, Z., **Petala, A.**, "$LaSrNiXO_3$ (X: Zn, Mg, Fe, Co, Al, Cu, Ga) as heterogeneous persulfate activators for Losartan degradation in aqueous media.", PESTICIDES2022, June 23 - 26, 2022, Ioannina, Greece.

REFEREE IN INTERNATIONAL SCIENTIFIC JOURNALS

Referee of 122 manuscripts in 32 scientific journals:
Journal of Chemical Technology & Biotechnology, Global NEST Journal, Water Science and Technology, Catalysis Today, Journal of Photochemistry and Photobiology, Applied Catalysis B: Environmental, Materials, Journal of Inorganic and Organometallic Polymers and Materials, Materials Letters, Nano Energy, Journal of Environmental Management, Research on Chemical Intermediates, Science of the Total Environment, Nanomaterials, Catalysis Letters, Journal of Hazardous Materials, Resources, Conservation and Recycling, Journal of Nanostructure in Chemistry, Colloids and Surfaces A: Physicochemical and Engineering Aspects, Catalysts, New Journal of Chemistry, Chemical Engineering Journal, Journal of Colloid and Interface Science, Energies, Chemical Engineering Journal Advances, Environmental Nanotechnology, Monitoring & Management, Journal of Alloys and Compounds, Separation and Purification Technology, Journal of Taibah University for Science, Process Safety and Environmental Protection, Journal of Molecular Liquids.

HONORS AND AWARDS

First prize in the Student Paper Communication Competition at the Fourth European Conference on Environmental Applications of Advanced Oxidation Processes – EAAOP4 – Athens, Greece, on October 21-24, 2015.
"Solar light induced degradation of ethyl parabens with $Cu_2O/BiVO_4$- Statistical evaluation of operating factors", A. Petala, R. Bontemps, A. Spartatouille, Z. Frontistis, D.I. Kondarides, D. Mantzavinos

SEMINARS

Certified Adult Trainer, No. Registry. EB36676

- Seminar title: "Training of Adult Trainers", Duration 160 hours,
  National and Kapodistrian University of Athens.

- Seminar title: "Vocational Education and Training", Duration 200 hours,
  National and Kapodistrian University of Athens.

- Professional Orientation using ARISTON Candidates Ariston Psychometrics.

PROJECT MANAGEMENT

- Participation in the organizing committee of the 3rd Conference of Master's & Post-Doctors in Chemical Engineering Sciences (CES-WGP3), (Patras October 3, 2017)
  http://wgp3.iceht.forth.gr/

- General coordinator of the 5th Master's & Postdoctoral Conference in Chemical Engineering Sciences (CES-WGP5), (Patras November 6, 2019)
  http://wgp5.iceht.forth.gr/index.php

LANGUAGES

Excellent knowledge of English (C2), Cambridge English: Proficiency (CPE), Michigan Certificate (ECPE)

DIGITAL COMPETENCE

Computer literate