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Personal Details

Date of Birth: February 12, 1977
Marital Status: Married with two children

Education

1999-2004 PhD in Chemical Engineering
University of Patras, Dept.of Chemical Engineering, Greece
Thesis title: Study of the Electrochemical Promotion of Catalysis using temperature programmed techniques (TPD, TPO and transient experiments) under ultra-high vacuum and atmospheric pressure conditions.

1999-2004 Diploma in Chemical Engineering
University of Patras, Dept.of Chemical Engineering, Greece

Professional Experience

2019 - Professor at University of Patras, Department of Chemical Engineering
2015 - 2019 Associate Professor at University of Patras, Department of Chemical Engineering,
2011 - 2015 Assistant Professor at University of Patras, Department of Chemical Engineering
2009 Visitor Researcher at Ecole Polytechnique Fédérale de Lausanne (EPFL)
Institute of Chemical Sciences and Engineering, Lausanne, Switzerland
2006 - 2010 Lecturer at Technical University of Crete, Department of Environmental Engineering
2004 - 2006 Senior Researcher at University of Patras, Department of Chemical Engineering,

Member in Organizations / Editorial Boards

- International Society of Electrochemistry (ISE)
- The Electrochemical Society (ECS)
- Working Party on Electrochemical Engineering (European Federation of Chemical Engineering)
- Hellenic Federation of Chemical Engineering
- Journal of Chemical Technology and Biootechnology, member of the editorial board

Current Scientific Research

1. Mechanistic Studies on the origin of Electrochemical Promotion of Catalysis (EPOC or NEMCA effect)
2. Electrochemical Promotion of CO₂ Hydrogenation to high value chemicals and fuels
3. Preparation and electrochemical characterization of Dimensionally Stable Anodes (DSA) for electrochemical and/or photoelectrochemical treatment of wastewaters and for direct alcohol fuel cells.
 4. Triode operation of low temperature fuel cells under poisoning conditions
5. Preparation, characterization and development of electrochemical sensors for phenolic compounds in wastewater

Chapters in Books

1. A. Katsaounis, S. Brosda and C.G. Vayenas, "Electrocatalysis" in Encyclopaedia of Electrochemistry, Vol. 5, Wiley-VCH GmbH & Co KGaA, editors A.J. Bard, M. Stratmann etc, 2008
2. A. Katsaounis, "Air Treatment Technologies" in Introduction to Environmental Engineering Science (in greek), Technical University of Crete, 2008
3. C.G. Vayenas, A. Katsaounis, S. Brosda and A. Hammad "Electrochemical Modification of Catalytic Activity" in "Handbook of Heterogeneous Catalysis", 2nd edition, editors G. Ertl, H. Knötzinger, F. Schüth and J. Weitcamp, Weiheim, 2008
4. A. Katsaounis and S. Souentie " In-Cell Mediated (via Active Chlorine) Electrochemical Oxidation of Organic Pollutants in Water Using DSA Electrodes" in "Encyclopedia of Applied Electrochemistry", editors R.F. Savinell, Ken-ichiro Ota, G. Kreysa, Springer 2014
5. C.G. Vayenas, A. Katsaounis, S. Brosda and F. Sapountzi, "Electrochemical Promotion of Catalytic Reactions" in "Encyclopedia of Applied Electrochemistry", editors R.F. Savinell, Ken-ichiro Ota, G. Kreysa, Springer 2014
6. Ch. Chatziliass, E. Martino, D. Zagoraios, G. Kyriakou, A. Katsaounis, Electrochemical Promotion of Catalysis for CO₂ Valorization" in "Recent Advances in Electrochemical Promotion of Catalysis", editors P. Vernoux, C.G. Vayenas, Springer Nature 2022 (doi 10.1007/978-3-031-13893-5)

Invited Lectures

1. *"Recent advances in Electrochemical Promotion of Catalysis", 4th Training course: Trends in Electrochemical Promotion of Catalysis (TEPOC), Almagro, Ciudad Real, Spain, 24-26/11/2009*
2. *"Effectiveness factor of isopropanol oxidation and various redox couples on IrO₂ based electrodes of different loading", 60th International Society of Electrochemistry Annual Meeting, Cina, 16-21/8/2009*
3. *"Temperature Programmed Desorption Techniques for the origin of Electrochemical Promotion of Catalysis (EPOC)", University of Belgrade, Faculty of Technology and Metallurgy, 8/12/2008, Serbia*
4. *"Electrochemical Promotion of Catalysis (EPOC)... on the way to explore the mechanism of promotion and develop the next generation of electropromoted reactors", 8th European Symposium on Electrochemical Engineering, Prague, 24-28/8/2008*

5. *"Characterization techniques for electrode applications in PEM fuel cells and electropromoted reactors"*, 1st training course: Basics and Applications of Solid State Electrochemistry (BASE), Patras, Greece, 2007

Patents

C.G. Vayenas, S. Balomenou, D. Tsiplakides, **A. Katsaounis**, S. Brosda, G. Foti, C. Comninellis, S. Thieman-Handler, B. Cramer, World Intellectual Property Organization (WO/2005/072860).

Awards

Carl Wagner Medal Award in Electrochemical Engineering, European Federation of Chemical Engineering, Working Party on Electrochemical Engineering, 2008.

Publications in Scientific International Journals

- P97. Y. Liu, Z. Liu, M. Kamali, A. Katsaounis, A. Bikogiannakis, G. Kyriakou, N. Askari, L. Appels, R. Dewil "An electrosorption-assisted porous carbonaceous electrode for simultaneous H₂O₂ in situ generation and ciprofloxacin removal" *Chemical Engineering Journal* 515 (2025) 163584
- P96. X. Qing, P. Kalidindi, Z. Liu, A. Vananroye, I. Taurino, A. Katsaounis, P. Fardim, "Phytic acid/chitosan-assisted zwitterionic double-network hydrogels with enhanced mechanical properties, adhesion ability and ionic conductivity for wearable strain sensors" *International Journal of Biological Macromolecules* 309 (2025) 142841
- P95. X. Qing, Z. Liu, Ch. Chatziliass, A.K. Bikogiannakis, G. Kyriakou, P. Fardim, A. Katsaounis, E. Martino, "Effect of carbon support on the electrochemical performance of Pt-based anodes for bio-alcohol fuel cells" *Journal of Chemical Technology and Biotechnology* 100 (2025) 1025
- P94. Z. Liu, A.K. Bikogiannakis, K. Fani, J. Zafeiropoulos, K. Bourikas, F. Lynen, G. Kyriakou, A. Katsaounis, "Peroxymonosulfate activation boosted by the co-doping of carbon and transition metals in graphitic carbon nitride: Dominance of non-radical pathways" *Journal of Environmental Chemical Engineering* 13 (2025) 115711
- P93. C. He, J. Zhang, D. Mantzavinos, A. Katsaounis, D-H Si, Z. Yan, H-Y Zhang, and Zhu-Wu Jiang, "Elaborate Designed Three-Dimensional Hierarchical Conductive MOF/LDH/CF Nanoarchitectures for Superior Capacitive Deionization" *Angewandte. Chemie* 64 (2025) e202420295
- P92. Z. Liu, A.K. Bikogiannakis, X. Qing, J. Zafeiropoulos, F. Lynen, K. Bourikas, G. Kyriakou, P. Fardim, A. Katsaounis, "Activation of peroxymonosulfate by a core-shell structured carbon-encapsulated cobalt ferrite (CoFe₂O₄/CoFe@C) for bisphenol S removal: Temperature-dependent structure and degradation mechanism elucidation" *Chemical Engineering Journal* 505 (2025) 159185

- P91. X. Qing, Z. Liu, A. Vananroye, F. Franceschini, N. Bouropoulos, A. Katsaounis, I. Taurino, P. Fardim, "Self-healing and transparent ionic conductive PVA/pullulan/borax hydrogels with multi-sensing capabilities for wearable sensors" *International Journal of Biological Macromolecules* 284 (2025) 137841
- P90. Z-W Jiang, J. Zhang, D. Mantzavinos, A. Katsaounis, D-H Si, Xiao Yao, R-G Weng, C. He, "Metal-organic framework/layered double hydroxide (MOF/LDH) hetero-nanosheet array for capacitive deionization" *Chemical Engineering Journal* 502 (2024) 158120
- P89. Ch. Chatziliias, E. Martino, A.K. Bikogiannakis, G Kyriakou, A. Katsaounis, "Unraveling the role of EPOC during the enhancement of RWGS reaction in a Pt/YSZ/Au single chamber reactor" *Journal of CO2 Utilization* 90 (2024) 102980
- P88. X. Bai, J. Yang, D. Mantzavinos, A. Katsaounis, H. Zhang, F. Zhang, F. Sun, C. Pan, H. Di, Z. Jiang, "Simultaneous dehalogenation and oxidation of dichloroacetamide by Cu-modified CoFe-LDH in three-dimensional continuous flow aerated electrocatalytic reactor" *Chemical Engineering Journal* 500 (2024) 156652
- P87. Z. Jiang, Y. Wang, D. Mantzavinos, A. Katsaounis, X. Bai, S. Cheng, C. Zheng, J Shen, H. Zhang "Role of cerium modification on LDHs applied in three-dimensional electrochemical reactor for N-nitrosopyrrolidine disinfection by- products abatement in water", *Process Safety and Environmental Protection*, 191 (2024) 995
- P86. Z. Liu, A. Kajtazi, F. Lynen, N. Askari, R. Dewil, S. Ladas, G. Kyriakou, A. Katsaounis, "Direct electron transfer mediated electrochemical activation of persulfates by reticulated vitreous carbon (RVC) cathode", *Journal of Environmental Chemical Engineering*, 12 (2024) 113416
- P85. X. Qing, Z. Liu, A. Katsaounis, N. Bouropoulos, I. Taurino, P. Fardim, "Poly(vinyl alcohol)/Pullulan/NaCl Conductive Hydrogels with High Strength and Sensitivity for Wearable Strain Sensors", *ACS Applied Polymer Materials*, 6 (2024) 8105
- P84. I. Ali, A. Barros de Souza, Z. Liu, D. Cabooter, A. Katsaounis, S. De Laet, K. Van Eyck, R. Dewil, "Improving the removal of losartan, irbesartan and their transformation products through in situ produced hydrogen peroxide in electrochemical oxidation processes", *Journal of Water Process Engineering*, 55 (2023) 104133
- P83. A.K. Benekos, I.A. Vasiliadou, A.G. Tekerlekopoulou, M. Alexandropoulou, S. Pavlou, A. Katsaounis, D.V. Vayenas, "Groundwater denitrification using a continuous flow mode hybrid system combining a hydrogenotrophic biofilter and an electrooxidation cell", *Journal of Environmental Management*, 339 (2023) 117914
- P82. A. Lymperi, Ch. Chatziliias, F. Xydas, E. Martino, G. Kyriakou, A. Katsaounis, "Electrochemical Promotion of CO₂ Hydrogenation Using a Pt/YSZ Fuel Cell Type Reactor", *Nanomaterials*, 13(13) (2023) 1930
- P81. N. Kokkinou, F. Xydas, S. Brosda, G. Kyriakou, G., Katsaounis, A., "Electrochemical Promotion of CO₂ Hydrogenation Using Rh Catalysts Supported on O²⁻ Conducting Solid Electrolyte", *Catalysts*, 13(6) (2023) 1014

- P80. Ch. Chatziliias, E. Martino, C.G. Vayenas, G. Kyriakou, A. Katsaounis, "A low temperature SOFC as self-promoted reactor for CO₂ catalytic hydrogenation", *J Applied Catalysis B: Environmental* 317 (2022) 121778
- P79. S. Giannakopoulos, P. Kokkinos, B. Hasa, Z. Frontistis, A. Katsaounis, D. Mantzavinos, "Electrochemical Oxidation of Pharmaceuticals on a Pt–SnO₂/Ti Electrode", *Electrocatalysis*, 13(4) (2022) 363–377
- P78. I.A. Vasiliadou, A. Kalogiannis, A. Spyridonidis, A. Katsaounis, K. Stamatelatou, "Effect of applied potential on the performance of an electroactive methanogenic biocathode used for bioelectrochemical CO₂ reduction to CH₄", *Journal of Chemical Technology and Biotechnology*, 97(3) (2022) 643–652
- P77. D. Zagoraios, N. Kokkinou, G. Kyriakou, A. Katsaounis, "Electrochemical control of the RWGS reaction over Ni nanoparticles deposited on yttria stabilized zirconia", *Catalysis Science and Technology*, 12(6) (2022) 1869–1879
- P76. B. Hasa, E. Martino, S. Tsatsos, J. Vakros, G. Kyriakou, A. Katsaounis, "Non-precious Sn as alternative substitute metal in graphene-based catalysts for methanol electrooxidation", *Journal of Applied Electrochemistry*, 52(3) (2022) 509–520
- P75. Ch. Chatziliias, E. Martino, S. Tsatsos, G. Kyriakou, A. Katsaounis, C.G. Vayenas, "Kinetic study of CO₂ hydrogenation on Ru/YSZ catalyst using a monolithic electropromoted reactor (MEPR)", *Chemical Engineering Journal*, 430 (2022) 132967
- P74. C. Apostolopoulos, A. Drakakaki, A. Katsaounis, M. Bardi, K.F. Koulouris, "Parameters determining the quality of corrosion damage, induced by impressed current density technique, on steel reinforcement", *International Journal of Structural Integrity*, 12(4) (2021) 548-561
- P73. A.A. Khechfe, M.M. Sullivan, D. Zagoraios, A. Katsaounis, C.G. Vayenas, Y. Román-Leshkov, "Non-Faradaic Electrochemical Promotion of Brønsted Acid-Catalyzed Dehydration Reactions over Molybdenum Oxide", *ACS Catalysis*, 12(2) (2022) 906–912
- P72. D. Zagoraios, Ch. Ioakeimidis, G. Kyriakou and A. Katsaounis, "Glassy Carbon Electrochemical Sensor for Gallic and Vanillic Acid Detection in Aqueous Solutions", *Applied Sciences*, 11 (2021) 8045-8047
- P71. A.K. Benekos, M. Tsigara, S. Zacharakis, I–E. Triantaphyllidou, A.G. Tekerlekopoulou, A. Katsaounis and D.V. Vayenas, "Combined electrocoagulation and electrochemical oxidation treatment for groundwater denitrification", *Journal of Environmental Management*, 297 (2021) 113387
- P70. D. Grigoriou, D. Zagoraios, A. Katsaounis and C.G. Vayenas, "The role of the promoting ionic species in electrochemical promotion and in metal-support interactions", *Catalysis Today*, 363 (2021) 122–127
- P69. Ch. Chatziliias, E. Martino, A. Katsaounis, C.G. Vayenas, "Electrochemical promotion of CO₂ hydrogenation in a monolithic electrochemically promoted reactor (MEPR) ", *J Applied Catalysis B Environmental*, 284 (2021) 119695

- P68. D. Zagoraios, Ch. Panaritis, A. Krassakopoulou, E.A. Baranova, A. Katsaounis and C.G. Vayenas, "Electrochemical Promotion of Ru Nanoparticles deposited on a Proton Conductor Electrolyte during CO₂ Hydrogenation", *Applied Catalysis B: Environmental* 276 (2020) 119148
- P67. D. Zagoraios, A. Athanasiadi, I. Kalaitzidou, S. Ntais, A. Katsaounis, A. Caravaca, P. Vernoux, C.G.Vayenas, "Electrochemical promotion of methane oxidation over nanodispersed Pd/Co₃O₄ catalysts", *Catalysis Today* 355 (2020) 910–920
- P66. D. Zagoraios, S. Tsatsos, S. Kennou, C.G. Vayenas, G. Kyriakou, and A. Katsaounis, "Tuning the RWGS Reaction via EPOC and In Situ Electro-oxidation of Cobalt Nanoparticles", *ACS Catalysis* 10, 24 (2020) 14916–14927
- P65. B. Hasa, E. Martino, J. Vakros, G. Trakakis, C. Galiotis, A. Katsaounis, "Effect of Carbon Support on the Electrocatalytic Properties of Pt–Ru Catalysts", *ChemElectroChem* (front cover), 6 (2019) 4921
- P64. A. Masouras, D. Giannopoulos, B. Hasa, A. Katsaounis, V. Kostopoulos, "Hybrid graphene nanoplatelet/manganese oxide electrodes for solid-state supercapacitors and application to carbon fiber composite multifunctional materials", *Journal of Energy Storage*, 23 (2019) 515-525
- P63. I. Kalaitzidou, D. Zagoraios, S. Brosda, A. Katsaounis, P. Vernoux, C.G. Vayenas, "Electrochemical promotion of methane oxidation on Pd nanoparticles deposited on YSZ", *Materials Today: Proceedings*, 5 (2018), 27345–27352
- P62. E. Martino, A. Gusev, A. Katsaounis and C.G. Vayenas, "Steady State Multiplicities in Low Temperature PEM Fuel Cells", *Materials Today: Proceedings*, 5 (2018), 27397-27405
- P61. B. Hasa, J. Vakros, A. Katsaounis, "Study of low temperature alcohol electro-reforming", *Materials Today: Proceedings*, 5 (2018), 27337-27344
- P60. M. Makri, A. Symillidis, D. Grigoriou, A. Katsaounis and C. G. Vayenas, "Electrochemical Promotion of CO₂ reduction on a dispersed Ru/YSZ catalyst supported on YSZ solid electrolyte", *Materials Today: Proceedings*, 5 (2018) 27617-27625
- P59. A. Katsaounis, D. Teschner, S. Zafeiratos, "The effect of polarization and reaction mixture on the Rh/YSZ oxidation state during ethylene oxidation studied by Near Ambient Pressure XPS", *Topics in Catalysis*, 61 (2018) 2142-2151
- P58. B. Hasa, J. Vakros, A. Katsaounis, "Effect of TiO₂ on Pt-Ru-based anodes for methanol electroreforming", *Applied Catalysis B: Environmental*, 237 (2018) 811-816
- P57. A. Kotsiras, I. Kalaitzidou, D. Grigoriou, A. Symillidis, M. Makri, A. Katsaounis, C.G. Vayenas, "Electrochemical promotion of nanodispersed Ru-Co catalysts for the hydrogenation of CO₂", *Applied Catalysis B: Environmental*, 232 (2018) 60-68
- P56. M. Athanasiou, B. Hasa, J. Vakros, L. Sygellou, A. Katsaounis, "Electrochemical promotion of carbon supported Pt, Rh and Pd catalysts for H₂ oxidation in aqueous alkaline media", *J. Chem. Technol. Biotechnol.* 93(6) (2018) 1542-1548
- P55. I. Drakakaki, B. Hasa, A. Katsaounis and Ch. Apostolopoulos, "Resistance and Mechanical Characteristics of dual-phase steel B500c, after shot blasting processes", *International Journal of Structural Integrity*, 8(5) (2017) 544-564

- P54. E. Martino, G. Koiliyas, M. Athanasiou, A. Katsaounis, Y. Dimakopoulos, J. Tsamopoulos and C.G.Vayenas, "Experimental investigation and mathematical modeling of triode PEM fuel cells", in preparation, *Electrochimica Acta* 248 (2017) 518-533.
- P53. V. Markou, M.-C. Kontogianni, Z. Frontistis, A.G. Tekerlekopoulou, A. Katsaounis, D. Vayenas, "Electrochemical treatment of biologically pre-treated dairy wastewater using dimensionally stable anodes", *Journal of Environmental Management* 202 (2017) 217-224
- P52. D. Niakolas, S. Neophytides, C.G. Vayenas, A. Katsaounis, N. Athanasopoulos, S. Balomenou, K-M Papazisi, D. Tsiplakides, M. Schautz, "Investigation of advanced components in a high pressure single cell electrolyser for the development of a HP-ELY stack as part of a regenerative fuel cell system", *E3S Web of Conferences* 16 (2017) 09004.
- P51. Z. Frontistis, M. Antonopoulou, M. Yazirdagi, Z. Kilin, I. Konstantinou, A. Katsaounis and D. Mantzavinos, "Boron-doped diamond electrooxidation of ethyl paraben: The effect of electrolyte on by-products distribution and mechanisms", *Journal of Environmental Management*, 195 (2017) 148156
- P50. I. Kalaitzidou, M. Makri, D. Theleritis, A. Katsaounis and C.G. Vayenas, "Comparative study of the electrochemical promotion of CO₂ hydrogenation on Ru using Na⁺, K⁺, H⁺ and O²⁻ conducting solid electrolytes", *Surface Science*, 646 (2016) 194-203
- P49. M. Makri, A. Katsaounis and C.G. Vayenas, "Electrochemical Promotion of CO₂ hydrogenation on Ru catalyst-electrodes supported on β "-Al₂O₃(K⁺) solid electrolyte", *Electrochimica Acta*, 179 (2015) 556-564
- P48. B. Hasa, E. Kalamaras, E. Papaioannou, I. Vakros and A. Katsaounis, "Effect of TiO₂ Loading on PtRu catalysts during methanol electrooxidation", *Electrochimica Acta*, 179 (2015) 578-587
- P47. I. Kalaitzidou, A. Katsaounis, T. Norby and C.G. Vayenas, "Electrochemical Promotion of the hydrogenation of CO₂ on Ru deposited on a BZY proton conductor", *Journal of Catalysis*, 331 (2015) 98-109
- P46. D. Theletiris, M. Makri, A. Caravaka, S. Souentie, A. Katsaounis and C.G. Vayenas, "Comparative study of the electrochemical promotion of CO₂ hydrogenation over Ru supported catalysts using electronegative and electropositive promoters" *ChemElectroChem*, 1 (2014) 254–262
- P45. E.I. Papaioannou, E. Siokou, Ch. Comninellis and A. Katsaounis, "Pt-Ir binary electrodes for direct oxidation of methanol in low temperature fuel cells (DMFCs)" *Electrocatalysis* 4 (2013) 375-381
- P44. B. Hasa, E. Kalamaras, E.I. Papaioannou, L. Sygellou and A. Katsaounis, "Electrochemical oxidation of alcohols on Pt-TiO₂ binary electrodes" *International Journal of Hydrogen Energy*, 38 (2013) 15395-15404
- P43. S. Souentie, M. Athanasiou, D.K. Niakolas, A. Katsaounis, S.G. Neophytides, C.G. Vayenas, "Mathematical modeling of Ni/GDC and Au–Ni/GDC SOFC anodes performance under internal methane steam reforming conditions" *Journal of Catalysis*, 306 (2013) 116-128

- P42. V.M. Daskalaki, H. Marakas, D. Mantzavinos, A. Katsaounis, P. Gikas, "Use of seawater for the Boron-doped diamond electrochemical treatment of diluted vinasse wastewater" *Water Science and Technology* 68 (2013) 2344–2350
- P41. D. Venieri, E. Chatzisyneon, E. Politi, S. Sofianos, A. Katsaounis, D. Mantzavinos, "Photoelectrocatalytic disinfection of water and wastewater: performance evaluation by qPCR and culture techniques" *Journal of Water and Health*, 11 (2013) 21-29
- P40. D. Venieri, E. Chatzisyneon, S. Sofianos, E. Politi, N. Xekoukoulotakis, A. Katsaounis, D. Mantzavinos, "Removal of faecal indicator pathogens from waters and wastewaters by photoelectrocatalytic oxidation on TiO₂/Ti-films under simulated solar radiation" *Environmental Science & Pollution Research* 19 (2012) 3782–3790
- P39. V. Amstutz, A. Katsaounis, A. Kapalka, Ch. Comninellis and K.-M. Udert, "Effects of carbonate on the electrolytic removal of ammonia and urea from urine with thermally prepared IrO₂ electrodes" *Journal of Applied Electrochemistry*, 42 (2012) 787-795
- P38. D. Theleritis, S. Souentie, A. Katsaounis and C.G. Vayenas, "Hydrogenation of CO₂ over Ru/YSZ electropromoted catalysts" *ACS Catalysis*, 2 (2012) 770
- P37. C. Jiménez-Borja, A. Consuegra, F. Sapountzi, F. Dorado, A. Katsaounis, J.L. Valverde, "Oscillatory behaviour of Rh/YSZ under electropromoted conditions" *Chemical Physics Letters*, 519-520 (2012) 89-92
- P36. E. Tsantaki, T. Velegraki, A. Katsaounis, D. Mantzavinos, "Anodic oxidation of textile dyehouse effluents on boron-doped diamond electrode" *Journal of Hazardous Materials*, 207-208 (2012) 9196
- P35. Z. Frontistis, C. Brebou, D. Venieri, D. Mantzavinos, A. Katsaounis, "BDD anodic oxidation as tertiary wastewater treatment for the removal of emerging micro-pollutants, pathogens and organic matter" *Journal of Chemical Technology and Biotechnology* 86 (2011) 1233-1236
- P34. E. Turro, A. Giannis, R. Cossu, E. Gidarakos, A. Katsaounis, "Electrochemical oxidation of stabilised landfill leachate on DSA electrodes" *Journal of Hazardous Materials*, 190 (2011) 460
- P33. V. Daskalaki, E. Timotheatou, A. Katsaounis, D. Kalderis, "Degradation of Reactive Red 120 using hydrogen peroxide in subcritical water" *Desalination*, 274 (2011) 200
- P32. Z. Frontistis, V.M. Daskalaki, A. Katsaounis, I. Poulios and D. Mantzavinos, "Electrochemical enhancement of solar photocatalysis: Degradation of endocrine disruptor bisphenol-A on Ti/TiO₂ films", *Water Research* 45 (2011) 2996
- P31. V. Daskalaki, Z. Frontistis, D. Mantzavinos and A. Katsaounis, "Solar light-induced degradation of bisphenol-A with TiO₂ immobilized on Ti" *Catalysis Today*, 161 (2011) 110
- P30. A. Kapalka, S. Fiero, Z. Frontistis, A. Katsaounis, S. Neodo, K.M. Udert and Ch. Comninellis "Electrochemical oxidation of ammonia (NH₄⁺/NH₃) on thermally and electrochemically prepared IrO₂ electrodes" *Electrochimica Acta*, 56 (2011) 1361
- P29. A. Kapalka, A. Katsaounis, N.L. Michels, A. Leonidova, S. Souentie, Ch. Comninellis, Kai M. Udert, "Ammonia oxidation to nitrogen mediated by electrogenerated active chlorine on Ti/PtO_x-IrO₂" *Electrochemistry Communications* 12 (2010) 1203

- P28. A. Nakos, S. Souentie and A. Katsaounis, "Electrochemical promotion of methane oxidation on Rh/YSZ" *Applied Catalysis B: Environmental*, 101 (2010) 31
- P27. E. Chatzisyneon, S. Fierro, I. Karafyllis, D. Mantzavinos, N. Kalogerakis, A. Katsaounis, "Anodic oxidation of phenol on Ti/IrO₂ electrode: Experimental studies" *Catalysis Today* 151 (2010) 185
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- P25. T. Velegraki, N. Xekoukoulotakis, A. Katsaounis, E. Diamantopoulos and D. Mantzavinos, "Electrochemical oxidation of benzoic acid in water over BDD electrodes: Statistical analysis of key operating parameters, kinetic modelling, reaction by-products and ecotoxicity" *Chemical Engineering Journal* 160 (2010) 538
- P24. Alexandros Katsaounis, "Recent developments and trends in Electrochemical Promotion of Catalysis" *Journal of Applied Electrochemistry*, 40 (2010) 885
- P23. E.H. Calderon, J. Hahladakis, G. Foti and A. Katsaounis, "Effectiveness factor of isopropanol oxidation on IrO₂ based electrodes of different loading" *Electrochimica Acta*, 55 (2010) 8215
- P22. N. Papastefanakis, D. Mantzavinos and A. Katsaounis, "DSA electrochemical treatment of olive mill wastewater on Ti/RuO₂ anode" *Journal of Applied Electrochemistry* 40 (2010) 729
- P21. E.H. Calderon, A. Katsaounis, R. Wüthrich, P. Mandin, G. Foti, Ch. Comninellis, "Effectiveness factor of fast (Fe³⁺/Fe²⁺), moderate (Cl₂/Cl⁻) and slow (O₂/H₂O) redox couples using IrO₂ based electrodes of different loading" *Journal of Applied Electrochemistry*, 39 (2009) 1827
- P20. Chatzisyneon, E., Xekoukoulotakis, N.P., Diamadopoulos, E., Katsaounis, A. and Mantzavinos, D. "Boron-doped diamond anodic treatment of olive mill wastewaters: Statistical analysis, kinetic modeling and biodegradability" *Water Research*, 43 (2009) 3999
- P19. A. Kapalka, S. Fierro, Z. Frontistis, A. Katsaounis, O. Frey, M. Koudelka, Ch. Comninellis and K.M. Udert, "Electrochemical behaviour of ammonia (NH₄⁺/NH₃) on electrochemically grown anodic iridium oxide film (AIROF) electrode" *Electrochemistry Communications* 11 (2009) 1590
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Scientific Research Projects as Scientific Director

2020-2023	European Union's EU Framework Programme for Research and Innovation Horizon 2020 MSCA-ETN (Grant Agreement No 861369) "InnovEOX - Training a new generation of researchers in Innovative Electrochemical Oxidation processes" (budget: € 400.000)
2013-2015	ARISTEIA-II (General Secretary of Research & Technology) " Electrochemical Promotion of aerobic-catalytic treatment of toxic pollutants in aqueous phase" (budget: € 300.000)
2014-2016	Greek Research Program – Karatheodory (from University of Patras) "Preparation and study of anodes for low temperature alcohol fuel cells (DAFCs)" (budget: € 33.000)
2007-2008	Greek Research Program (from Technical University of Crete) "Catalytic treatment of soot from diesel engines" (budget: € 5.000)
2008-2010	Greek Research Program (from Technical University of Crete) "Development and study of low temperature direct alcohol fuel cells" (budget: € 12.000)
2009-2010	Research Program with Industry (FINOBETON Cement Industry) "Measurement and distribution of gas emissions" (budget: € 10.000)
2020-2024	European Union's EU Framework Programme for Research and Innovation Horizon 2020, Grant Agreement (No 861369) "InnovEOX - Training a new generation of researchers in Innovative Electrochemical Oxidation processes" (budget: € 250.000)

Scientific Research Projects as member of the Scientific Team

2018-2021	EPAnEK 2014-2020 European Union, European Regional Development Fund, Program Research-Create-Innovate, T1EΔK-01631: Scale up of Electrochemically Promoted Catalytic Hydrogenation of CO ₂ for fuel production (CO ₂ TO FUELS)
2014-2018	ESA RPEMFC: 4000109578/13/NL/SC Development of a Closed Loop Regenerative HT PEM Fuel Cell System
2012-2015	SYNERGASIA 2011, EYΔE-ETAK (09ΣYN-42-729): Development of nanostructured electrodes for water electrolysis in high temperature polymeric membrane devices (HTPEM-ELE)

2012-2015	SYNERGASIA 2011, ΕΥΔΕ-ΕΤΑΚ (09ΣΥΝ-32-615): Electrochemical promotion of catalytic hydrogenation of CO ₂ (ECHO ₂ CO ₂)
2011-2013	ARISTEIA-I (General Secretary of Research & Technology), Electrochemical promotion of catalysis for the case of CO ₂ hydrogenation to fuels and chemicals (Electrofuels)
2004-2006	FP6-2003-NEST-A: Electrocatalytic Gas-Phase Conversion of CO ₂ in Confined Catalysts
2004-2006	Greek Programme 04 AKMON 61 supported from the Greek General Secretary of Research and Technology
2000-2003	Growth Project GRD1-1999-10239 Oxidation catalyst deactivation
1999-2002	European Project GRD1-1999-10239 – Study of the mechanism of Catalyst Deactivation for ethylene oxide and vinyl acetate reactions
1997-1999	Electric Power Research Institute (EPRI) contract WO8065-25 – Electrochemical Promotion of Ammonia Synthesis from N ₂ and H ₂