CURRICULUM VITAE

NAME	Dimitrios Vlachos
QUALIFICATION	Doctor of Physics
CURRENT POSSESSION	Associate Professor
ADDRESS	Department of Physics University of Ioannina Ioannina, Greece tel. ++30 2651 008578 e-mail: dvlachos@cc.uoi.gr
DATE OF BIRTH	18th of July, 1966
PLACE OF BIRTH	Lefkas, Greece
MARITAL STATUS	Married with two daughters
NATIONALITY	Greek
EDUCATION	2nd High School of Lefkas, 1984 Bachelor in Physics, Univ. of Ioannina, 1988 Ph. D in experimental Surface Physics, University of Ioannina, 1997
Ph D THESIS TITLE	"Ba and hydrogen coadsorption on semiconducting and metallic surfaces"

FIELD OF RESEARCH

Surface Physics and Chemistry: Interaction of metals and gases on metallic and semiconducting surfaces. Study of the electronic and structural properties of these systems by the use of the following techniques at ultrahigh vacuum conditions:
Auger Electron Spectroscopy (AES),
Ultraviolet Photoelectron Spectroscopy (UPS)
X-ray Photoelectron Spectroscopy (XPS)
Thermal Desorption Spectroscopy (TDS)
Electron Energy Loss Spectroscopy (EELS)
Low Energy Electron Diffraction (LEED)
Work Function measurements (WF)
Low Energy Ion Scattering (LEIS).
Metastable Impact Electron Spectroscopy (MIES)

Solid State Physics and Chemistry: Study of bulk electronic and structural properties of materials by using the following techniques:
Electron Microscopy (TEM and STEM)
Energy Dispersive x-ray Spectroscopy (EDS)
X-Ray Diffraction (XRD)

Electron Energy Loss Spectroscopy (EELS)
X-ray Absorption Spectroscopy by Synchrotron Radiation (XAS – transmission, fluorescence and total electron yield measurements)

Few words for my career

Likely or not, I have continuously been working in academia since 1989, with only a break of almost two years for doing my military service.

It was October in 1988 when I graduated from the Physics Department of the University of Ioannina in Greece. Almost half year later, I jointed again the same department as a Phd student in a funded postgraduate position. The subject of my Phd thesis was in the field of the experimental Surface and Interface Physics. Specifically, I studied the coadsorption of barium and hydrogen on mono-crystalline surfaces. Part of the measurements and analysis was carried out at the FOM Institute in Holland. In parallel with the work of my thesis, I participated in an international cooperation research project concerning the alkali adsorption on layer compounds. The experiments of that project took place at my home department and at BESSY Synchrotron Radiation Center in Berlin in Germany.

As a postgraduate student, beside my research work, I had also had some tutorial duties in the department, teaching and demonstrating for the undergraduate students. Furthermore I had the change to supervise few final year students doing their diploma thesis.

In February of 1998, I was appointed as post doctoral research assistant in the Physics and Astronomy Department in the University of Glasgow. My prior responsibility was to carry out the experimental part of a funded project concerning the study of doped zirconia by several oxides. The main tools of this research, were electron microscopy (TEM and STEM), electron energy loss spectroscopy (EELS) and x-ray absorption measurements. The latter were performed at Daresbury synchrotron radiation laboratory in UK. The main purpose of the project was the characterization of doped zirconia, by investigating the electron loss near edge structure (ELNES) and x-ray absorption near edge structure (XANES) for a number of electronic excitations. In this manner was possible to gain direct information on the influence of dopants and vacancies on the local structure and bonding. The final objective was to develop the relationship between structural information and material properties of novel zirconia composites. During that time, I developed collaboration with the Atomistic Simulation Group in Queen's University in Belfast in UK. This allowed a comparison of the experimental results with the theoretical predictions. Beside my research duties in the department, I also had some tutorial ones. Specifically I taught and demonstrated for the first year students in the general physics labs.

In October of 2000, I was appointed as lecturer in the department of Biological Applications and Technology of the University of Ioannina in Greece. My main duty was the teaching of General Physics and Physical Chemistry courses for the first year students. At the same time, in January of 2001, I started working in the Department of Physics of the University of Ioannina, within the frame of a founded project by the National Institute of Scholarships of Greece (IKY). This project was related to the development of ultrathin films of alkaline earth metal oxides on surfaces. The investigation was carried out by basic surface analytical techniques such as, Auger electron spectroscopy (AES), low energy electron diffraction (LEED), thermal desorption spectroscopy, (TDS), EELS and work function (WF) measurements. Complementary measurements of soft x-rays photoelectron spectroscopy (SXPS) and ultraviolet photoelectron spectroscopy (UPS) were performed at the national institute of synchrotron radiation of MAX-lab in Lund in Sweden. At about the same time a new cooperation was started between my home Department and the Physics and the Metallurgy Departments of the Technical University of Clausthal in Germany. The project concerned the possible catalytic action of Ni and Sr on the $SrTiO_3(100)$ surface with interaction of several gases such as O_2, CO_2, H_2S etc. The measurements were carried out at our lab in Grecee by using our home techniques as well as at the Physics department in Clausthal by the provided facilities there, XPS, UPS and metastable impact electron spectroscopy (MIES).

In October of 2004, I was appointed as lecturer at the department of Physics in the University of Ioannina in Greece. I work in a well equipped lab of Surface and Interface Physics. Although the instrumentation is not modern, the housing of five different analytical experimental techniques for surface analysis at the same ultra-high vacuum system, makes our research quite powerful and productive. My current interests are mainly focused on the development of metals and oxides in the form of ultrathin films on metallic and semiconducting surfaces, and the characterization of these systems by studying their electronic, structural and physicochemical properties. These systems are very useful and applicable in modern technology. My intention is to continue working on the already running projects and also to develop new collaborations with other institutes in abroad. For example, last years I have started a collaboration with the AMES laboratory in Iowa in USA, and more specifically with the condensed matter Physics division. The project concerns the development and characterization of metallic nanostructures on semiconducting surfaces from the structural and electronic point of view. A lot of fruitful experiments of this project have already been performed at Ioannina, at the ELETTRA synchrotron radiation laboratory in Trieste in Italy and at Max-lab the swedish national laboratory in Lund I Sweden. In general, the combination of our home techniques results with those taken by more modern and sophisticated facilities based in distinguished international institutes, gives to our scientific effort more valuable and reliable impact.

In June of 2011, I was promoted to the rank of assistant professor and in December of 2023 to the rank of associate professor in the department of Physics, where I am serving till today.

LIST OF REFEREED PUBLICATIONS

1. "The behaviour of K on the basal plane of MoS_2"
   C. A. Papageorgopoulos, M. Kamaratos, S. Kennou and D. Vlachos
   Surface Science 251/252 (1991) 1057-1061.

2. "Coadsorption of K and O_2 on MoS_2(0001)"
   C. A. Papageorgopoulos, M. Kamaratos, S. Kennou and D. Vlachos
   Surface Science 277 (1992) 273-281.

3. "Potassium adsorption on MoS_2 (0001) at low temperature"
   M. Kamaratos, D. Vlachos and C. A. Papageorgopoulos
   Journal of Physics - Condensed Matter 5 (1993) 535-540.

4. "Ba adsorption on Si(100)2×1"
   D. Vlachos, M. Kamaratos and C. A. Papageorgopoulos
   Solid State Communications 90 (1994) 175-181.

5. "Photoelectron spectroscopy of UHV in situ intercalated Li/$TiSe_2$. Experimental proof of the rigid band model"
   W. Jaegermann, C. Pettenkofer, A. Schellenberger, C. A. Papageorgopoulos
   M. Kamaratos, D. Vlachos and Y. Tomm
   Chemical Physics Letters 221 (1994) 441-446.

6. "Ba deposition on Ni(110)"
   D. Vlachos, S. D. Foulias, S. Kennou, C. Pappas, C. A. Papageorgopoulos
   Surface Science 331/333 (1995) 673-678.

7. "H^- formation in proton Ba/Ag(111) collisions: effects of the surface structure"
W. R. Koppers, B. Berenbak, D. Vlachos, U. Van Slooten and A. W. Kleyn
Nuclear Instrument and Methods in Physics Research B 100 (1995) 417-422.

8. "A synchrotron radiation study of the interaction of Na with WSe_2 and $TaSe_2$: oxygen-induced deintercalation"
S. D. Foulias, D. Vlachos, C. A. Papageorgopoulos, R. Yavor, C.Pettenkofer and W. Jaegermann
Surface Science 352/354 (1996) 463-467.

9. "Barium adsorption on hydrogenated Si(100)2×1 surfaces"
D. Vlachos and C. A. Papageorgopoulos
Journal of Physics - Condensed Matter 8 (1996) 8799-8814.

10. "Low-energy hydrogen-ion scattering from metal surfaces: Trajectory analysis and negative-ion formation"
W. R. Koppers, B. Berenbak, D. Vlachos, U. Van Slooten and A. W. Kleyn
Physical Review B 57 (1998) 13246-13256.

11. "Thermal desorption study of Ba and hydrogen coadsorption on Ni(110) surface"
D. Vlachos and C. A. Papageorgopoulos
Applied Surface Science 136 (1998) 230-237.

12. "Effect of relaxation on the oxygen K-edge electron energy-loss near edge structure in yttria-stabilised zirconia"
S. Ostanin, A. J. Craven, D. W. McComb, D. Vlachos, A. T. Paxton, A. Alavi and M. W. Finnis
Physical Review B 62 (2000) 14728-14735.

13. "The influence of dopant concentration on the oxygen K-edge ELNES and XANES in yttria-stabilised zirconia"
D. Vlachos, A. J. Craven and D. W. McComb
Journal of Physics - Condensed Matter 13 (2001) 10799-10809.

14. "Electron energy-loss near-edge shape as a stabilization probe of yttria-stabilised zirconia"
S. Ostanin, A. J. Craven, D. W. McComb, D. Vlachos, A. Alavi, A. T. Paxton, and M. W. Finnis
Physical Review B 65 224109 (2002).

15. "Li interaction with the group IV selenides layer compounds at low temperature"
M. Kamaratos, D. Vlachos, C. A. Papageorgopoulos, A. Schellenberger, W. Jaegermann and C. Pettenkofer
Journal of Physics: Condensed Matter 14 (2002) 8979-8986.

16. "Theory of the phases and atomistic structure of Yttria-doped zirconia"
S. Ostanin, E. Salamatov, A. J. Craven and D. W. McComb and D. Vlachos
Physical Review B 66 132105 (2002).

17. "AES and WF characterization of oxygen adsorption on Ba covered Ni(110)"
D. Vlachos, N. Panagiotides and S. D. Foulias
Journal of Physics: Condensed Matter 15 (2003) 8195-8206

18. "Ni ultrathin film development on $SrTiO_3$(100) surface"

D. Vlachos, M. Kamaratos, S. D. Foulias, Ch. Argirusis, and G. Borchardt
Surface Science 550 (2004) 213-222

19. "The development of nickel ultra-thin films and the interaction with oxygen on the $SrTiO_3$(100) surface studied by soft x-rays photoelectron spectroscopy"
M. Kamaratos, D. Vlachos, S.D. Foulias and Ch. Argirusis
Surface Review and Letters 11 (2004) 419-425

20. "Adsorption of oxygen on a nickel covered $SrTiO_3$(100) surface, studied by means of Auger electron spectroscopy and work function measurements"
D. Vlachos, M. Kamaratos, S. D. Foulias, Ch. Argirusis, and G. Borchardt
Journal of Physics: Condensed Matter 17 (2005) 635-642

21. "Specimen charging in X-ray absorption spectroscopy: correction of total electron yield data from stabilized zirconia in the energy range 250-915 eV"
D. Vlachos, A.J. Craven and D.W. McComb
Journal of Synchrotron Radiation 12 (2005) 224-233

22. "Electronic properties of barium ultrathin layers on the Ni(110) surface"
M. Kamaratos, D. Vlachos and S.D. Foulias
Surface Review and Letters 12 Nos. 5&6 (2005) 721-726

23. "Oxygen and potassium adsorption on a carbide-modified stepped-W(100) in contact with the carbon solid solution: An AES and WF study at 300 K and at elevated temperatures"
S.D. Foulias, A. Perdikis and D. Vlachos
Surface Review and Letters 12 Nos. 5&6 (2005) 787-792

24. "Barium and oxygen interaction on the Ni(110) surface at low coverages studied by soft x-ray photoemission spectroscopy: Ba negative binding energy shifts and their correlation with AES shifts"
D. Vlachos, M. Kamaratos and S. D. Foulias
Journal of Physics: Condensed Matter 18 (2006) 6589-6603

25. "Development and characterization of an ultrathin barium oxide film on a surface oxidized Ni(110) substrate"
D. Vlachos, S. D. Foulias and M. Kamaratos
Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry, 38 (2008) 400-404

26. "Development and characterization of Fe ultrathin films on the $SrTiO_3$(100) surface"
M. Kamaratos, D. Vlachos and S.D. Foulias
Journal of Physics: Condensed Matter 20 (2008) 315009

27. "Barium adsorption on the chemisorbed O(2×1)/Ni(110) surface: a combined Auger electron spectroscopy and synchrotron radiation study"
D. Vlachos, S. D. Foulias and M. Kamaratos
Journal of Physics: Condensed Matter **21** (2009) 445004

28. "Indium growth on the reconstructed Si(111)$\sqrt{3}\times\sqrt{3}$ and 4×1–In surfaces"
D. Vlachos, M. Kamaratos, S.D. Foulias, F. Bondino, E. Magnano and M. Malvtestuto
Journal of Physical Chemistry C **114** (2010) 17693-17702

29. "Lead growth on Si(111) surfaces reconstructed by indium"

D. Vlachos, M. Kamaratos, S.D. Foulias, S. Binz, M. Hupalo and M.C. Tringides
Journal of Physics: Condensed Matter **24** (2012) 095006.

30. "A study of barium ultra-thin films on the $SrTiO_3$(100) surface by soft x-ray photoelectron spectroscopy"
D. Vlachos, M. Kamaratos, Ch. Argirusis and S. D. Foulias
Journal of Electron Spectroscopy and Related Phenomena **185** (2012) 615-620.

31. "The low energy Auger electron spectroscopy lines as an index of the Ba overlayer order on the Ni(110) surface"
D. Vlachos, M. Kamaratos and S.D. Foulias
International Journal of Spectroscopy, Vol **2014** (2014) 289346

32. "Cesium growth on the $SrTiO_3$(100) surface"
D. Vlachos, E. Giotopoulou, S. D. Foulias, and M. Kamaratos
Materials Research Express **2** (2015) 116501.

33. **"**Ultrathin films of Ge on the Si(100)2 × 1 surface"
M. Kamaratos, A.K. Sotiropoulos, and D. Vlachos
Surface and Interface Analysis **50** (2018) 198-204. DOI: 10.1002/sia.6358

34. "Yttrium ultra-thin films on the Si(100)2×1 surface and their in situ oxidation process"
D. Vlachos and M. Kamaratos
Thin Solid Films **673**, (2019) 104-111.

35. "A quantitative analysis of AES and XPS specifically applied in adsorption systems at sub-monolayer regime"
D. Vlachos
Surface and Interface Analysis (2020) 1–7. https://doi.org/10.1002/sia.6893

36. "The interaction mechanism of cesium with water on the $SrTiO_3$(100) surface at room temperature"
M. Kamaratos, E. Giotopoulou and D. Vlachos
Reaction Kinetics, Mechanisms and Catalysis (2022)
https://doi.org/10.1007/s11144-022-02320-9

NATIONAL & INTERNATIONAL CONFERENCES

1. "Adsorption of K on MoS_2(0001)"
C. A. Papageorgopoulos, M. Kamaratos, S. Kennou and D. Vlachos
6th Panhellenic Conference on Solid State Physics,
Heraklion, Hellas, 26-29th September 1990

2. "Adsorption of K and its coadsorption with O_2 on MoS_2(0001)"
C. A. Papageorgopoulos, M. Kamaratos, S. Kennou and D. Vlachos
11th European Conference on Surface Science (ECOSS-11)
Spain, 1990

3. "Coadsorption of K and O_2 on MoS_2(0001)"
D. Vlachos, M. Kamaratos, C. A. Papageorgopoulos,
"Coadsorption of alkali metals and oxygen on layered compound surfaces"
C. A. Papageorgopoulos, M. Kamaratos and D. Vlachos

7th Hellenic Conference on Solid State Physics,
Thessaloniki, Hellas, 22-25th September 1991

4. "Deposition of Ba on Si(100)2×1"
D. Vlachos, M. Kamaratos, C. A. Papageorgopoulos,
8th Panhellenic Conference on Solid State Physics,
Ioannina, Hellas, 22-25th September, 1992

5. "Adsorption of Ba on clean and H-covered Si(100)2×1"
D. Vlachos, M. Kamaratos and C. A. Papageorgopoulos
12th International Vacuum Congress and 8th International Conference on Solid Surfaces, The Netherlands, 1992

6. "Negative ion formation in proton Ba/Ag(111) collisions: effects of the surface structure"
W. R. Koppers, B. Berenbak, D. Vlachos, U. Van Slooten and A. W. Kleyn
Proceedings of the Fifth European Workshop on the Production and Application of Light Negative Ions, Dublin, Ireland, 23-25th March 1994

7. "Coadsorption of Ba and hydrogen on Si(100)2×1"
D. Vlachos and C. A. Papageorgopoulos
"Study of negative hydrogen ions by low energy proton scattering on barium covered Ag(111)"
D. Vlachos, W. R. Koppers, B. Berenbak, U. Van Slooten and A. W. Kleyn 10th 10th Panhellenic Conference on Solid State Physics,
Delphi, Hellas, 18-21th September 1994

8. "Ba deposition on Ni(110)"
D. Vlachos, S. D. Foulias, S. Kennou, C. Pappas, C. A. Papageorgopoulos
14th European Conference on Surface Science (ECOSS-14)
Leipzig, Germany, 19-23th September 1994

9. "A synchrotron radiation study of the interaction of Na with WSe_2 and $TaSe_2$: oxygen-induced deintercalation"
S. D. Foulias, D. Vlachos, C. A. Papageorgopoulos, R. Yavor, C.Pettenkofer and W. Jaegermann
15th European Conference on Surface Science (ECOSS-15)
Lille, France, 4-8th September 1995

10. "Hydrogen effect on the barium growth on Si(100)2×1 surface"
D. Vlachos and C. A. Papageorgopoulos
11th Panhellenic Conference on Solid State Physics,
Xanthi, Hellas, 17-20th September 1995

11. "Coadsorption of Ba and hydrogen on Ni(110)"
D. Vlachos and C. A. Papageorgopoulos
12th Panhellenic Conference on Solid State Physics,
Heraklion, Hellas, 15-28th September 1996

12. "Fundamental Aspects of Surface Science- Synchrotron Radiation and Surfaces" (no announcement)
Castelvecchio Pascoli, Italy, 6-11th June 1997

13. "The O K-edge in yttria stabilised zirconia"
A. J. Craven, D. Vlachos, D. W. McComb, S. Ostanin, A. T. Paxton,

A. Alavi and M. W. Finnis
Condensed Matter and Materials Physics (CMMP)
Leicester, England, 19-22th December 1999

14. "Oxygen adsorption on barium covered Ni(110) surfaces: An AES and WF study"
D. Vlachos, N. Panagiotides and S. D. Foulias
"Electronic structure of solids and surfaces"
Giens, France, 7-12th September 2001

15. The use of XANES and ELNES for the characterisation of stabilised zirconia"
D. W. McComb, S. Ostanin, D. Vlachos, A. J. Craven, M. W. Finnis, A. T. Paxton, and A. Alavi
MRS Fall Meeting
Boston, USA, 26-30th November 2001

16. "Theory of the phases and atomistic structure of yttria-doped zirconia"
S. Ostanin, E. Salamatov, A. J. Craven, D. W. McComb and D. Vlachos
EMRS, European Materials Research Society,
Spring Meeting
Strasbourg, France, 18-21th June 2002

17. "The development and characterization of ultrathin barium oxide film on the Ni(110) surface"
D. Vlachos, M. Kamaratos and S.D. Foulias
"The electronic properties of Ni ultrathin films on the $SrTiO_3$(100) surface with oxygen adsorption"
M. Kamaratos, D. Vlachos and S.D. Foulias
20th Panhellenic Conference on Solid State Physics,
Ioannina, Hellas, 26-29th September, 2004

18. "Barium adsorption on the $SrTiO_3$(100) surface"
D. Vlachos, M. Kamaratos and S.D. Foulias
21th Panhellenic Conference on Solid State Physics & Materials Science
Cyprus, Lefcosia, 28-31th August 2005

19. "Ultrathin barium oxide layers on nickel surface"
D. Vlachos, S.D. Foulias and M. Kamaratos.
ICMAT 2007, 4th International Conference on Materials for Advanced Technologies
Singapore, 1-6th July, 2007.

20. "Barium adsorption on an oxygen chemisorbed O(2×1)/Ni(110) surface"
D. Vlachos, S.D. Foulias and M. Kamaratos
23th Panhellenic Conference on Solid State Physics & Materials Science
Athens, Hellas, 23-26th September 2007

21. "Development and characterization of Fe ultrathin films on the $SrTiO_3$(100) surface"
D. Vlachos, M. Kamaratos and S.D. Foulias
"Nanotechnology for Sustainable Energy",
Obergurgl, Austria, 14-19th June 2008

22. "Indium adsorption on the reconstructed Si(111)$\sqrt{3}\times\sqrt{3}$ and 4×1-In surfaces"
D. Vlachos, M. Kamaratos and S.D. Foulias
25th Panhellenic Conference on Solid State Physics & Materials Science
Thessaloniki, Hellas, 20-23th September 2009

23. "Lead nanostructures on reconstructed by indium Si(111) surfaces"

D. Vlachos, M. Kamaratos, S.D. Foulias, S. Binz and M.C. Tringides
7th International Conference on Nanosciences & Nanotechnologies - NN10
Ouranoupolis, Halkidiki, Hellas, 11-14 July 2010

24. "Indium growth on the reconstructed Si(111)$\sqrt{3}\times\sqrt{3}$ and 4×1–In surfaces"
D. Vlachos, M. Kamaratos, S.D. Foulias, F. Bondino, E. Magnano and M. Malvtestuto
27th European Conference on Surface Science – ECOSS 27
Groningen, Holland, 29 August - 3 September 2010

25. "Lead growth on reconstructed by indium Si(111)$\sqrt{3}\times\sqrt{3}$ and 4×1–In surfaces"
D. Vlachos, M. Kamaratos, S.D. Foulias, S. Binz and M.C. Tringides
26th Panhellenic Conference on Solid State & Materials Science
Ioannina, Greece, 26-29 September 2010

26. 18th Interdisciplinary Surface Science Conference (ISSC-18)
(no announcement)
Warwick, UK, 4-7 April 2011

27. "Nanocomposited anatase TiO_2 on $LaAlO_3$(100) surfaces by PLD"
D. Vlachos, M. Misra, N. Fereshteh Saniee, D.P. Woodruff and C.F. McConville
9th International Conference on Nanosciences & Nanotechnologies - NN12
Thessaloniki, Hellas, 3-6 July 2012

28. "Development of nanostructured anatase TiO_2 by means of pulsed layer deposition"
D. Vlachos, M. Misra, N. Fereshteh Saniee, D.P. Woodruff and C.F. McConville
28th PanHellinic Conference on Solid State Physics and Materials Science
Patras , Hellas, 23-26 September 2012.

29. "The *L* adsorption edges as index for the doped zirconia stabilization process"
D. Vlachos, S. Ostanin, A. J. Craven and D. W. McComb
29th PanHellinic Conference on Solid State Physics and Materials Science
Atehns , Hellas, 22-25 September 2013.

30. "Adsorption of water on a cesium covered $SrTiO_3$ (100) surface"
D. Vlachos, E. Giotopoulou, M. Kamaratos and S.D. Foulias
31th PanHellinic Conference on Solid State Physics and Materials Science
Thessaloniki, Hellas, 20-23th September 2015.

31. "Cesium growth and characterization on the $SrTiO_3$(100) surface: Water adsorption"
D. Vlachos, M. Kamaratos, E. Giotopoulou and S.D. Foulias
2nd World Congress and Expo on Nanotechnology and Material Science
Dubai, UAE, 4-6th April 2016.

32. "Yttrium and oxygen interaction on the Si(100)2×1 surface"
M. Kamaratos and D. Vlachos
32th PanHellinic Conference on Solid State Physics and Materials Science
Ioannina, Hellas, 18-21th September 2016.

34. "The influence of caesium in the titanium oxidation on the Si(100)2x1 surface"
D. Vlachos and M. Kamaratos
34th Panhellinic Conference on Solid State Physics and Materials Science
Patras, Hellas, 11-14th September 2019.

35. "Surface Science in Nanocatalysis"
D. Vlachos (Keynote speaker)

13th International Conference and Expo on Nanotechnology and Nanomaterials (Web conference)
Barchelona, Spain, 12-13th July 2021.

36. "In and Pb nanostructures on reconstructed Si(111) surfaces"
D. Vlachos (Invited speaker)
International forum on Condensed Matter Physics (CMPFORUM2023 - Web conference)
Porto, Portugal, 6-8th February 2023.

37. "Cesium and water adsorption on a pollicrystalline molybdenum surface: the effect of the work function change"
D. Vlachos and O. Papageorgiou

"Mechanical and thermal properties of spinel refractories mixed with blast furnace waste slag"
Ai. Symvoulidou, George Vekinis and D. Vlachos
37th Panhellinic Conference on Solid State Physics and Materials Science Thessaloniki, Hellas, 17-21th September 2023.

38. "Work function of caesiated molybdenum surfaces under different water vapor pressures and surface temperatures"
N. Klose, A. Heiler, D. Vlachos, R. Friedl and U. Fantz
38th Panhellinic Conference on Solid State Physics and Materials Science Ioannina, Hellas, 15-18th September 2024.

ORAL PRESENTATIONS IN ABROAD

1. "Ba adsorption on Si(100)2×1"
FOM-Institute for Atomic and Molecular Physics
Amsterdam, Netherlands, July 1993

2. "Ba and hydrogen coadsorption on Si(100)2×1"
Queen University Physics Department, Belfast, May 1998

3. "A TEM and X-ray absorption study of several oxides doped zirconia polymorphs"
Physics and Astronomy Department, University of Glasgow, March 1999

4. "Characterisation of the electronic and structural properties of doped zirconia by several oxides"
Queen University, Physics Department, Belfast, September 1999

5. "A TEM and X-ray absorption study of doped zirconia polymorphs"
Techniche Universität Clausthal, Institut für Metallurgie, Clausthal-Zellerfeld, Germany, July 2002

6. "Ultrathin barium oxide layers on nickel surface"
ICMAT 2007, 4th International Conference on Materials for Advanced Technologies
Singapore, 1-6th July, 2007.

7. "Indium growth on the reconstructed Si(111)$\sqrt{3}\times\sqrt{3}$ and 4×1–In surfaces"
27th European Conference on Surface Science – ECOSS 27

Groningen, Holland, 29 Aug.-3 Sept 2010

8. "Nanostructures on surfaces: Pb on Si(111)-In"
University of Warwick, Department of Physics, Coventry, UK, July 2011.

9. Cesium growth and characterization on the $SrTiO_3$(100) surface: Water adsorption"
2nd World Congress and Expo on Nanotechnology and Material Science
Dubai, UAE, 4-6th April 2016.

10. "Surface Science in Nanocatalysis" (Keynote speaker)
13th International Conference and Expo on Nanotechnology and Nanomaterials Barchelona, Spain, 12-13th July 2021.

11. "In and Pb nanostructures on reconstructed Si(111) surfaces" (Invited speaker)
International Forum on Condensed Matter Physics (CMPFORUM2023)
Porto, Portugal, 6-8th February 2023.

12. "Caesium and water coadsorption on a polycrystalline molybdenum surface" (Invited speaker)
ITER Technology and Diagnostics, Seminar on Tagungsstätte Schloss Ringberg
Schloßstraße 20, 83708 Kreuth, Germany, 22-26th May 2023.

INTERNATIONAL SCHOOLS

1. European Summerschool in Surface Science
"Surface Crystallography"
Physikzentrum, Bad Honnef, Germany
23-27th March 1992

2. "European Workshop on Research with Synchrotron Radiation"
Hotel Xenia, Ioannina, Hellas
3-5th May 1993

3. Daresbury Laboratory
"Introduction to EXAFS (Extended X-ray Absorption Fine Structure)"
Warrington, WA4 4AD, England, UK
16-17th November 1998

RESEARCH COLLABORATIONS WITH OTHER INSTITUTIONS

1. Hahn-Meitner Institute / BESSY, Berlin, GERMANY
November 1992, March 1994

2. FOM-Institute for Atomic and Molecular Physics
Kruislaan 407, 1098 SJ Amsterdam, NETHERLANDS
July - September 1993, December 1993, August 1994

3. Physics and Astronomy Department
University of Glasgow
Kelvinbuilding G12 8QQ

Glasgow, Scotland, UK
1998-2000

4. Queen University Physics Department,
Department of Pure and Applied Physics
Belfast, North Ireland, UK
often visits in 1998-2000

5. Daresbury Laboratory
Warrington, WA4 4AD
England, UK
23-25th August 1998, 26-30th May and 1-8th July 1999, 3-5th February 2000

6. Techniche Universität Clausthal
Institut für Metallurgie
Robert-Koch-Str.42, D-38678
Clausthal-Zellerfeld, GERMANY
15-25th July 2002, 24th November-2nd December 2002, 25th June-4th July 2004, 6th-11th December 2004

7. MAX-lab, Swedish National Laboratory
Box 118, S-221 00 Lund , SWEDEN
16th February – 5th March 2003, 1-14th September 2003, 27th April-3th May 2009, 19th October-2nd November 2009.

8. ELETTRA, Synchrotrone Trieste
Strada Statale14 – km 163.5 in Area Science Park
34012 Basovizza, Trieste, ITALY
9-21th September 2008

9. University of Warwick
Department of Physics
Coventry CV4 7AL, UK
February 2011-August 2011
Visiting Fellow

10. Iowa State University and AMES laboratory, Ames IA 50011, USA
(2008-2012)

11. Max Planck Institute for Plasma Physics (IPP)
Garching, GERMANY
(April 2020- since today)

FUNDED PROJECTS

1. IKYDA 2001 PROGRAMM , Bilateral German-Greek research project financed by the DAAD and IKY State Scholarships Foundation.

2. “Oxidation of alkaline earth metals on surfaces”. Access to Research Infrastructure Action of the Improving Human Potential Programme (ARI), financed by the European Union.

3. “Engineering nanostructures on surfaces” financed by the European Union under the contract RII3-CT-2004-506008 (IA-SFS).

4. “Engineering nanostructures on surfaces”. Research Infrastructure Action under the FP6 "Structuring the European Research Area" Programme (through the Integrated Infrastructure Initiative "Integrating Activity on Synchrotron and Free Electron Laser Science"). Granted by the European Union.

TUITION

I have taught the following undergraduate courses

1. Mechanics
2. Electromagnetism
3. Laboratories of General Physics (Mechanics, Thermodynamics, Waves, Optics, Physical Chemistry)
4. Thermodynamics

I have supervised several students in their diploma and master thesis.

PROFESSIONAL SERVICE

-Referee in the following international journals:

Surface Science, Physical Chemistry Chemical Physics (PCCP), Catalysts, Materials Science and Engineering B, Thin Solid Films, Materials, Molecules, RCS Advances, Nanomaterials, Surface and Interface Analysis, Materials Characterization and Surfaces.

-Czech Science Foundation (reviewer for evaluation of project proposals)

-Official connoisseur for XPS systems in the Greek National Accreditation System.

-Member of the committees responsible for 1) the timetable of the undergraduate courses, and 2) the supply of technical equipment in the Department of Physics in the University of Ioannina.

FELLOWSHIPS

1. Departmental Scholarship
   Department of Physics, University of Ioannina
   1989-1994

2. Postdoctoral Scholarship
   Engineering and Physical Science Research Council
   Department of Physics and Astronomy, University of Glasgow
   1998-2000

3. Postdoctoral Scholarship
   National Institute of Scholarships of Greece (IKY)
   2001-2002

4. Royal Society Fellowship
International Travel Grand Scheme
Department of Physics University of Warwick
Coventry CV4 7AL, UK
February – April 2011 (3 months)

CITATIONS

My publications have been cited more than 400 times.