

**Present position:** Associate Professor of Electrochemistry, Department of Chemical Engineering, Laboratory of Inorganic Chemistry Aristotle University of Thessaloniki

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**Language:** English

**Education:** Dr. Chem. Eng. (AUTH, GR, 1992)  
Dipl. Chem. (Univ. Patras, GR, 1976)

**Research Interests:**

1. Electrochemical synthesis of inorganic and organic compounds.
2. Electrochemical removal of toxic compounds from wastewaters
3. Analysis of inorganic and organic compounds by chromatography (GC, GC-MS HPLC)
4. Photocatalytic degradation of organic compounds
5. Oxidation with supercritical water (SCW)

**Publications**

1. **G. Kyriacou** and A. Anagnostopoulos, "Electroreduction of CO<sub>2</sub> on differently prepared copper electrodes. The influence of electrode treatment on the current efficiencies", **J. Electroanal. Chem.**, **322** (1992) 233-246

2. **G. Kyriacou** and A. Anagnostopoulos, "Influence of CO<sub>2</sub> partial pressure and the supporting electrolyte cation on the product distribution in CO<sub>2</sub> electroreduction", **J. Appl. Electrochem.**, **23** (1993) 483-486

3. **G. Kyriacou** and A. Anagnostopoulos, "Electroreduction of CO<sub>2</sub> at copper+gold electrodes", **J. Electroanal. Chem.**, **328** (1992) 233-243

4. Anagnostopoulos, D. Varsamis, **G. Kyriacou**, and K. Tzoanas, "Comparative study of the performance of downstream and upstream electrodes for the removal of copper ions from dilute solutions", **Gaz. Chim. Ital.**, **123** (1993) 61-63

5. A. Avranas, C. Kypri, I. Poullos, D. Giannakoudakis and **G. Kyriacou**, "Heterogeneous photocatalytic degradation of the cationic surfactant

dodecylpyridinium chloride (N-DPCI)", **Appl. Catal. B: Environmental**, **2** (1993) 289-302

**6. G. Kyriacou**, K. Tzoanas and I. Poullos, "Photocatalytic decomposition of 2,3 dichloro-pyridine over aqueous suspensions of TiO<sub>2</sub>", **J. Environ. Sci. Health, A** **32(4)** (1997) 963-976

**7. Delli**, S. Kouloumtzoglou, **G. Kyriacou\*** and Ch. Lambrou, "Electrochemical reduction of CCl<sub>2</sub>F<sub>2</sub> on Nafion solid polymer electrolyte composite electrodes", **Chem. Commun.**, (1998) 1693-1694

**8. A. Kotsinaris**, **G. Kyriacou\*** and Ch. Lambrou, "Electrochemical conversion of dichloromethane to higher hydrocarbons", **J. Appl. Electrochem.**, **28** (1998) 613-616

**9. Ch. Avgousti**, N. Georgolios, **G. Kyriacou** and G. Ritzoulis, "The electrochemical oxidation of tetrahydrofuran in sulphuric acid solution", **Electrochim. Acta**, **44** (1999) 3295-3301

**10. A. Schizodimou**, **G. Kyriacou\*** and Ch. Lambrou, "Electrochemical Reduction of Dichlorodifluoromethane in Acetonitrile Medium to Useful Fluorinated Compounds", **J. Electroanal. Chem.**, **471** (1999) 26-31

**11. Th. Fotiadis**, **G. Kyriacou\***, Ch. Lambrou and S. Hadjispyrou, "Electrochemical reduction of dichlorodifluoromethane at a nafion solid polymer electrolyte cell", **J. Electroanal. Chem.**, **480** (2000) 249-254

**12. N. Georgolios**, G. Kyriacou and G. Ritzoulis, "Electrochemical reduction of dichloro-difluoromethane on silver and lead electrodes", **J. Appl. Electrochem.**, **31** (2001) 207-212

**13. V. Kordali**, **G. Kyriacou\*** and Ch. Lambrou, "Electrochemical synthesis of ammonia at atmospheric pressure and at low temperature in a solid polymer electrolyte cell", **Chem. Commun.**, (2000), 1673-1674

14. I. Poullos and **G. Kyriacou**, “Photocatalytic degradation of coumaric acid over aqueous suspensions of TiO<sub>2</sub>”, **Env. Techn.**, 23 (2002) 179-187
15. V. Papageorgiou, A. Assimopoulou, **G. Kyriacou** “Determination of naturally occurring hydroxynaphthoquinone polymers by size-exclusion chromatography” **Chromatographia** 55 (2002) 423
16. C. Polatidis and **G. Kyriacou\*** “Electrochemical removal of nitrate from aqueous solutions on various metals and alloys” **J. Appl. Electrochem.**, 35 (2005) 421-427
17. C. Polatides, M. Dortsiou and **G. Kyriacou\*** «Electrochemical removal of nitrate from aqueous solution by pulsing potential electrolysis», **Electrochim. Acta**, 50 (2005) 5237-5241
18. I. Katsounaros, D. Ipsakis, C. Polatides and **G. Kyriacou\*** «Efficient electrochemical reduction of nitrate to nitrogen on tin cathode at very high cathodic potentials» **Electrochim. Acta**, 52 (2006) 1329-1338
19. I. Katsounaros, **G. Kyriacou\*** , “Influence of the concentration and the nature of the supporting electrolyte on the electrochemical reduction of nitrate on tin cathode”, **Electrochim. Acta**, 52 (2007) 6412–6420
20. A. Chatzitakis, C. Berberidou, I. Paspaltsis, **G. Kyriakou**, T. Sklaviadis and I. Poullos, “Photocatalytic degradation and drug activity reduction of chloramphenicol”, **Water Research** 42 ( 2008 ) 386 – 394
21. I. Katsounaros, **G. Kyriacou\***, “Influence of the concentration of nitrate on its electrochemical reduction on tin cathode: Identification of reaction intermediates” **Electrochim. Acta** 53 (2008) 5477-5484
22. M. Ziagova, **G. Kyriakou**, M. Liakopoulou-Kyriakides “Co-metabolism of 2,4-dichlorophenol and 4-Cl-*m*-cresol in the presence of glucose as an easily assimilated carbon source by *Staphylococcus xylosus*” **J Hazard. Mater.** 163(1) (2009) 383

23. M. Dortsiou and **G. Kyriacou\*** “Electrochemical reduction of nitrate on bismuth cathodes”, **J. Electroanal. Chem.**, 630 (2009) 69–74s
24. M. Dortsiou, I. Katsounaros, C. Polatides and **G. Kyriacou\*** “Electrochemical method for the removal of nitrate from the ion exchange spent regenerant solution” **Desalination**, 248 (1-3) (2009) 923-930
25. M. Dortsiou, I. Katsounaros and **G. Kyriacou\***, “Electrochemical reduction of nitrate and nitrite in simulated liquid nuclear wastes, **J Hazard. Mater.** 171 (2009) 323–327
26. M. Dortsiou, I. Katsounaros and **G. Kyriacou\***, “Quantitative Determination of Hyponitrite and Hyponitrate by Ion chromatography” **Chromatographia** 70(1-2)(2009) 315
27. I. Katsounaros, M. Dortsiou, Ch. Polatides, S. Preston, Th. Kypraios and **G. Kyriacou\***, “Reaction pathways in the electrochemical reduction of nitrate on tin”, **Electrochimica Acta**, 71 (2012) 270-276
28. A. Schizodimou and **G. Kyriacou\***, “Acceleration of the reduction of carbon dioxide in the presence of multivalent cations” **Electrochimica Acta** 78 (2012) 171-176
29. K. Matziaris, C. Polatides, I. Katsounaros and **G. Kyriacou\***, “Electrochemical removal of bromate from drinking water” **Desalination and Water Treatment** 51 (2013) 2889–2894
30. M. Dortsiou, I. Katsounaros, C. Polatides and **G. Kyriacou\***, “The influence of the metal cathode and the pH on the rate and the distribution of products of the electrochemical reduction of nitrate “ **Env. Techn.** 34 (2013) 373-381(2013)

**31. I. Kotoulas, A. Schizodimou and G. Kyriacou** Electrochemical Reduction of Formic Acid on a Copper-Tin-Lead Cathode *The Open Electrochemistry Journal*, 5(2013) 8-12

## **Patents**

**1. G. Kyriacou, I. Katsounaros, C. Polatides and D. Ipsakis:** “Electrochemical method for the removal of nitrate or/and nitrite through their conversion to nitrogen” Number: 1005326/18-10-2006/ Industrial Property Organisation (OBI), Greece International classification: C02F 1/461, C02F 101/16.

**2. G. Kyriacou, M. Dortsiou, C. Polatides and I. Katsounaros:** “Method for the electrochemical removal of nitrate and nitrite ions from aqueous solutions on bismuth cathode” Submitted to the Industrial Property Organisation (OBI), Greece Application Number: 20080100443, Application Date: 30/6/2008

## **Research programs**

**1. PENED 1995** “Development of an electrochemical method for the utilization of the carbon dioxide” General Secretariat of Research and Technology, Greece

**2. PENED 2004** “Electrochemical removal of nitrate and ammonia from aqueous solutions and environmental samples” General Secretariat of Research and Technology, Greece

**3.** Participation in the network on the “Advance oxidation methods”

## **PhD Theses Advisor**

1. Christos Polatides
2. Ioannis Katsounaros
3. Maria Dortsiou

## **Chapters in Books**

G. Kyriacou and I. Katsounaros: “ELECTROLYSIS OF NITRATE IN AQUEOUS SOLUTION”, Invited Chapter in “Electrolysis: Theory, Types and Applications”.

Edited by Shing Kuai and Ji Meng, Nova Science Publishers, Inc., March 2010. Pages 327-354. ISBN: 978-1-60876-619-2.

## **Citations**

More than 500 citations according to Scopus and SCI H-index =16