

## CURRICULUM VITAE

**Dr. Sofia Kalogeropoulou**

**ADDRESS:** Technological Educational Institute of Piraeus  
School of Technological Applications  
Department of Physics Chemistry and Materials Technology  
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### PERSONAL:

Date of Birth : 12/1/1961, in Athens, Greece  
Marital status : Married with two children  
Nationality : Hellenic

### CURRENT POSITION:

**Professor**, Department of Physics Chemistry and Materials Technology, School of Technological Applications, Technological Educational Institute of Piraeus (T.E.I. of Piraeus)

### EDUCATION:

**09/84-12/89 Ph.D. in Chemical Engineering**, December 1989  
National Technical University of Athens  
Dissertation: "*Study of the mechanism of the electrochemical reduction of aluminium from chloride or chlorofluoride molten salts at 450°C*"; Advisor: Prof. J. Chryssoulakis

**09/78-03/84 Diploma in Chemical Engineering**, March 1984  
National Technical University of Athens  
Diploma Thesis: "*Study of the mechanism of the electrochemical reduction of aluminium from chlorofluoride molten salts at 450°C*"; Advisor : Prof. J. Chryssoulakis

### SCIENTIFIC FIELDS OF SPECIALISATION:

**-Electrochemistry:** Modern electrochemical techniques for the study of electrochemical reactions, electrodeposition, electrochemical corrosion, electrochemical analytical methods.  
**-Physicochemistry of interfaces** (metal/ceramic composite materials, intergranular corrosion of metals by molten metals).

## PROFESSIONAL EXPERIENCE:

- 06/94- today**      **Professor**, Department of Physics Chemistry and Materials Technology, School of Technological Applications, Technological Educational Institute of Piraeus (T.E.I. of Piraeus)  
Responsible for the courses:
- “Materials Technology”, Dept. of Electrical Engineering
  - “Electrochemistry”, Dept. of Electrical Engineering
- 10/1997-9/1998**      **Research Associate (sabbatical year)**, Laboratoire de Thermodynamique et Physico-chimie Metallurgiques, Ecole Nationale Supérieure d’Electrochimie et d’Electrometallurgie, Institut National Polytechnique de Grenoble, France, Project: “Study of the intergranular penetration in liquid metals/solid metals systems”
- 1993-1994**      **Adjunct Professor**, Department of Physics Chemistry and Materials Technology, School of Technological Applications, Technological Educational Institute of Piraeus (T.E.I. of Piraeus)  
Lectures, preparation and supervision of laboratory experiments and grading of reports for the courses:
- “Materials Technology”, Dept. of Electrical Engineering
  - “Electrochemistry”, Dept. of Electrical Engineering
  - “Materials Technology”, Dept. of Mechanical Engineering
- 1993-1994**      **Adjunct Professor**, Department of Conservation of Antiquities and Works of Art , Faculty of Fine Arts and Design, Technological Educational Institute of Athens (T.E.I. of Athens).  
Lectures, preparation and supervision of laboratory experiments and grading of reports for the courses:
- “Metal artefact conservation”
  - “Special topics in chemistry”
- 7/1991-10/1993**      **Post-Doctoral Fellow**, Laboratoire de Thermodynamique et Physico-chimie Metallurgiques, Ecole Nationale Supérieure d’Electrochimie et d’Electrometallurgie, Institut National Polytechnique de Grenoble.  
Research program BRITE/EURAM-913002: “Metal Matrix Composites : Physicochemical properties of Al/Carbon interfaces”.
- 4/1986-4/1990**      **Research Associate (main researcher)**, Department of Chemical Engineering, Section (III): Materials’ Science and Technology, National Technical University of Athens  
Research program BRITE No P-1149-1-85 : “Study of the electrochemical deposition of aluminium and silicon on iron steels”  
Collaboration of:  
-Universite de Mons, Belgique  
-Trempe Superficielle S.A., Nivelles, Belgique  
-Ecole National des Mines de St Etienne, France  
-Centre de Recherches de l’ Industrie Belge de la Ceramique, Belgique
- 1986-1990**      **Adjunct Lecturer**, Department of Conservation of Antiquities and Works of Art , Faculty of Fine Arts and Design, Technological Educational Institute of Athens (T.E.I. of Athens).  
Lectures, preparation and supervision of laboratory experiments and grading of reports for the courses:
- “Metal artifact conservation”
  - “Special topics in chemistry”
  - “Technology- Construction Techniques”

- 1985-1987**      **Teaching Fellow**, Department of Chemical Engineering, Section (III): Materials' Science and Technology, National Technical University of Athens  
Preparation and supervision of laboratory experiments for the courses:
- “Physicochemistry”
  - “Electrochemistry”
- 1984-1991**      **Professional Chemical Engineer**, Technical and Economic Studies in Chemical Engineering.

#### **PARTICIPATION IN RESEARCH PROGRAMS:**

- 2009-2010**      **Research programs 80025 & 80026**, funded by the Special Research Account of TEI Piraeus: “*Failure analysis of a cold-working die for sheet-metal cutting*”, Dept. of Physics, Chemistry and Materials Technology, TEI Piraeus, **Scientific Supervisor**
- 2004-2006**      **ARCHIMEDES research program**, funded by the European Community and the Greek Ministry of Education: “*Investigation of Concrete Durability with the use of Cement industrial byproducts B.F. Slag and Corrosion Inhibitors*”, Dept. of Physics, Chemistry and Materials Technology, TEI Piraeus, **Researcher**
- 2004-2006**      **ARCHIMEDES research program**, funded by the European Community and the Greek Ministry of Education: “*Electric and magnetic properties of polymer materials with conducting and magnetic inclusions of nano size dimensions*”, Dept. of Physics, Chemistry and Materials Technology, TEI Piraeus, **Researcher**
- 2004-2006**      **ARCHIMEDES research program**, funded by the European Community and the Greek Ministry of Education: “*Study of the chemical and microbiological degradation of oil spills*”, Dept. of Physics, Chemistry and Materials Technology, TEI Piraeus, **Researcher**
- 2004-2006**      **ARCHIMEDES research program**, funded by the European Community and the Greek Ministry of Education: “*Historical-physicochemical study and documentation conservation suggestions*”, Dept. of Physics, Chemistry and Materials Technology, TEI Piraeus, **Researcher**
- 4/2001-8/2001**      **LIFE99-ENV/GR 567 research program**, funded by the European Community: “*Magnetic method for oil spills cleaning*”, Dept. of Physics, Chemistry and Materials Technology, TEI Piraeus, **Researcher**
- 7/1991-10/1993**      **BRITE/EURAM-913002 research program**, funded by the European Community: “*Metal Matrix Composites : Physicochemical properties of Al/Carbon interfaces*”, Laboratoire de Thermodynamique et Physico-chimie Metallurgiques, Ecole Nationale Supérieure d'Electrochimie et d'Electrometallurgie, Institut National Polytechnique de Grenoble, **Post-Doctoral Fellow**
- 4/1986-4/1990**      **BRITE No P-1149-1-85 research program**, funded by the European Community: “*Study of the electrochemical deposition of aluminium and silicon on iron steels*”, Department of Chemical Engineering, Section (III): Materials' Science and Technology, National Technical University of Athens  
Collabotation of:  
-Universite de Mons, Belgique

-Trempe Superficielle S.A., Nivelles, Belgique  
-Ecole Nationale des Mines de St Etienne, France  
-Centre de Recherches de l'Industrie Belge de la Ceramique, Belgique  
**Research Associate (main researcher)**

**1985-1987**

**JSP-85-358-GR, JSP-86-358-GR, JSP-87-358-GR, research programs**, funded by the Office of Educational Cooperation of the European Community: "*Use of new instrumental electrochemical techniques for the study of Corrosion*", "*Study of the electrodeposition of aluminium from molten salts (high temperatures) and organic melts (low temperatures)*", "*Study of the diffusion in solid state*", Department of Chemical Engineering, Section (III): Materials' Science and Technology, National Technical University of Athens

Collaboration of:

-Department of Chemical Engineering, Section (III): Materials' Science and Technology, National Technical University of Athens  
-Laboratoire d'Electrochimie, Universite Pierre et Marie Curie, Paris.  
-Ecole Nationale Supérieure d'Electrochimie et d'Electrometallurgie de Grenoble.  
-Universite Scientifique et Medical de Grenoble

**Research Fellow**

#### **HONORS/AWARDS:**

**1991-1993**

**TMR Fellowship** (BRITE/EURAM-913002) for carrying out research at the Laboratoire de Thermodynamique et Physico-chimie Metallurgiques, Ecole Nationale Supérieure d'Electrochimie et d'Electrometallurgie, Institut National Polytechnique de Grenoble, France.

#### **LANGUAGES:**

English: Excellent  
French : Excellent

#### **PROFESSIONAL AND SCIENTIFIC AFFILIATIONS:**

Technical Chamber of Greece, since 1984.  
Hellenic Society of Chemical Engineers, since 1984.

#### **REFERENCES:**

Available upon request

#### **PUBLISHED WORK:**

##### **1. DOCTORAL DISSERTATION**

1.1. **S. Kalogeropoulou:** "Study of the electrochemical reduction of aluminium from chloride and chlorofluoride molten salts at 450° C", Department of Chemical Engineering, National Technical University of Athens, (1990).

##### **2. PUBLICATIONS IN REFEREED JOURNALS AND CONFERENCE PROCEEDINGS:**

- 2.1. Y. Chryssoulakis, **S. Kalogeropoulou** : “Etude du mecanisme reactionnel de reduction electrolytique de l’aluminium dans le melange NaCl-KCl-LiCl-LiF fondu a 450° C”, J. Appl. Electrochem. 15(1985)267-278.
- 2.2. Y. Chryssoulakis, **S. Kalogeropoulou**: “Etude du mecanisme reactionnel de reduction electrolytique de l’aluminium dans les melanges NaCl-KCl-LiCl-LiF et NaCl-KCl-LiCl fondus a 450°C” 2eme partie, Metaux-Corrosion-Industrie, No 707-708(1984)241-245.
- 2.3. Y. Chryssoulakis, M. Iatrelli, **S. Kalogeropoulou**, A. Alexopoulou : “Methode simple de resolution des equations integrales decrivant les courbes de la voltamperometrie cyclique ou triangulaire”, J. Appl. Electrochem. 15(1985)307-311.
- 2.4. Y. Chryssoulakis, **S. Kalogeropoulou**, A. Protopapa, G. Manoli : “Etude de la reduction electrochimique de AlCl<sub>3</sub> dans le dimethylsulfoxyde a 25°C” J. Appl. Electrochem. 16(1986)196-202.
- 2.5. Y. Chryssoulakis, **S. Kalogeropoulou**: “Etude de la reaction de la reduction electrochimique de l’aluminium dans les melanges de chlorures alcalins et de chlorures-fluorures alcalins fondus a 450°C”, J. Appl. Electrochem. 17(1987)941-948.
- 2.6. Y. Chryssoulakis, F. Lantelme, A. Alexopoulou, **S. Kalogeropoulou**, M. Chemla: “Etude des coefficients d’interdiffusion dans les solutions solides Al-Ag par les methodes electrochimiques transitoires dans l’eutectique ternaire NaCl-KCl-LiCl” Electrochim. Acta 32(1987)699-707.
- 2.7. Y. Chryssoulakis, F. Lantelme, A. Alexopoulou, **S. Kalogeropoulou** : “Interdiffusion dans les alliages Al-Ag par les methodes electrochimiques dans l’eutectique NaCl-KCl-LiCl-LiF”, Electrochim. Acta 32(1987)1247-1250.
- 2.8. Y. Chryssoulakis, F. Lantelme, A. Alexopoulou, **S. Kalogeropoulou** : “Etude de la reaction d’oxydo-reduction de l’aluminium dans des bains de chlorures alcalins fondus”, J. Appl. Electrochem. 18(1988)23-26.
- 2.9. F. Lantelme, E. Cherrat, Y. Chryssoulakis, **S. Kalogeropoulou** : “Studies of the kinetics of aluminium incorporation into an iron electrode in molten salts by linear sweep voltammetry”, J. Appl. Electrochem. 19(1989)271-274.
- 2.10. **S. Kalogeropoulou**, K. Landry, N. Eustathopoulos: “Wettability and reactivity in the aluminium/carbon system”, Materials Science Forum, Vol.126-128(1993)683-686.
- 2.11. B. Drevet, **S. Kalogeropoulou**, N. Eustathopoulos: “Wettability and interfacial bonding in Au-Si/SiC system” Acta Metall. Mater. 41(1993)3119-3126.
- 2.12. **S. Kalogeropoulou**, Y. Chryssoulakis, L. Gregoire, G. Moortgat : “Aluminium deposits on 42CD4 steel substrates by molten salts electrolysis” Plating and Surface Finishing, (Aug. 1993)28-33.
- 2.13. P. Goeriot, **S. Kalogeropoulou**, Y. Chryssoulakis : “Dry corrosion of electrochemically aluminided steels”, Plating and Surface Finishing, (June 1994) 92-95.
- 2.14. C. Rado, **S. Kalogeropoulou**, N. Eustathopoulos : “Surface and bulk interactions in M-SiC systems (M=Au, Cu, Ni)” Mat. Res. Soc. (MRS) 327(1994)319-324.
- 2.15. **S. Kalogeropoulou**, L. Baud, N. Eustathopoulos : “Relationship between wettability and reactivity in Fe/SiC system” Acta Metall. Mater. 43(1995)907-912.

- 2.16. K. Landry, **S. Kalogeropoulou**, N. Eustathopoulos, Y. Naidich, V. Krasovsky: “Characteristic contact angles in the aluminium/vitreous carbon system” *Scripta Materialia*, 34(1996)841-846.
- 2.17. C. Rado, **S. Kalogeropoulou**, N. Eustathopoulos: “Reactivity and wettability of SiC by Ni and Ni-Si alloys” *Materials Science Forum*, 207-209(1996)425-428.
- 2.18. K. Landry, **S. Kalogeropoulou**, N. Eustathopoulos : “Wettability of carbon by aluminum and aluminum alloys” *Materials Science and Engineering A* (1998)99-111.
- 2.19. C. Rado, **S. Kalogeropoulou**, N. Eustathopoulos : “Wetting and bonding of Ni-Si alloys on silicon carbide”, *Acta materialia*, 47(1999)461-473.
- 2.20. **S. Kalogeropoulou**, C. Rado, N. Eustathopoulos : “Mechanisms of reactive wetting: The wetting to non-wetting case”, *Scripta materialia*, 41(1999)723-728.
- 2.21. C. Rado, **S. Kalogeropoulou**, N. Eustathopoulos : “Bonding and wetting in non-reactive metal/SiC systems: weak or strong interfaces?”, *Materials Science & Engineering A*, 276(2000)195-202.
- 2.22. C. Rado, **S. Kalogeropoulou**, N. Eustathopoulos : “Wetting and adhesion in metal-silicon carbide systems: the effect of surface polarity of SiC”, *Scripta materialia*, 42(2000)203-208.
- 2.23. **S. Kalogeropoulou**, J. Van Deelen, N. Eustathopoulos, F. Le Guyadec, M. Berardo: “Study of Cu/TiN system: wetting or non-wetting?”, *Trans. of Joining Wetting Research Institute*, 30(2001)107-112.
- 2.24. J. Foucher, **S. Kalogeropoulou**, P. Protsenko, F. Hodaj, N. Eustathopoulos: “Grain boundary penetration of Ni by molten Pb”, *Defects and Diffusion Forum*, Vol.216-217 (2003)331-336.
- 2.25. A. Routoulas, **S. Kalogeropoulou**, P. Pantazopoulou, P. Koulouris : “Investigation of CKD-BFS in reinforcement corrosion protection” in *Measuring, Monitoring and Modeling Concrete Properties*, Ed. by Maria S. Konsta-Gdoutos, Springer 2006.

### 3. PUBLICATIONS IN GREEK JOURNALS AND GREEK CONFERENCE PROCEEDINGS

- 3.1. Γ. Νικολαΐδης, Ε. Φουντουκίδης, Γ. Ατανάσοβα, **Σ. Καλογεροπούλου**, Α. Φωτόπουλος, Ν. Θεοφίλου, Σ. Τσιτομενέας, Π. Πίσσης, Μ. Κοντού-Δρούγκα: “Μαγνητικές ιδιότητες πολυμερών με νανοσωματιδιακά μαγνητικά εγκλείσματα (σε ισοτροπική & ανισοτροπική μορφή)”, *Επιστημονική Επετηρίδα Εφαρμοσμένης Έρευνας*, ΤΕΙ Πειραιά, Vol. XIII, No1(2008)131-137.
- 3.2. Γ. Ατανάσοβα, **Σ. Καλογεροπούλου**, Ε. Φουντουκίδης, Γ. Νικολαΐδης, Α. Φωτόπουλος, Ν. Θεοφίλου, Σ. Τσιτομενέας, Π. Πίσσης, Μ. Κοντού-Δρούγκα: “Διηλεκτρική Σταθερά & ac Ηλεκτρική Αγωγιμότητα Πολυμερών με Νανοσωματιδιακά ισοτροπικά μαγνητικά εγκλείσματα”, *Επιστημονική Επετηρίδα Εφαρμοσμένης Έρευνας*, ΤΕΙ Πειραιά, Vol. XIII, No1(2008)41-50.
- 3.3. Δ. Ρήγος, Ι. Σιδέρης, Κ. Μέντρεα, **Σ. Καλογεροπούλου** : “Μη καταστροφικές δοκιμές στην ανάλυση πρόωρης αστοχίας μήτρας για εν ψυχρώ κοπή” 4<sup>ο</sup> Πανελλήνιο Συνέδριο Μεταλλικών Υλικών, 4-5 Νοεμβρίου 2010, Θεσσαλονίκη.

### 4. BOOKS

- 4.1. Δ. Παπαϊωάννου, Η. Ευθυμιόπουλος, Σ. Καλογεροπούλου, Ν. Μυριανθοπούλου, Φ. Τζιλίνη

«Οδηγός σε θέματα προστασίας περιβάλλοντος για τους οργανισμούς τοπικής αυτοδιοίκησης», Ελληνική Εταιρία Τοπικής Ανάπτυξης & Αυτοδιοίκησης, Αθήνα 1989.

**CITATION INDEX: 235 (up to 08.03.2010)**