1. PERSONAL DETAILS

Surname / Name:	Papaefthimiou Spiros
Date of birth:	6 October 1971
Current work status:	Assistant Professor in Department of Production Engineering and Management, Technical University of Crete with specificity: "Systems and Technologies for Energy Management and Efficiency".
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2. EDUCATION

2001 : PhD, Physics Department, University of Patras
2001 : Master's Degree, Hellenic Open University
1997 : Master's Degree in Environmental Sciences, University of Patras
1995 : Bachelor's Degree, Physics Department, University of Patras

3. SCIENTIFIC – RESEARCH – PROFESSIONAL ACTIVITY

Publications in International Journals :	28
Publications in refereed International Scientific Conference Proceedings:	15
Citations:	more than 500
Participation in refereed International Scientific Conferences :	35

4. RESEARCH INTERESTS

4.1 Energy saving devices – "Smart" materials for energy applications

- Experimental preparation and characterization of "smart" electrochromic glazing incorporating thin films.
- Theoretical design, modelling, preparation and characterization of low emissivity coatings (low-e coatings) for application in energy saving devices.

4.2 Study of advanced solar collectors and photovoltaics

- Design and experimental study of various types flat solar collectors: a. with or without transparent cover, b. with coloured absorber for aesthetic integration into building façades and roofs, c. with plain or selective absorber.
- Experience in designing, manufacturing and testing of stationary high-efficiency solar collector using asymmetric mirrors (CPC type).
- Study of high performance solar thermal collectors with reverse absorber.
- Design and experimental study of concentrating photovoltaic cells with enhanced performance for integration into building façades.

4.3 Thermal and energy characterization of building structural elements

- Thermal and energy characterization of building components (such as windows, frames, glazing, special walls, energy façades, insulation, etc.). Determination of thermal conductivity and thermal transmittance (U-Value) through experiments in Test Cells.
- Study of the energy performance of buildings incorporating "smart" energy glazing.

4.4 Environmental Systems Analysis: Life Cycle Assessment and Eco-efficiency analysis

- Life Cycle Assessment (LCA) and Eco-Efficiency analysis of energy saving applications.
- Development of a methodology for energy labelling of building elements (i.e. glazing) with a combination of life cycle analysis and ecological performance assessment.
- Combined environmental, energy and economic assessment of energy systems (wind-solar-photovoltaic plants, geothermal installations, etc.)

4.5 Management and modelling of Renewable Energy Sources (RES)

- Determination of necessary procedures for the integration of RES in remote communities. Environmental legislation. Public awareness issues on energy matters: energy savings in buildings, renewable energy for domestic use, large-scale projects.

4.6 Environmental and energy related issues in maritime sector

- Energy analysis and cost-efficiency issues. Anticipated policies and market-based measures.
- Emissions reduction schemes for the maritime sector.

4. SELECTED PUBLICATIONS IN INTERNATIONAL SCIENTIFIC JOURNALS

1. Papaefthimiou S., Leftheriotis G. and Yianoulis P., "*Study of electrochromic cells incorporating WO_3, MoO_3, WO_3-MoO_3 and V_2O_5 coatings*", Thin Solid Films, 343-344 (1999) 183.
2. Y. Tripanagnostopoulos, P. Yianoulis, S. Papaefthimiou, M. Souliotis and Th. Nousia, "*Cost effective asymmetric CPC solar collectors*", Renewable Energy 16 (1999) 628-631.
3. Leftheriotis G., Papaefthimiou S. and Yianoulis P., "*Integrated low-emittance-electrochromic devices incorporating ZnS/Ag/ZnS coatings as transparent conductors*", Sol. Energy Mater. Sol. Cells, 61 (2000) 107.
4. G. Leftheriotis, S. Papaefthimiou and P. Yianoulis, "*Development of multilayer transparent conductive coatings*", Solid State Ionics 136-137 (2000) 655.
5. Y. Tripanagnostopoulos, P. Yianoulis, S. Papaefthimiou and S. Zafeiratos, "*CPC Solar Collectors With Flat Bifacial Absorbers* ", Solar Energy 69, Vol. 3 (2000) 191-203.
6. S. Papaefthimiou, G. Leftheriotis, and P. Yianoulis, "*Study of WO_3 films with textured surfaces for improved electrochromic performance*", Solid State Ionics 139 (2001) 135.
7. S. Papaefthimiou, G. Leftheriotis and P. Yianoulis, "*Advanced electrochromic devices based on WO_3 thin films*", Electrochimica Acta 46, 13-14 (2001) 2145.
8. G. Leftheriotis, S. Papaefthimiou, P. Yianoulis, A. Siokou, D. Kefalas, "*Structural and electrochemical properties of opaque sol-gel deposited WO_3 layers*", Applied Surface Science 218 (2003) 275-280.
9. E. Syrrakou, S. Papaefthimiou, P. Yianoulis, "*Environmental assessment of electrochromic glazing production*", Solar Energy Materials and Solar Cells 85 (2005) 205.
10. E. Syrrakou, S. Papaefthimiou, N. Skarpentzos and P. Yianoulis "*Electrochromic windows: physical characteristics and environmental profile*", Ionics 11 (3-4) (2005) 281.
11. S. Papaefthimiou, E. Syrrakou and P. Yianoulis, "*Energy performance assessment of an electrochromic window*", Thin Solid Films 502 (2006) 257.
12. E. Syrrakou, S. Papaefthimiou and P. Yianoulis, "*Eco-efficiency evaluation of a smart window prototype*", Science of the Total Environment 359 (2006) 267.
13. P.Y. Pennarun, P. Jannasch, S. Papaefthimiou, N. Skarpentzos and P. Yianoulis, "*High coloration performance in electrochromic devices assembled with electrolytes based on a branched boronate ester polymer and $LiClO_4$*", Thin Solid Films 514 (2006) 258.
14. S. Papaefthimiou, G. Leftheriotis, P. Yianoulis, T. J. Hyde, P. C. Eames, Y. Fang, P.-Y. Pennarun and P. Jannasch, "*Development of electrochromic evacuated advanced glazing*", Energy and Buildings 38 (2006) 1455.
15. S. Papaefthimiou, E. Syrrakou, P. Yianoulis "*An alternative approach for the energy and environmental rating of advanced glazing: an electrochromic window case study*", Energy and Buildings 41 (2009) 17.
16. G. Leftheriotis, S. Papaefthimiou, P. Yianoulis, *"Electrochromic windows for energy saving applications in buildings: Material development and large scale device fabrication"*, Multifunctional Materials and Devices (2010) 114.
17. S. Papaefthimiou, E. Syrrakou, P. Yianoulis "*Implementation of electrochromic windows in buildings: evaluation of their energy savings and environmental impact"*, Multifunctional Materials and Devices (2010) 196.
18. S. Papaefthimiou, "*Chromogenic technologies: Towards the realization of smart electrochromic glazing for energy-saving applications in buildings*", Advances in Building Energy Research 4 (2010) 77.
19. A. Maragkogianni, S. Papaefthimiou, C. Zopounidis, "*Emissions trading schemes in the transportation sector*", pp. 269-289, Sustainable Technologies, Policies, and Constraints in the Green Economy; Advances in Environmental Engineering and Green Technologies Book Series, IGI Global.
20. Y.A. Phillis, A.M. Madni, E. Grigoroudis, F. Kanellos, V.S. Kouikoglou, and S. Papaefthimiou, "Why climate action is urgent", Bridge 44(3) (2014) 30.