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Personal information

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Education

1. Ph.D in Physics, 1991, "A study of the generation of coherent VUV radiation in Hg" University of Patras, Greece
2. M.Sc. in Applied Physics, 1987, University of Crete, Greece
3. M.Sc. in Lasers and their Applications, 1984, University of Essex, England
4. B.Sc. in Physics, 1983, University of Athens, Greece

Professional experience

- Dec. 2002-today : Professor, Department of Electrical and Computer Engineering HMU
- Sept. 2001-Nov. 2002 : Special Functionary Scientist C, FORTH-IESL
- Jan. 1999-Aug. 2001 : Researcher, FORTH-IESL
- Nov. 1997-Dec. 1998 : Researcher, ARTT
- Oct. 1993-Oct. 1997 : Research Associate, FORTH-IESL
- Dec. 1991-March 1992 : Research Associate, FORTH-IESL
- July 1987-Nov. 1991 : Research Assistant, FORTH-IESL
- Sept. 1984-June 1987 : Research Assistant, FORTH-IESL and Teaching Assistant, Physics Department, University of Crete

Experience in Education

Teaching in undergraduate level

Electrical measurements, Sensors, Electric Circuits Theory, Antennas, Optical Fibers, Optical Systems, Physics

Teaching in graduate level

Advanced functional materials: development, properties and applications, Lasers systems for metrology and materials processing, Technology exploitation

Thesis Supervision

6 PhD Theses, 10 MSc Theses and more than 100 diploma theses

Experience in research

- Development, characterization and investigation of the performance of metal oxides and carbon allotropes in applications like solar cells, transparent electrodes, photocatalysis, antibacterial action, electrochromic/thermochromic devices, Li ion batteries and electromagnetic shielding
- Development, characterization and investigation of the electrical and mechanical response of polymer nanocomposites

- Investigation of the performance of polymer based outdoor insulators used in high voltage applications
- Investigation of optical, electrical and mechanical properties of materials and devices
- Laser based diagnostic techniques
- Nonlinear optical response of novel materials
- Generation of VUV radiation

Experience in administration

1. Vice-president of the Research Committee -today
2. Director of the post-graduate program «Business administration for Engineers» of HMU -today
3. Coordinator of many research projects
4. Member of the Council for four years
5. Head of the Department of Electrical and Computer Engineering for five years

Research projects

- 1) Nanostructured composite paints for electronics electromagnetic shielding, **SPS NATO** project (project code: G5477), 2018-2021
- 2) TiO₂-based antifouling materials for use in aquaculture, Greek Operational Program Competitiveness, Entrepreneurship and Innovation, under the call for **Special Actions in "AQUACULTURE" - "INDUSTRIAL MATERIALS" - "OPEN INNOVATION IN CULTURE"**, 2019-2021
- 3) Sustainable food packaging based on polymers incorporating essential oils, Greek Operational Program Competitiveness, Entrepreneurship and Innovation, under the call for **Special Actions in "AQUACULTURE" - "INDUSTRIAL MATERIALS" - "OPEN INNOVATION IN CULTURE"**, 2019-2021
- 4) Innovative materials for nets for fish farms with environmentally friendly anti-fouling action, **Greek Operational Program Maritime and Fishery**, 2019-2022
- 5) Graphene-CA: **Graphene Flagship**, Ramp Phase, FP7
- 6) Plasmonic nanoparticles for efficient, stable and cheap organic photovoltaic devices, **Excellence** project funded by Greece
- 7) Smart and low cost thermochromic windows for energy saving in buildings, **Cooperation** project funded by Greece
- 8) Investigation of the performance of polymer based outdoor insulators used in high voltage applications and development of a remote and real-time diagnostic technique for the evaluation of their functionality, **Cooperation** project funded by Greece
- 9) Graphene and its Nanocomposites: production, properties and applications, **Thalis** project, funded by Greece
- 10) Design and fabrication of nanostructured hybrid solar cells with improved performance, **Archimedes III** project, funded by Greece
- 11) Nanostructured metal oxide photocatalysts, **Archimedes III** project, funded by Greece
- 12) Growth and characterization of novel nanostructured layers suitable for the confinement of GHz electromagnetic radiation, **Archimedes III** project, funded by Greece

- 13) Electrochromic, low cost, advanced windows, **Archimedes III** project, funded by Greece
- 14) **PENED 1991**, “Generation of coherent VUV and XUV radiation”
- 15) **PENED 1995**, “Nanoscale analysis of biological samples using Photon Scanning Tunneling Microscope (P.S.T.M.).
- 16) **PEP of Crete 1996**, “Development and application of laser based analytical techniques in the environmental pollution”.
- 17) **EPEAEK Archimedes 2004**, “Novel, low cost solar cells”
- 18) **EPEAEK Archimedes 2004**, “Infrared phosphors for optical imaging”
- 19) **EPEAEK Archimedes 2004**, “Radiation and polymers”
- 20) **EPEAEK Archimedes 2005**, “ZnO films for gas sensing applications”
- 21) **LIDAR B-01-52**, “Measurements of atmospheric pollutant using laser”, 1987-1989
- 22) **LARGE INSTALLATION PLAN DG XII, G/89100086/GEP**, European Ultraviolet Laser Facility, 1990-2002
- 23) **PICS No 152**, “ Dynamics and spectroscopy of highly excited molecules of astronomical interest”, 1991-1996
- 24) **BRITE/EURAM BE 7717**, “High speed laser identification of plastics and polymers from domestic waste for recycling purposes”, 1994-1996
- 25) **HUMAN CAPITAL AND MOBILITY PROGRAM ERBCHRXCT940485**: “Molecular Rydberg States - Spectroscopy, Properties and Theory”, 1994-1996
- 26) **BRITE-EURAM III BE-96-3804**, “On line Sensing for integrated Monitoring of the Reactions and Processes in Industrial-Scale Metallurgical and Mineral Processing Furnaces”, 1996-1998
- 27) **TMR Research Network ERB 4061 PL97-0217**, “Usable Fullerene Derivatives: Synthesis, Stabilization, Spectroscopy and Systematics”, 1997-2001.
- 28) **BRITE: BRPR-CT98-0783**, “Development of multi-purpose industrial units for recycling of plastic wastes by on-line pattern recognition of polymer features”, 1998-2001
- 29) **Greek-French collaboration: No 2531/26-2-98**, “Real time dynamics of the molecular fragmentation”, 1998-2001
- 30) **ECSC-99: 7120 PR 128**, “Improved process control of hot metal production through a non-intrusive, on-line sensing system for metals in topgas of blast furnace”, 1999-2002
- 31) **Research Training Network RTN 1-1999-00442**, “Reactive Intermediates”, 2001-2005
- 32) **Greek-Russian: No 10691/7-8-2000**, “Nonlinear optical properties of semiconductor thin films” 2000-2002

Publications in international refereed journals

- 1) Kokkinaki, O., Klini, A., Polychronaki, M., Mavrikakis, N.C., Siderakis, K.G., Koudoumas, E., Pylarinos, D., Thalassinakis, E., Kalpouzos, K., Anglos, D., Assessing the type and quality of high voltage composite outdoor insulators by remote laser-induced breakdown spectroscopy analysis: A feasibility study, *Spectrochimica Acta - Part B Atomic Spectroscopy*, 165, art. no. 105768, (2020).
- 2) Vidakis, N., Petousis, M., Savvakis, K., Maniadi, A., Koudoumas, E., A comprehensive investigation of the mechanical behavior and the dielectrics of pure polylactic acid (PLA) and PLA with graphene (GnP) in fused deposition modeling (FDM), *International Journal of Plastics Technology*, 23 (2), pp. 195-206 (2019).

- 3) Pascariu, P., Vernardou, D., Suchea, M.P., Airinei, A., Ursu, L., Bucur, S., Tudose, I.V., Ionescu, O.N., Koudoumas, E., Tuning electrical properties of polythiophene/nickel nanocomposites via fabrication, (2019) *Materials and Design*, 182, art. no. 108027.
- 4) Panagopoulou, M., Vernardou, D., Koudoumas, E., Tsoukalas, D., Raptis, Y.S., Tungsten doping effect on V₂O₅ thin film electrochromic performance, (2019) *Electrochimica Acta*, 321, art. no. 134743, .
- 5) Louloudakis, D., Thongpan, W., Mouratis, K., Koudoumas, E., Kiriakidis, G., Singjai, P., Novel Spark Method for Deposition of Metal Oxide Thin Films: Deposition of Hexagonal Tungsten Oxide, (2019) *Physica Status Solidi (A) Applications and Materials Science*, 216 (7), art. no. 1800513.
- 6) Pascariu, P., Tudose, I.V., Suchea, M., Koudoumas, E., Fifere, N., Airinei, A., Preparation and characterization of Ni, Co doped ZnO nanoparticles for photocatalytic applications (2018) *Applied Surface Science*, 448, 481-488.
- 7) Drakakis, E., Suchea, M., Tudose, V., Kenanakis, G., Stratakis, D., Dangakis, K., Miaoudakis, A., Vernardou, D., Koudoumas, E., Zinc oxide-graphene based composite layers for electromagnetic interference shielding in the GHz frequency range (2018) *Thin Solid Films*, 651, 152-157.
- 8) D. Louloudakis , D. Vernardou, G. Papadimitropoulos, D. Davazoglou, E. Koudoumas, The effect of growth time and oxygen flow on the properties of electrochromic WO₃ thin layers grown by LPCVD, *Advanced Materials Letters*, 9(8), 578-584 (2018)
- 9) D. Louloudakis, D. Vernardou, G. Papadimitropoulos, D. Davazoglou, E. Koudoumas, Effect of deposition temperature on the electrochromic properties of WO₃ grown by LPCVD, *Advanced Materials Letters*, 9(3), 192-198 (2018)
- 10) Stylianakis, M.M., Konios, D., Viskadouros, G., Vernardou, D., Katsarakis, N., Koudoumas, E., Anastasiadis, S.H., Stratakis, E., Kymakis, E., Ternary organic solar cells incorporating zinc phthalocyanine with improved performance exceeding 8.5% (2017) *Dyes and Pigments*, 146, pp. 408-413.
- 11) Panagopoulou, M., Vernardou, D., Koudoumas, E., Tsoukalas, D., Raptis, Y.S., Oxygen and temperature effects on the electrochemical and electrochromic properties of rf-sputtered V₂O₅ thin films, (2017) *Electrochimica Acta*, 232, pp. 54-63.
- 12) Vernardou, D., Kazas, A., Apostolopoulou, M., Katsarakis, N., Koudoumas, E.
Cationic Effect on the Electrochemical Characteristics of the Hydrothermally Grown Manganese Dioxide, (2017) *Journal of Electronic Materials*, 46 (4), pp. 2232-2240.
- 13) Drakakis, E., Kymakis, E., Tzagkarakis, G., Louloudakis, D., Katharakis, M., Kenanakis, G., Suchea, M., Tudose, V., Koudoumas, E., A study of the electromagnetic shielding mechanisms in the GHz frequency range of graphene based composite layers (2017) *Applied Surface Science*, 398, pp. 15-18.
- 14) Panagopoulou, M., Vernardou, D., Koudoumas, E., Katsarakis, N., Tsoukalas, D., Raptis, Y.S., Tunable properties of Mg-doped V₂O₅ thin films for energy applications: Li-ion batteries and electrochromics (2017) *Journal of Physical Chemistry C*, 121 (1), pp. 70-79.
- 15) Vernardou, D., Marathanou, I., Katsarakis, N., Koudoumas, E., Kazadojev, I.I., O'Brien, S., Pemble, M.E., Povey, I.M., Capacitive behavior of Ag doped V₂O₅ grown by aerosol assisted chemical vapour deposition (2016) *Electrochimica Acta*, 196, pp. 294-299.

- 16)** Louloudakis, D., Vernardou, D., Spanakis, E., Suchea, M., Kenanakis, G., Pemble, M., Savvakis, K., Katsarakis, N., Koudoumas, E., Kiriakidis, G., Atmospheric pressure chemical vapor deposition of amorphous tungsten doped vanadium dioxide for smart window applications (2016) *Advanced Materials Letters*, 7 (3), pp. 192-196. 5 citations. IF 0.41
- 17)** Liaros, N., Couris, S., Koudoumas, E., Loukakos, P.A., Ultrafast Processes in Graphene Oxide during Femtosecond Laser Excitation, (2016) *Journal of Physical Chemistry C*, 120 (7), pp. 4104-4111.
- 18)** Vernardou D., Louloudakis D., Spanakis E., Katsarakis N., Koudoumas E., "Functional properties of APCVD VO₂ layers", *International Journal of Thin Films Science and Technology* 4, 187 (2016).
- 19)** Suchea M., M. Vamvakaki, D. Louloudakis, M. Sigalas, N. Katsarakis, D. Vernardou, E. Koudoumas, "Influence of thickness on the properties of TiO₂ and Ti(Nb)O₂ thin films", *Studia Universitatis Babes-Bolyai Chemia* 61, 97-106 (2016).
- 20)** Vernardou, D., Louloudakis, D., Katsarakis, N., Koudoumas, E., Kazadojev, I.I., O'Brien, S., Pemble, M.E., Povey, I.M., Electrochemical evaluation of vanadium pentoxide coatings grown by AACVD (2015) *Solar Energy Materials and Solar Cells*, 143, pp. 601-605.
- 21)** Vernardou, D., Psifis, K., Louloudakis, D., Papadimitropoulos, G., Davazoglou, D., Katsarakis, N., Koudoumas, E., Low pressure CVD of electrochromic WO₃ at 400°C (2015) *Journal of the Electrochemical Society*, 162 (9), pp. H579-H582.
- 22)** Psifis, K., Louloudakis, D., Vernardou, D., Spanakis, E., Papadimitropoulos, G., Davazoglou, D., Katsarakis, N., Koudoumas, E., Effect of O₂ flow rate on the electrochromic response of WO₃ grown by LPCVD (2015) *Physica Status Solidi (C) Current Topics in Solid State Physics*, 12 (7), pp. 1011-1015.
- 23)** Suchea, M., Tudose, I.V., Tzagkarakis, G., Kenanakis, G., Katharakis, M., Drakakis, E., Koudoumas, E., Nanostructured composite layers for electromagnetic shielding in the GHz frequency range (2015) *Applied Surface Science*, 352, pp. 151-154.
- 24)** Louloudakis, D., Vernardou, D., Spanakis, E., Dokianakis, S., Panagopoulou, M., Raptis, G., Aperathitis, E., Kiriakidis, G., Katsarakis, N., Koudoumas, E., Effect of O₂ flow rate on the thermochromic performance of VO₂ coatings grown by atmospheric pressure CVD (2015) *Physica Status Solidi (C) Current Topics in Solid State Physics*, 12 (7), pp. 856-860.
- 25)** Christou, K., Louloudakis, D., Vernardou, D., Katsarakis, N., Koudoumas, E., One-pot synthesis of WO₃ structures at 95 °C using HCl (2015) *Journal of Sol-Gel Science and Technology*, 73 (3), pp. 520-526.
- 26)** Vernardou, D., Louloudakis, D., Spanakis, E., Katsarakis, N., Koudoumas, E., Amorphous thermochromic VO₂ coatings grown by APCVD at low temperatures (2015) *Advanced Materials Letters*, 6 (7), pp. 660-663.
- 27)** Vernardou, D., Apostolopoulou, M., Louloudakis, D., Katsarakis, N., Koudoumas, E., Electrochemical Performance of Vanadium Oxide Coatings Grown using Atmospheric Pressure CVD (2015) *Chemical Vapor Deposition*, 2015, 21, 369.
- 28)** Apostolopoulou, M., Louloudakis, D., Vernardou, D., Katsarakis, N., Koudoumas, E., Kiriakidis, G., Study of the pH effect on the properties of the hydrothermally grown V₂O₅ (2015) *Thin Solid Films*, 594, pp. 338-342.
- 29)** Christou, K., Louloudakis, D., Vernardou, D., Savvakis, C., Katsarakis, N., Koudoumas, E., Kiriakidis, G., Effect of solution chemistry on the characteristics of

hydrothermally grown WO₃ for electroactive applications (2015) *Thin Solid Films*, 594, pp. 333-337.

30) Louloudakis, D.; Vernardou, D.; Spanakis, E.; Dokianakis, S.; Panagopoulou, M.; Raptis, G.; Aperathitis, E.; Kiriakidis, G.; Katsarakis, N.; Koudoumas, E., Effect of O₂ flow rate on the thermochromic performance of VO₂ coatings grown by atmospheric pressure CVD, *Physica Status Solidi (c)*, 2015, 12, 856.

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33) Vernardou, D.; Louloudakis, D.; Spanakis, E.; Katsarakis, N.; Koudoumas, E. Electrochemical properties of vanadium oxide coatings grown by hydrothermal synthesis on FTO substrates, *E. New Journal of Chemistry*, 2014, 38, 1959.

34) Vernardou, D.; Apostolopoulou, M.; Louloudakis, D.; Katsarakis, N.; Koudoumas, E., Hydrothermal growth and characterization of shape-controlled NH₄V₃O₈, *New Journal of Chemistry*, 2014, 38, 2098.

35) Vernardou, D.; Apostolopoulou, M.; Louloudakis, D.; Katsarakis, N.; Koudoumas, E., Hydrothermally grown β-V₂O₅ electrode at 95 °C, *Journal of Colloid and Interface Science*, 2014, 424, 1.

36) Vernardou, D.; Apostolopoulou, M.; Louloudakis, D.; Spanakis, E.; Katsarakis, N.; Koudoumas, E.; McGrath, J.; Pemble, M.E., Electrochemical properties of opal-V₆O₁₃ composites, *Journal of Alloys and Compounds*, 2014, 586, 621.

37) Vernardou, D.; Drosos, H.; Fasoulas, J.; Koudoumas, E.; Katsarakis, N. Photocatalytic properties of chemically grown vanadium oxide at 65 °C, *N. Thin Solid Films*, 2014, 555, 169.

38) Liaros N., Koudoumas E., Couris S, Broadband near infrared optical power limiting of few layered graphene oxides, *Applied Physics Letters*, 2014, 104, Article number 191112.

39) Kenanakis, G., Katsarakis, N., Koudoumas, E., Influence of precursor type, deposition time and doping concentration on the morphological, electrical and optical properties of ZnO and ZnO:Al thin films grown by ultrasonic spray pyrolysis, (2014) *Thin Solid Films*, 555, pp. 62-67.

40) Vernardou, D.; Spanakis, E.; Katsarakis, N.; Koudoumas, E. Electrodeposition of V₂O₅ using ammonium metavanadate at room temperature, *E. Advanced Materials Letters*, 2014, 5, 569.

41) E. Spanakis, M. Pervolaraki, J. Giapintzakis, N. Katsarakis, E. Koudoumas, D. Vernardou, Effect of gold and silver nanoislands on the electrochemical properties of carbon nanofoam, *Electrochimica Acta*, (2013), 111 (30) pp 305-313

42) Louloudakis, D.; Vernardou, D.; Spanakis, E.; Katsarakis, N.; Koudoumas, E., Electrochemical properties of vanadium oxide coatings grown by APCVD on glass substrates, *SURFACE & COATINGS TECHNOLOGY* (2013), 230, pp 186-189

43) Liaros, N., Iliopoulos, K., Stylianakis, M.M., Koudoumas, E., Couris, S., Optical limiting action of few layered graphene oxide dispersed in different solvents (2013), *Optical Materials*, 36 (1), pp 112-117

44) Stratakis, E., Stylianakis, M.M., Koudoumas, E., Kymakis, E., Plasmonic organic photovoltaic devices with graphene based buffer layers for stability and efficiency enhancement (2013), *Nanoscale* 5 (10), pp. 4144-4150

- 45) Vernardou, D., Sapountzis, A., Spanakis, E., Kenanakis, G., Koudoumas, E., Katsarakis, N., Electrochemical activity of electrodeposited V₂O₅ coatings (2013) *Journal of the Electrochemical Society* 160 (1), pp. D6-D9
- 46) Stylianakis, M.M., Stratakis, E., Koudoumas, E., Kymakis, E., Anastasiadis, S.H., Organic bulk heterojunction photovoltaic devices based on polythiophene-graphene, composites (2012) *ACS Applied Materials and Interfaces*, 4 (9), pp. 4864-4870.
- 47) D. Vernardou, D. Louloudakis, E. Spanakis, N. Katsarakis, E. Koudoumas, Electrochemical properties of vanadium oxide coatings grown by hydrothermal synthesis on FTO substrates, *New Journal of Chemistry*. DOI:10.1039/C3NJ00931A
- 48) D. Louloudakis, D. Vernardou, E. Spanakis, N. Katsarakis, E. Koudoumas Thermochromic vanadium oxide coatings grown by APCVD at low temperatures, , *Physics Procedia*. <http://dx.doi.org/10.1016/j.phpro.2013.07.055>
- 49) D. Vernardou, A. Sapountzis, E. Spanakis, G. Kenanakis, E. Koudoumas, N. Katsarakis, Electrochemical activity of electrodeposited vanadium oxide coatings grown at room temperature, *Journal of the Electrochemical Society*. DOI:10.1149/2.054301jes
- 50) H. Drosos, A. Sapountzis, E. Koudoumas, N. Katsarakis, D. Vernardou, Effect of current density on electrodeposited vanadium oxide coatings, *Journal of the Electrochemical Society*. DOI:10.1149/2.017208jes
- 51) Electrochemical properties of amorphous WO₃ coatings grown on polycarbonate by Aerosol – Assisted CVD, D. Vernardou, H. Drosos, E. Spanakis, E. Koudoumas, N. Katsarakis, M.E. Pemble, *Electrochimica Acta*. <http://dx.doi.org/10.1016/j.electacta.2012.01.035>
- 52) Kymakis, E., Stylianakis, M.M., Spyropoulos, G.D., Stratakis, E., Koudoumas, E., Fotakis, C. , Spin coated carbon nanotubes as the hole transport layer in organic photovoltaics, (2012) *Solar Energy Materials and Solar Cells*, 96 (1), pp. 298-301.
- 53) “Photoluminescence study of ZnO structures grown by aqueous chemical growth”, Kenanakis, G., Androulidaki, M., Vernardou, D., Katsarakis, N., Koudoumas, E., (2011), *Thin Solid Films*, 10.1016/j.tsf.2011.04.123
- 54) “Spin coated graphene films as the transparent electrode in organic photovoltaic devices”, Kymakis, E., Stratakis, E., Stylianakis, M.M., Koudoumas, E., Fotakis, C., (2011), *Thin Solid Films*, 10.1016/j.tsf.2011.04.208
- 55) “A study of the electrochemical performance of vanadium oxide thin films grown by atmospheric pressure chemical vapour deposition”, Vernardou, D., Paterakis, P., Drosos, H., Spanakis, E., Povey, I.M., Pemble, M.E., Koudoumas, E., Katsarakis, N. (2011) *Solar Energy Materials and Solar Cells*, 95 (10), pp. 2842-2847.
- 56) “Electrochemical and photocatalytic properties of WO₃ coatings grown at low temperatures”, Vernardou, D., Drosos, H., Spanakis, E., Koudoumas, E., Savvakis, C., Katsarakis, N., *Journal of Materials Chemistry*, (2011), 21 (2), pp. 513-517
- 57) “Plasmonic organic photovoltaic devices on transparent carbon nanotube films”, Kymakis, E., Stratakis, E., Koudoumas, E., Fotakis, C., (2011), *IEEE Transactions on Electron Devices* 58 (3), art. no. 5701662, pp. 860-864
- 58) “Hydrothermal growth of V₂O₅ photoactive films at low temperatures”, Vernardou, D., Spanakis, E., Kenanakis, E., Koudoumas, E., Katsarakis, N., (2010), *Materials Chemistry and Physics* 124 (1), pp. 319-322
- 59) “Hydrothermal growth of V₂O₅ photoactive films at low temperatures”, Vernardou, D., Spanakis, E., Kenanakis, G., Koudoumas, E., Katsarakis, N., (2010) *Materials Chemistry and Physics*, 124, 1, pp. 319-322.

- 60)** “Zinc oxide films chemically grown onto rigid and flexible substrates for TFT applications”, Suchea, M., Kornilios, N., Koudoumas, E., (2010) *Physica B: Condensed Matter*, 405 (20), pp. 4389-4392.
- 61)** “Modelling the photovoltaic potential of a site”, by Mavromatakis F., Makrides G., Georghiou G., Pothrakis A., Franghiadakis Y., Drakakis E., Koudoumas E., *Renewable Energy* (2010), 35, (7), pp. 1387-1390.
- 62)** “Growth of c-axis oriented ZnO nanowires from aqueous solution: The decisive role of a seed layer for controlling the wires' diameter”, Kenanakis, G., Vernardou, D., Koudoumas, E., Katsarakis, N., *Journal of Crystal Growth* (2009), 311 (23-24), pp. 4799-4804.
- 63)** “Influence of solution chemistry on the properties of hydrothermally grown TiO₂ for advanced applications”, D. Vernardou, K. Vlachou, E. Spanakis, E. Stratakis, N. Katsarakis, E. Kymakis and E. Koudoumas, *Catalysis Today*, (2009) 144 (1-2), pp. 172-176.
- 64)** “Photoinduced hydrophilic and photocatalytic response of hydrothermally grown TiO₂ nanostructured thin films”, D. Vernardou, G. Kalogerakis, E. Stratakis, G. Kenanakis, E. Koudoumas and N. Katsarakis, *Solid State Sciences* (2009), 11 (8), pp. 1499-1502
- 65)** “Nonlinear optical response of titanium oxide nanostructured thin films”, K. Iliopoulos, G. Kalogerakis, D. Vernardou, N. Katsarakis, E. Koudoumas, S. Couris, *Thin Solid Films* (2009), 518 (4), pp. 1174-1176
- 66)** “One pot direct hydrothermal growth of photoactive TiO₂ films on glass», Vernardou, D., Stratakis, E., Kenanakis, G., Yates, H.M., Couris, S., Pemble, M.E., Koudoumas, E., Katsarakis, N., *Journal of Photochemistry and Photobiology A: Chemistry* (2009), 202 (2-3), pp. 81-85
- 67)** “Influence of thickness and growth temperature on the optical and electrical properties of ZnO thin films”, Suchea, M., Christoulakis, S., Katharakis, M., Vidakis, N., Koudoumas, E., *Thin Solid Films* (2009), 517 (15), pp. 4303-4306.
- 68)** “Polymer-nanotube composite mats with improved field emission performance and stability”, Stratakis, E., Kymakis, E., Spanakis, E., Tzanetakos, P., Koudoumas, E., (2009) *Physical Chemistry Chemical Physics* 11 (4), pp. 703-709
- 69)** “Carbon nanotube doping of P3HT : PPCBM photovoltaic devices”, Kymakis, E., Kornilios, N., Koudoumas, E. (2008), *Journal of Physics D: Applied Physics* 41 (16), art. no. 165110.
- 70)** “Light-induced reversible hydrophilicity of ZnO structures grown by aqueous chemical growth”, Kenanakis, G., Stratakis, E., Vlachou, K., Vernardou, D., Koudoumas, E., Katsarakis, N., (2008), *Applied Surface Science* 254 (18), pp. 5695-5699.
- 71)** “Influence of solution concentration and temperature on the aqueous chemical growth of ZnO structures”, D. Vernardou, G. Kenanakis, K. Vlachou, E. Koudoumas, G. Kiriakidis, A. Vairis, and N. Katsarakis, *phys. stat. sol. (c)*, 1-5 (2008) / DOI 10.1002/pssc.200778879.
- 72)** “Structural and morphological properties of thin ZnO films grown by pulsed laser deposition”, Suchea, M., Christoulakis, Tibeica C., S., Katharakis, M., Kornilios, N., Efthimiopoulos T., Koudoumas E., (2008), *Appl. Surf. Sci.*, 254 (17), pp. 5475-5480
- 73)** “CaS:Eu,Sm and CaS:Ce,Sm films grown by embedding active powder into an inert matrix”, Suchea, M., Christoulakis, S., Androulidaki M., Koudoumas, E., (2008) *Mat. Sci. and Eng. B.*, 150 (2), pp. 130-134

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129) “Double resonant four-wave sum mixing near an autoionizing state”, E. Koudoumas and T. Efthimiopoulos, 9th International Symposium on Gas Flow and Chemical Lasers, September 21-25 1992, Heraklion, Crete, Greece.

130) “Laser-induced continuum structure and third harmonic generation in calcium”, O. Faucher, D. Charalambidis, E. Koudoumas and C. Fotakis, 9th International Symposium on Gas Flow and Chemical Lasers, September 21-25 1992, Heraklion, Crete, Greece.

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National conferences

1. “Surface ZnO microstructures manufactured by PLD method”, M. Katharakis, S. Christoulakis, N. Katsarakis, M. Koudoumas, M. Sucheas, K. Savvakis, T. Efthimiopoulos, G. Kiriakidis, 20th Panhellenic Conference on Solid State Physics & Materials Science (XX ΠΣΣΥ), September 26-29, 2004, Ioannina – Greece.

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3. “Applications of fullerenes in optoelectronics: optical limiting action of C_{60} in solution”, E. Koudoumas, S. Couris and S. Leach, 10th Greek Conference on Lasers and their Applications, September 22-24, 1994, Ioannina, Greece.

4. “Generation of coherent tunable VUV radiation - physical processes”, E. Koudoumas, T. Efthimiopoulos, 8th Greek Conference on Lasers and their Applications, April 25-27, 1990, Heraklion, Crete, Greece.

5. “The effect of an autoionizing state on the double resonant four wave sum mixing in Hg”, E. Koudoumas, T. Efthimiopoulos, 9th Greek Conference on Lasers and their Applications, May 28-30, 1992, Athens, Greece.