CURRICULUM VITAE
(SYNOPTIC)
NAME: GEORGIOS S. PATERMARAKIS
DEGREE: Chemical Engineer, MSc, PhD
TITLE: Professor
(UPDATE: February 2021)

WORK ADDRESS
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A. BIOGRAPHICAL PERSONAL DETAILS - STUDIES - POST GRADUATE STUDIES AND PROFESSIONAL ACTIVITY

1972-1977: MSc in Chemical Engineering at the School of Chemical Engineering of the National Technical University of Athens (NTUA).
1978-1983: (i) PhD in Chemical Engineering at the School of Chemical Engineering, NTUA. (Distinction). (ii) Parallel professional activity: Research, Higher Education, Other Education, Free Profession.
1983-1985: Served in the Navy as an ammunition technician.
1985-2014: (i) Post doctorate at the School of Chemical Engineering and School of Mining and Metallurgical Engineering, NTUA. (ii) Professional Activities in: Research, Higher Education, Other Education, Chemical Engineering (Technical and Technical - Economic Studies), Evaluation of Investment Proposals at the Greek Ministry of Development, Scientific and Technical Consultant in Materials Technology, Materials Recycling etc.
2014-2018: (i) Associate Professor at Piraeus University of Applied Sciences (PUAS). Subject: ***Inorganic Chemical – Electrochemical Technology and Catalysis***. Had been elected to this position by the Department of Physics, Chemistry and Materials Technology in 2011. Joined the Department of Textile Engineering. (ii) Head of Physical Chemistry and General Chemistry Laboratories in the Department of Textile Engineering (PUAS). Laboratories were reorganized completely. (iii) Deputy Head of the Section of Dyeing and Finishing in the Department of Textile Engineering (PUAS).
2015-2018: Member of the Coordinating Committee of Postgraduate Studies Program "Novel Textile Materials and Technologies in Fashion Design" in the Department of Textile Engineering (PUAS). Responsible of the course entitled "Physicochemical Processes in the Contemporary Textile Industry".
2018-: Professor at PUAS (2018) & Professor at the University of West Attica (UWA) School of Engineering (SE), Department of Industrial Design and Production Engineering (IDPE) (2018-2020) & Department of Biomedical Engineering (BME) (2020-). Subject: ***Inorganic Chemical - Electrochemical Technology and Catalysis***.
2018-2020: Deputy Head of the Section of Chemistry, Materials Science and Textiles (IDPE-SE - UWA).
2018-2020: Head of Chemistry I, Chemistry II and Physical Chemistry Laboratories at IDPE-SE - UWA, Ancient Olive Grove Campus.

2019-. Member and co-director of the Established Research Laboratory of Chemical Sciences and Technologies (inter-departmental laboratory), re-established at 2018.
2019. Member of the rapporteur committee for drafting the new 5-years undergraduate studies program at IDPE-SE-UWA, approved by the governing committee of UWA. By his suggestion many new courses incorporated into the program, extremely important for Industrial Design and Production Engineering.

B. SPECIALIZATIONS

I. Physical Chemistry (Chemical Kinetics, Catalysis, Adsorption, Theoretical and Applied Electrochemistry, Bioelectrochemistry, Physical Chemistry of Solids, Spectroscopy, Thermodynamics, etc).
II. Science and Engineering/Technology of Materials and Nanomaterials.
III. Inorganic Chemical and Electrochemical Technology, Physicochemical Processes.
IV. Metallurgy (Hydrometallurgy).
V. Environment and Energy.

C. ACTIVITIES

I. RESEARCH PROJECTS (SINCE 1978)

1. "Catalytic and adsorptive properties of Al oxides electrolytically prepared''.
2. "Aluminium anodising. Anodic oxidation of Al under controlled conditions and examination of physicochemical properties of the anodic coatings''.
3. "Removal of iron from diasporic bauxites''.
4. "Electrochemical treatment of water".
5. "Applied research in anodised products of Al".
6. "New protective coatings (pigmented polymers) for the protection of marbles and carbonate stones of ancient monuments and statues" (Eureka Project / Eurocare: European Project of Conservation and Restoration).
7. "Methods of anticorrosion protection – Chromation of metallic surfaces (Al)''.
8. "Kinetics and mechanism of growth, structure, nature, dielectric and physicochemical properties of anodic aluminium oxides membranes. Modification of their properties through their further treatment by different physicochemical methods".
9. "Catalytic properties of anodic aluminium oxides, their application in the design and study of models for porous catalysts and catalysts carriers, their trial in reactions of industrial importance and design and study of a semi-industrial scale catalytic reactor".
10. "Removal of iron from boehmitic bauxites''.
11. "Spectroscopy (FTIR, Raman, etc.) study of oxides catalysts and biocatalysts''.
12. "Discovery of the mechanism of appearance and progress of undesired parasitic phenomena like pitting, burning and chalking during the anodic oxidation of Al. Development of methods for their avoidance and control''.
13. "Spectroscopic study of semiconductivity, ionic conductivity, magnetic transition (spin flip transition) and magneto-chemical behaviour of hematite. Application of hematite as photoanode in photocatalytic electrochemical decomposition of water for the conversion and storage of solar energy''.

Projects were funded or co-funded from Research Committee of NTUA, Hellenic Company of Industrial & Metallurgical Research, Company Energeiaki Hellados and European Union.

II. EVALUATION OF INVESTMENT PROPOSALS

He has evaluated, as referee of the Greek Ministry of Development, proposals (above 45, with a total budget of the order of a hundred millions €) for energy character investments, namely (i) Energy Saving in Existing Businesses - Industries, (ii) Co-production of Electric Energy and Heat, (iii) Substitution of Electricity or Other Conventional Fuels with Natural Gas, LPG and Renewable Energy in Existing - Industries and (iv) Renewable Energy Sources, 1997-1998.

III. HIGHER EDUCATION

He has worked at the National Technical University, Air Force Academy, School of Pedagogical and Technological Training, Technological Education Institute of Athens, Piraeus University of Applied Sciences and University of West Attica, since 1978.

III1. TEACHING EXPERIENCE IN UNDERGRADUATE AND POSTGRADUATE STUDIES (SINCE 1978)

THEORETICAL COURSES: **1**. Physical Chemistry; **2**. Electrochemistry; **3**. General and Inorganic Chemistry; **4**. Specific Subjects (Topics) in Chemistry I (Chemical Kinetics, Equilibrium, Thermodynamics, Electrochemistry, Inorganic Materials); **5**. Chemical Technology; **6**. Chemical Technology - Fuels - Lubricants; **7**. Chemistry and Technology of Materials; **8**. Aerospace Engineering Materials Technology (Metals/Alloys, Synthetic Materials, Composite Materials); **9**. Civil Engineering Materials; **10**. Civil Engineering Materials Technology; **11**. Electrical Engineering Materials and Parts Technology; **12**. Mechanical Engineering Materials; **13**. Quality Control and Technology of Mechanical Engineering Materials; **14**. Environment Protection and Pollution Control Technologies; **15**. Conservation of Paper and Archives; **16**. Organization of School Laboratories (Organization of Laboratories, Accident Prevention, Health and Safety at Work); **17**. General Chemistry; **18**.Chemistry I; **19**.Chemistry II; **20**. Design of the Means of Personal Protection and Safety; **21**. By-Products Management and Environment; **22**. Thermodynamics and Heat Transfer. **23**. Mathematical Methods and Applications in Modern Life Sciences; etc. Total semesters for all the above courses ≈ 173 (until the winter semester 2020-2021).

LABORATORY EXERCISES: **1**. Physical Chemistry; **2**. Electrochemistry; **3**. Chemistry and Technology of Materials; **4**. Chemical Technology; **5**. Environmental Chemistry; **6**. Quality Control and Technology of Mechanical Engineering Materials; **7**. Quality Control and Technology of Naval Engineering Materials; **8**. Quality Control and Technology of Civil Engineering Materials; **9**. Topographic Engineering Materials Technology; **10**. Electrical Engineering Materials Technology; **11**. Chemical Technology - Fuels - Lubricants; **12**. General Chemistry; **13**. Inorganic Chemistry; **14**. Chemistry; **15**. Dental Materials; **16**. Organic Chemistry; **17**. Specific Subjects (Topics) in Chemistry I (General, Inorganic, Analytical and Physical Chemistry and Physicochemical Methods of Analysis); **18**. Specific Subjects (Topics) in Chemistry IV; **19**. Examination of the Microstructure of Monuments Materials and of their Physicochemical Susceptibility to Deterioration – Determination of Specific Surface by Adsorption/Desorption of Nitrogen; **20**. Discolouration and Bleaching of Textile Materials; **21**. Mass and Energy Transport in Dying Systems; **22**. Chemistry I; **23**. Chemistry II; **24**. Design of the Means of Personal Protection and Safety; **25**. By-Products Management and Environment; etc. Total semesters for all the above laboratory exercises ≈ 180 (until the winter semester 2020-2021).

III2. SUPERVISION OF DISSERTATIONS AND PARTICIPATION IN THE THREE - MEMBER OVERSIGHT AND SUPPORT OR ADVISORY OR EXAMINATION COMMITTEES (SINCE 1980)

1. **GRADUATE**: 16
2. **MS**: 17
3. **PhD**: 5

III3. PROFESSOR SUPERVISOR FOR THE INTERNSHIP OF STUDENTS

1. Professor supervisor for the internships of 4 students at Textile Engineering Department of Piraeus University of Applied Sciences (2015). Project code 80230.

III4. ORGANIZATION OF TRAINING SEMINARS (ADDRESSED TO UNIVERSITY GRADUATES) AND TEACHING, 1995-1999

1. The mechanism of deterioration - destruction of paper by environmental causes & The mechanism of deterioration - destruction of paper by human causes and physical disasters.

2. Cathodic protection of metals and alloys.
3. Corrosion and protection of pipeline networks.

III5. ORGANIZATION OF TRAINING AND RESEARCH LABORATORIES, 1985-2005
He has organized, or contributed decisively to the design, organization and equipment of 7 training and research laboratories.

III6. MEMBER OF THE COMMITTEES OF SPECIALISTS SCIENTISTS FOR THE PANHELLENIC EXAMINATIONS OF PROFESSIONAL TRAINING CERTIFICATION (ORGANISM OF PROFESSIONAL TRAINING – INSTITUTES OF PROFESSIONAL TRAINING – GREEK MINISTRY OF EDUCATION), 1996-1998
For the Specialties:
1. Technician of Pollution Control and Pollution Control Installations.
2. Technician of Industrial and Labour Environment Control.

D. PUBLICATIONS AND WRITING ACTIVITY
I. DISSERTATIONS
1. **G. Patermarakis**: Kinetics of the electrochemical reduction of nitrobenzene. *MS*c, 96 pages, NTUA, 1977.
2. **G. Patermarakis**: Catalytic properties of electrolytically prepared oxides of aluminium and its alloys (γ_1, $\gamma_{1,2}$, γ_2 - Al_2O_3). *PhD*, 465 pages, NTUA, 1983.

II. PUBLICATIONS IN PEER REVIEWED JOURNALS
1. **G. Patermarakis**: Catalytic properties of γ-Al_2O_3 electrolytically prepared. I. Effect of anodic oxidation time on its catalytic properties, *Chimika Chronika (N.S.)*, **16**, 141-153 (1987).
2. **G. Patermarakis and** Y. Paspaliaris: Preliminary kinetic study on the removal of iron from boehmitic bauxite by hydrochloric acid, *Mineral Wealth*, **52**, 35-41 (1988).
3. **G. Patermarakis**: Catalytic properties of γ-Al_2O_3 electrolytically prepared. II. Effect of anodic oxidation current density on its catalytic properties, *Chimika Chronika (N.S.)*, **18**, 115-129 (1989).
4. Th. Skoulikidis and **G. Patermarakis**: Multitubular coaxial catalytic reactor made of anodized aluminium, *Aluminium*, **65**, 185-188 (1989).
5. Y. Paspaliaris, Y. Yiouli and **G. Patermarakis**: Reaction kinetics for leaching of iron oxides in boehmitic bauxite by hydrochloric acid, *Transactions of the Institution of Mining and Metallurgy (Section C: Mineral Processing and Extractive Metallurgy)*, **98**, 21-25 (1989).
6. **G. Patermarakis** and Y. Paspaliaris: The leaching of iron oxides in boehmitic bauxite by hydrochloric acid, *Hydrometallurgy*, **23**, 77-90 (1989).
7. **G. Patermarakis** and E. Fountoukidis: Disinfection of water by electrochemical treatment. *Water Research*, **24**, 1491-1496 (1990).
8. **G. Patermarakis**: Catalytic properties of γ-Al_2O_3 electrolytically prepared. III. Effect of anodic oxidation bath temperature on its catalytic properties, *Chimika Chronika (N.S.)*, **20**, 17-37 (1991).
9. **G. Patermarakis**: Catalytic decomposition of formic acid on hydrothermally treated porous anodic alumina films, *Chimika Chronika (N.S.)*, **20**, 107-128 (1991).
10. **G. Patermarakis**, P. Lenas, Ch. Karavassilis and G. Papayiannis: Kinetics of growth of porous anodic Al_2O_3 films on Al metal, *Electrochimica Acta*, **36**, 709-725 (1991).
11. **G. Patermarakis** and P. Kerassovitou: Study on the mechanism of oxide hydration and oxide pore closure during hydrothermal treatment of porous anodic Al_2O_3 films, *Electrochimica Acta*, **37**, 125-137 (1992).
12. **G. Patermarakis** and N. Papandreadis: Effect of the structure of porous anodic Al_2O_3 films on the mechanism of their hydration and pore closure during hydrothermal treatment, *Electrochimica Acta*, **38**, 1413-1420 (1993).

13. **G. Patermarakis** and N. Papandreadis: Study on the kinetics of growth of porous anodic Al_2O_3 films on Al metal, *Electrochimica Acta*, **38**, 2351-2361 (1993).
14. **G. Patermarakis** and C. Pavlidou: Catalysis over porous anodic alumina catalysts, *Journal of Catalysis*, **147**, 140-155 (1994).
15. **G. Patermarakis** and D. Tzouvelekis: Development of a strict kinetic model for the growth of porous anodic Al_2O_3 films on aluminium, *Electrochimica Acta*, **39**, 2419-2429 (1994).
16. **G. Patermarakis** and K. Moussoutzannis: Mathematical models for the anodization conditions and structural features of porous anodic Al_2O_3 films, *Journal of the Electrochemical Society*, **142**, 737-743 (1995).
17. **G. Patermarakis** and K. Moussoutzanis: Electrochemical kinetic study on the growth of porous anodic oxide films on aluminium, *Electrochimica Acta*, **40**, 699-708 (1995).
18. H. Karayannis and **G. Patermarakis**: Effect of the Cl^- and SO_4^{2-} ions on the selective orientation and structure of Ni electrodeposits, *Electrochimica Acta*, **40**, 1079-1092 (1995).
19. **G. Patermarakis** and H. Karayannis: The mechanism of growth of porous anodic Al_2O_3 films on aluminium at high film thicknesses, *Electrochimica Acta*, **40**, 2647-2656 (1995).
20. **G. Patermarakis**: Transformation of the overall strict kinetic model governing the growth of porous anodic Al_2O_3 films on aluminium to a form applicable to the non-stirred bath film growth, *Electrochimica Acta*, **41**, 2601-2611 (1996).
21. **G. Patermarakis**: Transport phenomena inside the pores involved in the kinetics and mechanism of growth of porous anodic Al_2O_3 films on aluminium, *Journal of Electroanalytical Chemistry*, **404**, 69-76 (1996).
22. H.S. Karayianni, **G.S. Patermarakis** and J.C. Papaioannou: The electrical properties and quality factor of nickel electrodeposits, *Journal of Materials Science*, **31**, 6535-6539 (1996).
23. Th. Skoulikidis, A. Karageorgos, P. Vassiliou, **G. Patermarakis** and E. Daflos: Five Years Exposure of Anodized and Sealed under Different Conditions of Al-Mg Alloy in 10 Sites of Athens, in: **Corrosion and protection of an Al-Mg Alloy and protection with Al_2O_3 A review,** *Corrosion Reviews* **15(3-4)**, 277-302 (1997). Appears in Scopus.
24. **G. Patermarakis**: Development of a theory for the determination of the composition of the anodizing solution inside the pores during the growth of porous anodic Al_2O_3 films on aluminium by a transport phenomenon analysis, *Journal of Electroanalytical Ch*emistry, **447**, 25-41 (1998).
25. F. Roubani - Kalantzopoulou, **G. Patermarakis** and H. Karayianni: The mechanism of Zn corrosion in both aerated and deaerated aqueous KNO_3 solutions, *Anti - Corrosion Methods and Materials*, **45**, 84-94 (1998).
26. **G. Patermarakis**, K. Moussoutzanis and N. Nicolopoulos: Investigation of the incorporation of electrolyte anions in porous anodic Al_2O_3 films by employing a suitable probe catalytic reaction, *Journal of Solid State Electrochemistry*, **3**, 193-204, (1999).
27. **G. Patermarakis**, K. Moussoutzanis and J. Chandrinos: Preparation of ultra - active alumina of designed porous structure by successive hydrothermal and thermal treatments of porous anodic Al_2O_3 films, *Applied Catalysis A: General*, **180**, 345-358 (1999).
28. **G. Patermarakis** and N. Nicolopoulos: Catalysis over porous anodic alumina film catalysts with different pore surface concentrations, *Journal of Catalysis*, **187**, 311-320 (1999).
29. **G. Patermarakis** and K. Moussoutzanis: Formulation of a criterion predicting the development of uniform regular and non-uniform abnormal porous anodic alumina coatings and revealing the mechanisms of their appearance and progress, Co*rrosion Science*, **43**, 1433-1464 (2001).
30. **G. Patermarakis**, K. Moussoutzanis and J. Chandrinos: Discovery by kinetic studies of the latent physicochemical processes and their mechanisms during the growth of

porous anodic alumina films in sulfate electrolytes, *Journal of Solid State Electrochemistry*, **6**, 39-54 (2001).

31. **G. Patermarakis**, K. Moussoutzanis and J. Chandrinos: (Erratum) Discovery by kinetic studies of the latent physicochemical processes and their mechanisms during the growth of porous anodic alumina films in sulfate electrolytes, *Journal of Solid State Electrochemistry*, **6**, 71-72 (2001).
32. **G. Patermarakis**, J. Chandrinos and K. Moussoutzanis**:** Interface physicochemical processes controlling sulfate anion incorporation in porous anodic alumina and their dependence on the thermodynamic and transport properties of cations, *Journal of Electroanalytical Chemistry*, **510**, 59-66 (2001).
33. H.S. Karayianni, **G.S. Patermarakis** and J.C. Papaioannou: Impedance spectroscopy study of nickel electrodeposits, *Materials Letters*, **53**, 91-101 (2002).
34. **G. Patermarakis** and K. Moussoutzanis: Solid surface and field catalysed interface formation of colloidal $Al_2(SO_4)_3$ during Al anodising affecting the kinetics and mechanism of development and structure of porous oxide, *Journal of Solid State Electrochemistry*, **6**, 475-484 (2002).
35. **G. Patermarakis** and K. Moussoutzanis: Interpretation of the promoting effect of sulphate salt additives on the development of non-uniform pitted porous anodic Al_2O_3 films in H_2SO_4 electrolyte by a transport phenomenon analysis theory, *Corrosion Science*, **44**, 1737-1753 (2002).
36. **G. Patermarakis** and K. Moussoutzanis: A transport phenomenon analysis criterion predicting pitting appearance during Al anodisation in sulphate electrolytes, *Chemical Engineering Communications*, **190**, 1018-1040 (2003).
37. **G. Patermarakis**: The parallel dehydrative and dehydrogenative catalytic action of γ-Al_2O_3 pure and doped by MgO. Kinetics, selectivity, time dependence of catalytic behaviour, mechanisms and interpretations, *Applied Catalysis A: General*, **252**, 231-241 (2003).
38. **G. Patermarakis**, J. Papaioannou, H. Karayianni and K. Masavetas: Interpretation of electrical conductance transition of hematite in the spin flip magnetic transition temperature range, *Journal of the Electrochemical Society,* **151(8)**, J62-J68 (2004).
39. J.C. Papaioannou, **G.S. Patermarakis** and H.C. Karayianni: Electron hopping mechanism in hematite (α-Fe_2O_3), *Journal of Physics and Chemistry of Solids*, **66**, 839-844 (2005).
40. **G. Patermarakis** and K. Moussoutzanis: Aluminium anodising in ultra dense sulphate baths. Discovery by overall kinetic and potentiometric studies of the critical role of interface colloidal $Al_2(SO_4)_3$ nanoparticles in the mechanism of growth and nanostructure of porous oxide coatings, *Journal of Solid State Electrochemistry*, **9**, 205-233 (2005).
41. **G. Patermarakis**: Aluminium anodising in low acidity sulphate baths. Growth mechanism and nanostructure of porous anodic films*, Journal of Solid State Electrochemistry*, **10**, 211-222 (2006).
42. **G. Patermarakis** and K. Masavetas: Aluminium anodising in oxalate and sulfate solutions. Comparison of chronopotentiometric and overall kinetic response of growth mechanism of porous anodic films, *Journal of Electroanalytical Chemistry*, **588**, 179-189 (2006).
43. **G. Patermarakis**, J. Chandrinos and K. Masavetas: Formulation of a holistic model for the kinetics of steady state growth of porous anodic alumina films, *Journal of Solid State Electrochemistry*, **11**, 1191-1204 (2007).
44. **G.S. Patermarakis** and V.N. Kytopoulos: Combined kinetic and X-ray electron probe microanalysis characterization of local porosity variation and pore shape across anodic alumina films, *Materials Letters*, **61**(28), 4997-5003 (2007).
45. **G. Patermarakis** and K. Moussoutzanis: Development and application of a holistic model for the steady state growth of porous anodic alumina films, *Electrochimica Acta*, **54**, 2434-2443 (2009).

46. **G. Patermarakis**, Ch. Karayianni, K. Massavetas and J. Chandrinos: Oxide density distribution across the barrier layer during the steady state growth of porous anodic alumina films. Choronopotensiometry, kinetics of film mass and thickness evolution and a high field ionic migration model, *Journal of Solid State Electrochemistry*, **13**, 1831-1847 (2009).
47. **G. Patermarakis**: The origin of nucleation and development of porous nanostructure of anodic alumina films, *Journal of Electroanalytical Chemistry*, **635**, 39-50 (2009).
48. **G. Patermarakis**: Study on the mechanism of nucleation and development of porous nanostructure of anodic alumina films, *Materials Science: An Indian Journal*, **5(4)**, 364-375 (2009).
49. **G. Patermarakis** and K. Moussoutzanis: Transformation of porous structure of anodic alumina films formed during galvanostatic anodising of aluminium, *Journal of Electroanalytical Chemistry*, **659**, 176-190 (2011).
50. **G. Patermarakis** and Diakonikolaou: Mechanism of aluminium and oxygen ions transport in the barrier layer of porous anodic alumina films, *Journal of Solid State Electrochemistry*, **16**, 2921-2939 (2012).
51. **G. Patermarakis** and G. Kapiris: Processes, parameters and mechanisms controlling the normal and abnormal growth of porous anodic alumina films, *Journal of Solid State Electrochemistry*, 17, 1133-1158 (2013).
52. **G. Patermarakis**: Thorough electrochemical kinetic and energy balance models clarifying the mechanisms of normal and abnormal growth of porous anodic alumina films, *Journal of Electroanalytical Chemistry*, **730**, 69-85 (2014).
53. **G. Patermarakis** and J. Plytas: A novel theory interpreting the extremes of current during potentiostatic anodising of Al and the mechanisms of normal and abnormal growth of porous anodic alumina films, *Journal of Electroanalytical Chemistry*, **769**, 97-117 (2016).
54. D. Georgiou, M. Kalis, **G. Patermarakis** and A. Vasiliadis: Destruction of azo-reactive dyes by ozonation and the synergetic effect of a radio-frequency alternating electric field inductance device, *Current Trends in Fashion Technology & Textile Engineering*, **1(2)**: CTFTTE.MS.ID.555560 (2017).
55. **G. Patermarakis** and T.M. Triantis: Transformation of porous nanostructure and self-ordering of anodic alumina films during potentiostatic anodising of aluminium, *Current Topics in Electrochemistry*, **21,** 21-39 (2019).
56. **G. Patermarakis**: The multimodal dependence of anodic alumina film porous nanostructure on anodizing potential, *Current Topics in Electrochemistry*, **22**, 1-17 (2020).

All journals appear in the data bases: Scopus (+ Secondary Documents), Google Scholar and και SciFinder - Chemical Abstracts Service (a Division of the American Chemical Society).

Impact Factors of ournals

Journal	Number of publications	IF (2019)	Journal	Number of publications	IF (2019)
Water Research	1	9.130	Hydrometallurgy	1	3.338
Journal of Catalysis	2	7.888	Materials Letters	2	3.204
Corrosion Science	2	6.479	Journal of the Electrochemical Society	2	2.930
Electrochimica Acta	10	6.215	Journal of Solid State Electrochemistry	10	2.646
Applied Catalysis A: General	2	5.006	Chemical Engineering Communications	1	1.802
Journal of Electroanalytical Chemistry	8	3.807	Anti-Corrosion Methods and Materials	1	1.196
Journal of Materials Science	1	3.553	Current Topics in Electrochemistry	2	0.455
Journal of Physics and Chemistry of Solids	1	3.442	Transactions of the Institution of Mining and Metallurgy (Section C: Mineral Processing and Extractive Metallurgy)	1	0.087 (2004)

III. ACKNOWLEDGMENTS

1. E.K. Ioakeimidis, V.N. Kytopoulos and E. Hristoforou: Investigation of magnetic, mechanical and microfailure behavior of ARMCO-type low carbon steel corroded in 3.5% NaCl-aqueous solution, *Materials Science and Engineering A*, **583**, 254-260 (2013). "We are greatly indebted to Associate Professor **Patermarakis George** for his assistance and his constructive remarks."

IV. PRESENTATIONS IN CONGRESSES / SYMPOSIA / CONFERENCES

1. G. Abatzoglou and **G. Patermarakis**: The pollution of environment caused by industrial activity. The example of Eleusis industrial area. (Oral presentation – in Greek). *B' Panhellenic Congress of Chemical Engineers,* Athens 1980, Proceedings pp. 281-287.
2. Ch. Karayianni, **G. Patermarakis** and J. Papaioannou: The structure and electrical properties of nickel electrodeposits. (Oral presentation – in Greek). *1st Panhellenic Scientific Congress of Chemical Engineering,* Patra 1997, Proceedings pp. 61-67.
3. **G. Patermarakis**, K. Moussoutzanis and J. Chandrinos: Promotion of catalytic dehydrative activity of porous anodic Al_2O_3 by hydrothermal treatment. (Oral presentation – in Greek). *5th Panhellenic Symposium of Catalysis,* Ancient Olympia 1997, Proceedings pp. 168-173.
4. F. Roubani – Kallantzopoulou, **G. Patermarakis** and H. Karayianni: The mechanism of zinc corrosion in aerated potassium nitrate aqueous solutions. (Oral presentation – in Greek). *2nd Panhellenic Scientific Congress of Chemical Engineering,* Thessalonica 1999, Proceedings pp. 229-232.
5. **G. Patermarakis** and K. Moussoutzanis: Formulation of a theory explaining the appearance and progress of undesirable parasitic phenomena of abnormal growth of oxide during the anodic oxidation of aluminium. (Oral presentation – in Greek). *2nd Panhellenic Scientific Congress of Chemical Engineering*, Thessalonica 1999, Proceedings pp. 879-882.
6. H. Karayianni, **G. Patermarakis** and F. Roubani - Kallantzopoulou: The mechanism of zinc corrosion in potassium nitrate deaerated solutions. (Oral presentation – in English). *50th Annual Symposium of the International Society of Electrochemistry (ISE)*, Pavia Italia 1999, Proceedings CD p. 713.
7. **G. Patermarakis** and N. Nicolopoulos: Effect of the surface density of pores on the catalytic activity of porous anodic Al_2O_3. (Oral presentation – in Greek). *6th Panhellenic Sumposium of Catalysis,* Delphi 2000, Proceedings pp. 275-280.
8. **G. Patermarakis**, J. Chandrinos and K. Moussoutzanis: Latent physicochemical processes and their mechanisms during the growth of anodic aluminium oxides in sulphate electrolytes discovered by kinetic studies. (Oral presentation – in Greek). *3rd Panhellenic Scientific Congress of Chemical Engineering*, Athens 2001, Proceedings pp. 53-56.
9. **G. Patermarakis** and K. Moussoutzanis: Interpretation of the promoting effect of sulphate salt additives on the appearance of irregular non-uniform growth of porous anodic oxides of aluminium in H_2SO_4 bath solution. (Oral presentation – in Greek). *3rd Panhellenic Scientific Congress of Chemical Engineering*, Athens 2001, Proceedings pp. 537-540.
10. **G. Patermarakis** and K. Moussoutzanis: Formulation of a criterion predicting the development of uniform regular and non-uniform abnormal porous anodic alumina coatings in sulphate electrolytes and revealing the mechanisms of their appearance and progress. (Oral presentation – in English). *Eastern Mediteranian Chemical Engineering Conference (EMCC)*, Ankara Turkey 2001, Proceedings pp. 248-249.
11. **G. Patermarakis** and K. Moussoutzanis: Criteria predicting the regular uniform growth of porous anodic Al_2O_3 in sulphate electrolytes. (Oral presentation – in Greek). *1st Panhellenic Scientific Congress of Metallic Materials*, Volos 2001, Proceedings pp. 109-114.

12. **G. Patermarakis**: The mechanisms of parallel dehydrative and dehydrogenative catalytic action of alumina. (Oral presentation – in Greek). *7th Panhellenic Sumposium of Catalysis*, Edessa 2002, Proceedings pp. 309-314.
13. **G. Patermarakis** and K. Moussoutzanis: Comparison of catalytic efficiencies of active chemical γ- and nanoscale structured porous anodic aluminas. (Poster presentation – in English). *Eastern Mediterranean Chemical Engineering Conference (EMCC3)*, Thessalonica 2003.
14. **G. Patermarakis**, J. Chandrinos and K. Moussoutzanis: Interface physicochemical processes controlling the incorporation of sulphate anions in porous anodic alumina and their dependence on cation transport properties. (Oral presentation – in Greek). *4th Panhellenic Scientific Congress of Chemical Engineering*, Patra 2003, Proceedings pp. 529-532.
15. **G. Patermarakis** and K. Moussoutzanis: Formation of colloidal $Al_2(SO_4)_3$ during the anodic oxidation of Al and their effect on the mechanism of growth and structure of oxide. (Oral presentation – in Greek). *4th Panhellenic Scientific Congress of Chemical Engineering*, Patra 2003, Proceedings pp. 193-196.
16. **G. Patermarakis**, J. Chandrinos and K. Moussoutzanis: Effect of the thermodynamic and transport properties of cations on the interface processes controlling sulphate anion incorporation in porous anodic alumina films. (Oral presentation – in English). *55th Annual Symposium of the International Society of Electrochemistry (ISE)*, Thessalonica 2004, Proceedings - Book of Abstracts Vol. II p. 1391.
17. **G. Patermarakis** and K. Moussoutzanis: The critical role of interface colloidal $Al_2(SO_4)_3$ nanoparticles in the kinetics and mechanism of growth and nanostructure of porous anodic alumina films formed in ultra-dense sulphate baths. (Poster presentation – in English). *55th Annual Symposium of the International Society of Electrochemistry (ISE)*, Thessalonica 2004, Proceedings - Book of Abstracts Vol. II p. 1404.
18. **G. Patermarakis** and V. Kytopoulos: Study of the structure of porous coatings of anodically oxidized aluminium by x-ray electron probe microanalysis. (Poster presentation – in Greek). *2nd Panhellenic Scientific Congress of Metallic Materials,* Athens 2004, Proceedings pp. 537-542.
19. **G. Patermarakis** and K. Moussoutzanis: Effect of colloidal $Al_2(SO_4)_3$ nanoparticles on the kinetics and mechanism of growth and nanostructure of anodic alumina formed in dense sulphate baths. (Oral presentation – in Greek). *5th Panhellenic Scientific Congress of Chemical Engineering*, Thessalonica 2005, Proceedings pp. 273-276.
20. **G. Patermarakis**, J. Papaioannou and H. Karayianni: Interpretation of electrical conductivity transition of hematite in the temperature range of magnetic spin flip transition. (Oral presentation – in Greek). *6th Panhellenic Scientific Congress of Chemical Engineering*, Athens 2007, Proceedings pp. 957-960.
21. **G. Patermarakis** and J. Chandrinos: Formulation and application of a holistic kinetic model describing the development of porous anodic alumina film membranes in steady state. (Oral presentation – in Greek). *6th Panhellenic Scientific Congress of Chemical Engineering*, Athens 2007, Proceedings pp. 961-964.
22. **G. Patermarakis** and K. Moussoutzanis: Development of a holistic model for the steady state growth of porous anodic alumina films. (Oral presentation O18 – in English). *International Conference EURO INTERFINISH 2007 - Nanotechnology and Innovative Coatings*, Athens 2007, Abstract Book p. 34.
23. **G. Patermarakis** and Ch. Michali: Disclosure of the main factors determining the hexagonally ordered nanostructure of porous anodic alumina films. (Poster presentation P27 – in English). *International Conference EURO INTERFINISH 2007 - Nanotechnology and Innovative Coatings*, Athens 2007, Abstract Book p. 73.
24. **G. Patermarakis** and K. Moussoutzanis: Development of a holistic model for the steady state growth of porous anodic alumina films. (In English). *International Conference EURO INTERFINISH 2007 - Nanotechnology and Innovative Coatings*, Athens 2007, Proceedings pp. 120-130.

25. **G. Patermarakis**, H. Karayianni and Ch. Michali: Disclosure of the main factors determining the hexagonally ordered nanostructure of porous anodic alumina films. (In English). *International Conference EURO INTERFINISH 2007 - Nanotechnology and Innovative Coatings*, Athens 2007, Proceedings pp. 286-293.
26. **G. Patermarakis**: Distribution of oxide density in the barrier layer during the growth of porous-nanostructure anodic alumina films membranes. (Oral presentation – in Greek). *7th Panhellenic Scientific Congress of Chemical Engineering*, Patra 2009, Proceedings CD 7 pages.
27. **G. Patermarakis** and K. Moussoutzanis: Holistic model describing the growth of porous anodic Al_2O_3 with characteristic nanostructure. (Oral presentation – in Greek). *7th Panhellenic Scientific Congress of Chemical Engineering*, Patra 2009, Proceedings CD 7 pages.
28. **G. Patermarakis**: Disclosure of the mechanism of appearance and development of the porous structure of anodic alumina films. (Oral presentation – in Greek). *4th Panhellenic Symposium of Porous Materials*, Patra 2009, Proceedings CD 2 pages.
29. **G. Patermarakis** and K. Moussoutzanis: The mechanism of nucleation and development of nanostructure of porous anodic alumina films. (Poster presentation – in English). *Symposium on New Frontiers in Chemical and Biochemical Engineering*, Thessalonica 2009, Symposium Book of Abstracts 2 pages.
30. **G. Patermarakis**: Formulation of a new mechanism for the growth of porous structure of anodic alumina films. (Oral presentation – in Greek). 8th *Panhellenic Scientific Congress of Chemical Engineering*, Thessalonica 2011, Proceedings CD 9 pages.
31. **G. Patermarakis**, K. Moussoutzanis and E. Fountoukidis: Transformation of porous nanostructure of anodic alumina films developed during galvanostatic Al anodising. (Oral presentation – in Greek). 8th *Panhellenic Scientific Congress of Chemical Engineering*, Thessalonica 2011, Proceedings CD 12 pages.
32. **G. Patermarakis**: Mechanism of abnormal growth of porous anodic alumina films and prediction of prevention methods. (Oral presentation – in Greek). 9th *Panhellenic Scientific Congress of Chemical Engineering*, Athens 2013, Proceedings CD 10 pages.

V. ARTICLES (IN GREEK)

1. **G. Patermarakis**: Memory of Theodore Skoulikidis (A brief reference to the life, work and scientific and social presence of the late Professor Theodore N. Skoulikidis NTUA), *Utopia (Magazine of Theory and Culture)*, Issue **65** May-June, pp. 189-192 (2005).

VI. EXTENDED STUDIES – MONOGRAPHS – TECHNICAL REPORTS (IN GREEK)

1. **G. Patermarakis,** S. Zafiris and G. Grigoriou: The Chemization of Greek Industry. 85 pages. Athens 1982.
2. **G. Patermarakis** and E. Fountoukidis: Electrochemical Treatment for the Disinfection of Drinkable Water. 40 pages. Athens 1988.
3. Th. Skoulikidis, A. Karageorgos, P. Vassiliou, **G. Patermarakis** and E. Daflos: Control of the Corrosion of Anodised and Sealed Aluminium in the Atmosphere of Athens Region. 115 pages. Athens 1991.

VII. BOOKS AND NOTES ADDRESSED TO HIGHER EDUCATION STUDENTS (IN GREEK)

TITLES AND SUBJECTS:

1. **Electrochemistry I**. 100 pages.
2. **Electrochemistry II**. 142 pages.
3. **Laboratory Exercises of Electrochemistry I**. 60 pages.
4. **Laboratory Exercises of Electrochemistry II**. (Co-authored with five other authors). 90 pages.
5. **Advanced Electrochemistry Vol. I (I1. Equilibrium in Electrolytic Solutions, I2. Transport Phenomena)**. 112 pages.

6. **Chemistry and Technology of Materials Vol. II. Technology of Mechanical Engineering Materials**. 135 pages.
7. **Laboratory Exercises of Mechanical Engineering Materials**. 80 pages.
8. **Specific Topics in Chemistry I (Inorganic Materials and Topics in Chemistry)**. 202 pages.
9. **Laboratory Exercises of Specific Topics in Chemistry I (Topics in Physical Chemistry, General and Inorganic Chemistry and Physicochemical Methods of Analysis)**. (Co-authored with another author). 75 pages.
10. **Laboratory Exercises of Electrical Engineering Materials**. (Co-authored with another author). 140 pages.
11. **General Chemistry II. Introduction to the General Organic Chemistry**. 50 pages.
12. **Laboratory Exercises of Physical Chemistry**. 80 pages.
13. **Laboratory Exercises of General Chemistry**. (Co-authored with three other authors). 80 pages.
14. **Laboratory Exercises of General Chemistry Issue A.** (Co-authored with five other authors). 95 pages. (Revised and extended version of 13).
15. **Laboratory of Physical Chemistry: 1. General instructions for students. 2. Rules of laboratory work safety and operation and of working correctness**. 9 pages.
16. **Laboratory Exercises of General Chemistry Issue B.** (Co-authored with two other authors). 56 pages. 2020.

E. INTERNATIONAL RECOGNITION

I. CITATIONS (UPDATED 28-2-2021)
SCOPUS: 1381. Excluding self-citations: **1034**. **H-Index: 22**.
GOOGLE SCHOLAR: 1827. Excluding self-citations: **1509**. **H-Index**: **24**.

II. REQUESTS OF PUBLICATIONS REPRINTS: More than 309.

III. REFEREE / REVIEWER: He has been invited to review more than 166 and referred above 115 papers for the: **1**. Journal of Catalysis; **2**. Journal of the Electrochemical Society; **3**. Journal of Electroanalytical Chemistry; **4**. Electrochimica Acta; **5**. Industrial and Engineering Chemistry Research (Journal of the American Chemical Society (JACS)); **6**. Journal of Solid State Electrochemistry; **7**. Journal of Applied Electrochemistry; **8**. Inorganica Chimica Acta; **9**. Journal of Solar Energy Engineering; **10**. Transactions of the ASAE; **11**. Journal of Materials Science and Engineering; **12**. The Open Corrosion Journal; **13**. Langmuir (ACS); **14**. Materials Letters; **15**. Applied Surface Science; **16**. Journal of Physics D: Applied Physics; **17**. Measurement Science and Technology - SPECIAL ISSUE: Nanometrology; **18**. Corrosion Science; **19**. ACS Applied Materials & Interfaces; **20**. Physica Scripta; **21**. Monatshefte für Chemie - Chemical Monthly; **22**. Journal of Nanomechanics and Nanoengineering; **23**. Nanotechnology; **24**. Surface and Coatings Technology; **25**. Journal of Industrial and Engineering Chemistry; **26**. Nanoscience; **27**. The Scientific World Journal; **28**. Brazilian Journal of Chemical Engineering; **29**. Indian Journal of Engineering & Materials Sciences; **30**. Nanoscale - NR-ART; **31**. Engineering Science; **32**. Journal of Yangtze Oil and Gas; **33**. Current Nanoscience (CNANO); **34**. Materials Research Express. ETC.
Refereed works belong to the scientific regions of Electrochemistry, Photoelectrochemistry, Physical Chemistry – Catalysis – Chemical Kinetics, Inorganic Chemistry, Inorganic Chemical Technology, Materials Science, Physical and Chemical Processes (Chemical Engineering), Water Treatment Technology and Science of Environment, Renewable Sources of Energy, Nanoscience/Nanotechnology, etc.
He has also been reviewer/evaluator of research proposals

IV. MEMBER OF EDITORIAL BOARD:
1. The Open Corrosion Journal.
He has also been invited to become member of the editorial board in numerous other journals. Indicatively, only some of them are mentioned: The Open Electrochemistry Journal,

The Open Fuel Cells Journal, Research Journal of Chemistry and Environment, International Journal of Water Resource and Protection, SCIREA Journal of Materials, SCIREA Journal of Chemistry, American Journal of Applied Chemistry, Modern Chemistry, Chemical and Biomolecular Engineering, etc.

V. COMMENTS: Many positive and flattering comments have been made for the most of journal publications by the referees, editors, other scientists of eminent prestige and academicians. As an example, the models developed in the electrochemical content studies and the relevant theories have been characterized as very deep and scientifically-theoretically coherent, of great importance, excellent, sophisticated, cutting-edge, erudite, far-reaching, compact, etc. He is considered today to be the leading expert in the field of the electrochemical-anodic oxidation of aluminium (a model process in the field of solid-state electrochemistry) and of the development of porous anodic alumina films, his works are considered the main fundamental theoretical works in the field, etc. Also, in books of international publishing houses, entire chapters have been devoted to the models and theories that have been formulated in his published works or based almost exclusively on his published works.

F. PATENTS

1. **G. Patermarakis** and E. Fountoukidis: **Apparatus of electrochemical treatment of water**. Organization of Industrial Property, Certificate No. 2000398.

G. KNOWN TECHNOLOGICAL AND INDUSTRIAL APPLICATIONS OF RESEARCH FINDINGS AND SCIENTIFIC WORKS

1. Industry of Al production and vertically organized industries, Europe.
2. Aluminium anodising units, Europe.
3. Sterilization of liquid foods and disinfection of water, USA, Latin America.
4. Production and application of special catalysts for industrial and environmental processes, USA.
5. Nanotechnology.

H. AWARDS

Five papers (27, 30, 32, 34 and 36) and one presentation in congress (24) were awarded by the Deanery of NTUA.

I. DISTINCTIONS

In the international ranking of scientists based on recognized research evaluation indicators is included in a remarkable position (Stanford 2020 list, number of scientists in the top 2% (160000) with the highest global influence, journal PLOSone by John Ioannidis and colleagues). Holds a position of 506 in the total of included 648 Greek scientists. For the University of West Attica, holds 3rd place among 5 serving and retired included members and 2nd place among 4 serving members.

J. INVITED LECTURES WITH VARIOUS SCIENTIFIC, TECHNOLOGICAL AND SOCIAL CONTENTS: 15

K. MEMBER OF SCIENTIFIC AND PROFESSIONAL ASSOCIATIONS

Technical Chamber of Greece, Hellenic Association of Chemical Engineers, Association of Greek Chemists, Scientific Society of Mineral Wealth Technologists, Hellenic Catalytic Society.

L. NOTABLE ACTIVITIES

1. Investment Proposal Evaluator. Appointed by the Ministry of Development and entered in the register of evaluators (composed of distinguished scientists), 19997-1998.

2. Member of the Board of Directors of the Training Scientific Center (S.A.) of Chemical Engineers (consisting of distinguished Chemical Engineers), 2003-2006.
3. Member of the Standing Committee on Materials of the Technical Chamber of Greece (composed of distinguished relevant Engineers), 2005-2011.
4. Member of the Scientific Committee for the Hellenic Association of Chemical Engineers for many years.

M. OTHER ACTIVITIES & INTERESTS

ACTIVITIES: Various collaborations with scientific, technological, social, environmental, educational etc. content. Participation in other conferences with scientific and technological (Environment, Energy, Materials, Corrosion Protection of Metallic Materials, Corrosion Protection of Monuments, Corrosion Protection of Artworks, Industrial Development, Chemical Industry, etc.), economic and educational content. Presentation with subject "Technical Education and Industry" in a symposium on education in Positive, Technical and Geotechnical Sciences held at NTUA in 1987. Technical advices to industrial units and companies. Board member of various local, cultural and professional associations, etc.

INTERESTS: Theoretical Physics, Mathematics, Cosmology, Genetic Mechanics, Philosophy/Epistemology and Literature/Poetry.