

# Andreas Othonos

Professor

University of Cyprus  
Department of Physics  
P.O. Box 20537  
Nicosia  
Cyprus

Last Updated: Feb 2024

Tel 357 22 892827  
Fax 357 22 892821  
<http://ultrafast.ucy.ac.cy/>

## Education

- 1986-1990 **Ph.D. in Physics**  
Academic Institution: Department of Physics; University of Toronto.  
Field of Physics: Semiconductor and Laser physics.  
Thesis Title: Correlation of hot carrier and hot phonon kinetics in Germanium and  $\text{Ge}_{1-x}\text{Si}_x$  alloys on a picoseconds timescale.
- 1984-1986 **M. Sc. in Physics**  
Academic Institution: Department of Physics; University of Toronto.  
Field of Physics: High energy physics.  
Thesis Title: Excited States of the  $D^0$  Charmed meson.
- 1980-1984 **B. Sc. in Physics**  
Academic Institution: Department of Physics; University of Toronto.  
Field of Physics: Theoretical/Mathematical Physics.

## Academic History

- 2011-pres. **Professor**  
Academic Institution: Department of Physics; University of Cyprus.
- 2003-2011 **Associate Professor**  
Academic Institution: Department of Physics; University of Cyprus.
- 1996-2003 **Assistant Professor**  
Academic Institution: Department of Physics; University of Cyprus.
- 1992-1996 **Staff Research Scientist**  
Academic Institution: University of Toronto – The Ontario Laser and Lightwave Research Center (OLLRC).
- 1990-1992 **Postdoctoral Fellow/Scientist**  
Academic Institution: University of Toronto – The Ontario Laser and Lightwave Research Center (OLLRC).

## Teaching Experience

- 1996-pres. Academic Institution: Department of Physics; University of Cyprus  
Graduate courses:  
Classical Electrodynamics (PHY634),  
Ultrashort Laser Pulse Phenomena (PHY651),  
Ultrafast Spectroscopy of Semiconductors (PHY654),  
Fiber Optics and Applications in Telecommunications (PHY652)
- Undergraduate courses:  
Solid State Laboratory (PHY302), Electronics (PHY341)

1990-1995 Academic Institution: University of Toronto - Department of Physics (OLLRC)  
Undergraduate Laboratories, Laser physics, Fiber optics and telecommunications

## Research Supervision

Academic Institution: University of Cyprus - Department of Physics

2009-2014 Konstantina Rousogenous MSc "THz spectroscopy on Silicon nanofilms"  
2008-2012 Demetra Tsokkou; PhD "*Ultrafast carrier dynamics of semiconducting oxide nanowires*"  
2009-2011 Polina Papageorgiou; MSc "*Optical characterization and synthesis of InS nanowires*"  
2009-2011 Konstantinos Papatrionos; MSc "*Study Fiber Bragg Grating*"  
2009-2011 George Georgiou; MSc "*Time resolved Terahertz spectroscopy of nanowires*"  
2009-2012 Marianna Perdiki; MSc "*Synthesis and carrier dynamics in CuO NWs*"

2006-2008 Vasiliki Paraskeva; MSc "*Optical properties of ultrathin polysilicon using ultrafast pulses*"  
2006-2008 Demetra Tsokkou; MSc "*Ultrafast Spectroscopy in ZnSe nanowires and silicon nanocrystals*"  
2006-2008 Alexandros Emporas; MSc "*The study of the effect of silicon nanocrystals size using ultrafast laser pulses*".  
2004-2006 Loukas Loumakos; MSc "*Simulation dynamics in ultrathin polysilicon*"  
2005-2007 Elena Vahou; MSc "*Optical properties of direct and indirect gap semiconductor thin films using ellipsometry*"  
2005-2007 Andreas Andoniou; MSc "*Determination of the Index of refraction of ultrathin polycrystalline silicon and nanocrystals*"  
2005-2007 Konstandina Kanari; MSc "*Optical Properties of carbon nanotubes in P3HT*"  
2003-2005 Katerina Adamou; MSc "*Temporal control of ultrafast pulses*"  
2003-2005 Charalambos Koutsides; MSc "*Temperature effects in fiber Bragg gratings*"  
2002-2006 Emmanouil Lioudakis; PhD "*Ultrafast carrier dynamics of polycrystalline silicon samples: Effect of implantation, annealing and thickness*"  
2000-2002 Ioannis Karmiotis; MSc "*Ultrafast Laser Pulse Propagation in Optical Material*"

Post-Doctoral Fellows  
2006-2008 Emmanouil Lioudakis; Project ERYΞE/0406/01 -"Study of Silicon Nanostructures"  
2008-2010 Haris Tsankaris; Project "Innovative Optoelectronic and Acoustic Sensing Technologies for Large Scale Forest Fire Long Term Monitoring"  
2012-2014 Demetra Tsokkou; Project "*Ultrafast spectroscopy in organic semiconductors*"

## Research Interest

Ultrafast and Optical Spectroscopy; Semiconductor Physics, Nanoelectronic Structures and Devices, Nanophotonics, Laser Physics, Quantum Optics, Fiber Bragg Gratings.

## Research Funding

2019-2023 Cyprus Research Promotion Foundation; New Strategic Infrastructure Units-Young Scientists Infrastructure/2016/0043- "DegradationLab" Participating partner  
2019-2023 Cyprus Research Promotion Foundation; New Strategic Infrastructure Units-Young Scientists- "Nanosonics" Participating partner  
2010-2015 Molecular Electronics and Photonics, Cyprus Research Promotion Foundation Funding (Total project budget: €2,000,000), Participating partner  
2008-2013 Cyprus Research Promotion Foundation; Infrastructure Research Program: ERYNE/0508/02 – "Fabrication of fiber Bragg Gratings using femtosecond UV laser pulses" – Principal Investigator. Total support to the laboratory € 394,000.  
2006-2011 Cyprus Research Promotion Foundation; Infrastructure Research Program: Infrastructure Research Program –ERYNE/0506/02 – "Spatial-temporal probing nanostructures using Ultrafast Laser Techniques" – Principal Investigator. Total support to the laboratory € 470,000.

- 2006-2011 Cyprus Research Promotion Foundation; Infrastructure Research Program Infrastructure Research Program – ERYAN/0506/04 – “Study of ultrafast carrier dynamics in InGaN Semiconductors” – Principal Investigator. Total support to the laboratory € 220,000.
- 2006-2009 Cyprus Research Promotion Foundation; Infrastructure Research Program: Infrastructure Research Program – ERYΞE/0406/01 – “Study of Silicon Nanostructures” Principal Investigator. Total support € 150,000.
- 2004-2009 Cyprus Research Promotion Foundation; Infrastructure Research Program: ERYNE/0504/06 – “Research Center of Ultrafast Science” – Principal Investigator. Total support to the laboratory € 470,000.
- 2004-2007 Cyprus Research Promotion Foundation; IPE Research Program – TEXNO/0503/02 “Micromachining with Ultrafast Laser Pulses” – Principal Investigator. Total support to the laboratory € 90,000.
- 2004-2007 University of Cyprus Research Grant – Levendis Research Program: “THz Ultrafast Pulse Shaping” – Principal Investigator. Total support to the laboratory € 150000.
- 2002-2004 Cyprus Research Promotion Foundation – PENEK “Ultrafast pulse shaping” Principal Investigator. Total support to the laboratory € 75,000.
- 2006-2009 European Union Research Grant: Reference – EU-FIRE  
Title – “Innovative Optoelectronic and Acoustic Sensing Technologies for Large Scale Forest Fire Long Term Monitoring-*EU-FIRE*.” Participants: D'Appolonia, Italian Aerospace Research Centre, Brüel & Kjær, and University of Cyprus; Total support to the laboratory € 140000.
- 2002-2005 European Union Research Grant: Reference – IST-2000-29573  
Title – “Fabrication Organization and use of Memories obtained by Focused Ion Beams-*FORUM FIB*.” Participants; Institut National Des Sciences Appliquees De Lyon, Universita Degli Studi Di Roma “Tor Vergata”, Stmicroelectronics, Forschungszentrum Juelich GMBH, National Center of Scientific Research “Demokritos” and University of Cyprus. Total support to the laboratory € 150000.

## Scientific Consulting

- 2010-pres **QP Semiconductor Inc** – Development of Bragg grating using femtosecond laser pulses.
- 2001-2004 **K2 Optronics Inc** (1288 Hannerwood Ave, Sunnyvale, CA) –Development of semiconductor laser for telecommunication purposes.
- 1994-1996 **Hughes Leitz**: Supervising a group of scientists and engineers for studying and developing a diode-pumped Nd:YAG laser system.
- 1993-1996 **QP Semiconductor Inc**: Phase mask technology in fiber optics and optical waveguides
- 1991-1992 **IBM Research Division** (Quebec, Canada): Writing electronic circuits using lasers "an alternative technique for printing electronic circuits on a micron scale".
- 1992-1994 **Ontario Hydro** (*The nuclear power plant research division*) Optical non invasive techniques for detecting vibration problems in the nuclear fuel bundles.
- 1993-1994 **Xerox Canada**: Design and development of an Optical Parametric Oscillator.
- 1990-1991 **Lumonics Ltd** (Ottawa, Canada): overcoming various problems in their Excimer and Dye laser systems.
- 1991-1994 **Dehavilland Ltd (Boeing of Canada Ltd)**: Jet Exhaust studies using thermal imaging system for detecting and eliminating temperature problems in one of their production aircraft.

## Scientific and Professional Activities

Reviewer	Applied Physics Letters, Journal of Applied Physics, Journal of Quantum Electronics, Optics Communications, Optics Express, Journal of Lightwave Technology
Editorial	Member of the Editorial Board "Advanced Materials Letters" Member of the Editorial Board "Journal of Nanoscience Letters"
Conferences	Organizing in 2008 the Virtual Conference on Nanoscale Science and Technology, Session: Characterization of Nanostructured Materials for Solar and Optoelectronic Devices.  Micro&Nano2007, Micro&Nano2010 – 3 <sup>rd</sup> and 4 <sup>th</sup> international conference on Micro-Nanoelectronics and Nanotechnology and MEMS - Member of the International Scientific Committee.  XXI Hellenic <i>Conference</i> of Solid State Physics and Material Science, 2005, Nicosia, Cyprus. Member of the Organization Committee. Chairman of the Program Committee.
2010, 2006	Member, Faculty Recruitment Scientific Selection Committee for tenure-Track Faculty Positions in the Department of Physics
2001- pres.	Member of M.Sc. and Ph.D. Examination Committees
1993-1999	Development of professional simulation software " <i>SuperBragg</i> " for simulating fiber Bragg grating response; sold by QP Semiconductor Inc.

## Scientific Collaborators

2008-pres.	Prof. Matthew Zervos – University of Cyprus, Nanostructured Materials and Devices Laboratory, Department of Mechanical and Manufacturing Engineering. Project; Synthesis and Characterization of Semiconducting Nanowires.
2007-pres.	Prof. Harry Ruda – University of Toronto, Centre of Advanced Nanotechnology Project; Investigation of novel Nanowires and Nanostructures.
2002-pres.	Dr. Androula Nassiopoulou – Institute of Microelectronics, NCSR "Demokritos"; Project; Investigation of Silicon based Nanocrystals and Nanostructures.
1993-1996	Prof. Andreas Mandelis –University of Toronto, Center for Advance Difusion wave Technologies, Project: Photothermal characterization of semiconductors.
1996-1999	Prof. Din Ping Tsai – National Taiwan University. Project; Near field optical characterization fiber Bragg Gratings and Sensors.

## Administration and Other Activities

2010-2012	Elected Chairman of Department of Physics – University of Cyprus
2006-2008	Elected Chairman of Department of Physics – University of Cyprus
2008-2010	Elected Vice Chairman of Department of Physics – University of Cyprus
2004-2006	Elected Vice Chairman of Department of Physics – University of Cyprus
2000-2002	Elected by the Senate as a member of "Technical & Planning Committee"
1999-2001	Elected member of Council of the Faculty of Pure and Applied Sciences
1999-2010	Coordinator of Graduate program in Physics – University of Cyprus



## Andreas Othonos

Professor of Physics, [University of Cyprus](#)  
Verified email at ucy.ac.cy - [Homepage](#)

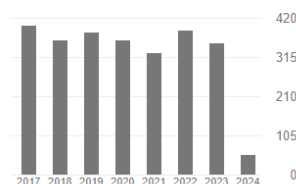
[Ultrafast Spectroscopy](#) [Semiconductor Physics](#) [Nanoscience](#)



Cited by

VIEW ALL

	All	Since 2019
Citations	8388	1863
h-index	34	17
i10-index	94	28



Public access

VIEW ALL

Public access	Count
2 articles	14 articles
not available	available

Based on funding mandates

TITLE	CITED BY	YEAR
<a href="#">Fibre bragg gratings</a> A Othonos, K Kalli, D Pureur, A Mugnier Wavelength Filters in Fibre Optics, 189-269	4343 *	2006
<a href="#">Probing ultrafast carrier and phonon dynamics in semiconductors</a> A Othonos Journal of applied physics 83 (4), 1789-1830	588	1998
<a href="#">Ultrafast dynamics of nonlinear absorption in low-temperature-grown GaAs</a> SD Benjamin, HS Loka, A Othonos, PWE Smith Applied Physics Letters 68 (18), 2544-2546	135	1996
<a href="#">Superimposed multiple Bragg gratings</a> AS Othonos, X Lee	128	1994
<a href="#">Distributed strain measurement based on a fiber Bragg grating and its reflection spectrum analysis</a> M LeBlanc, SY Huang, M Ohn, A Guemes, A Othonos Optics letters 21 (17), 1405-1407	111	1996
<a href="#">A multiplexed Bragg grating fiber laser sensor system</a> AT Alavie, SE Karr, A Othonos, RM Measures IEEE Photonics Technology Letters 5 (9), 1112-1114	106	1993
<a href="#">Optical properties of organic semiconductor blends with near-infrared quantum-dot sensitizers for light harvesting applications</a> G Itskos, A Othonos, T Rauch, SF Tedde, O Hayden, MV Kovalenko, ... Advanced Energy Materials 1 (5), 802-812	102	2011
<a href="#">Raman spectroscopy using a fiber optic probe with subwavelength aperture</a> DP Tsai, A Othonos, M Moskovits, D Uttamchandani Applied physics letters 64 (14), 1768-1770	97	1994
<a href="#">Novel and improved methods of writing Bragg gratings with phase masks</a>	80	1995

## LIST OF PUBLICATIONS

### I. Book Authoring:

1. Fiber Bragg Gratings: Fundamentals and Applications in Telecommunications and Sensing, Authors: A. Othonos and K. Kalli, Artech House, ISBN 0-89006-344-3 (1999).

### II. Published Papers in Refereed Scientific Journals and Invited Chapters:

150. Boosting the Photoluminescence Efficiency of InAs Nanocrystals Synthesized with Aminoarsine via a ZnSe Thick-Shell Overgrowth Dongxu Zhu, Houman Bahmani Jalali, Gabriele Saleh, Francesco Di Stasio, Mirko Prato, Nefeli Polykarpou, Andreas Othonos, Sotirios Christodoulou, Yurii P. Ivanov, Giorgio Divitini, Ivan Infante, Luca De Trizio, and Liberato Manna, *Advanced Materials*, 35, 2303621 (2023)
149. The Impact of Ligand Removal on the Optoelectronic Properties of Inorganic and Hybrid Lead Halide Perovskite Nanocrystal Films Paris Papagiorgis, Marios Sergides, Andreas Manoli, Modestos Athanasiou, Caterina Bernasconi, Fedros Galatopoulos, Apostolos Ioakeimidis, Constantinos Nicolaidis, Epameinondas Leontidis, Theodossis Trypiniotis, Stelios Choulis, Maryna I. Bodnarchuk, Maksym V. Kovalenko, Andreas Othonos, and Grigorios Itskos, *Advanced Optical Materilas*, 2301501 (2023).
148. Critical and controversial issues pertaining to the growth and properties of Cu<sub>2</sub>O in the context of energy conversion Eleni Prountzou; Andreas Ioannou; Dimitrios Sapalidis; Eleni Pavlidou; Maria Katsikini; Andreas Othonos; Matthew Zervos, *APL Energy* 1, 036102, (2023).

147. p-Type Iodine-Doping of Cu<sub>3</sub>N and Its Conversion to  $\gamma$ -CuI for the Fabrication of  $\gamma$ -CuI/Cu<sub>3</sub>N pn Heterojunctions A Tilemachou, M Zervos, A Othonos, T Pavloudis, J Kioseoglou, *Electronic Materials* 3 (1), 15-26 (2022)
146. Low-Threshold, Highly Stable Colloidal Quantum Dot Short-Wave Infrared Laser enabled by Suppression of Trap-Assisted Auger Recombination, N Taghipour, GL Whitworth, A Othonos, M Dalmases, S Pradhan, Y Wang, *Advanced Materials* 34 (3), 2107532 (2022)
145. Optical Transitions in Silver Indium Selenide Nanocrystals: Implications for Light-Emitting and Light-Imaging Applications A Zacharia, P Papagiorgis, O Yarema, A Moser, A Othonos, M Luisier, *ACS Applied Nano Materials* 4 (10), 11239-11248 (2021)
144. Controlling the optical properties of nanostructured oxide-based polymer films NC Angastiniotis, S Christopoulos, KC Petalidou, AM Efstathiou, *Scientific Reports* 11 (1), 1-8 (2021)
143. Surface Functionalization of CsPbBr<sub>3</sub> Nanocrystals for Photonic Applications A Manoli, P Papagiorgis, M Sergides, C Bernasconi, M Athanasiou, *ACS Applied Nano Materials* 4 (5), 5084-5097 (2021)
142. Impact of Oxygen on the Properties of Cu<sub>3</sub>N and Cu<sub>3-x</sub>N<sub>1-x</sub>O<sub>x</sub> M Zervos, A Othonos, T Pavloudis, S Giaremias, J Kioseoglou, K Mavridou, *The Journal of Physical Chemistry C* 125 (7), 3680-3688 (2021)
141. Exciton-Ligand Interactions in PbS Quantum Dots Capped with Metal Chalcogenides P Papagiorgis, D Tsokkou, K Gahlot, L Protesescu, A Manoli, ... *The Journal of Physical Chemistry C* 124 (50), 27848-27857
140. Ultrafast dynamics and short-lived carriers in Cu nitride and oxynitride layers M Sergides, M Zervos, A Othonos *Journal of Applied Physics* 128 (12), 125704 (2020)
139. Single-exciton gain and stimulated emission across the infrared telecom band from robust heavily doped PbS colloidal quantum dots S Christodoulou, I Ramiro, A Othonos, A Figueroba, M Dalmases, *Nano letters* 20 (8), 5909-5915 (2020)
138. Observation of the Direct Energy Band Gaps of Defect-Tolerant Cu<sub>3</sub>N by Ultrafast Pump-Probe Spectroscopy M Zervos, A Othonos, M Sergides, T Pavloudis, J Kioseoglou *The Journal of Physical Chemistry C* 124 (6), 3459-3469 (2020)
137. High-Temperature Pb Doping of SnO<sub>2</sub> and Growth Limitations of Pb<sub>x</sub>Sn<sub>1-x</sub>O<sub>2</sub> Nanowires Versus Low-Temperature Growth of Pb<sub>x</sub>Sn<sub>1-x</sub>O for Energy Zervos, A Othonos, E Tanasã, E Vasile *The Journal of Physical Chemistry C* 123 (26), 16415-16423 (2019)
136. Unraveling the radiative pathways of hot carriers upon intense photoexcitation of lead halide perovskite nanocrystals P Papagiorgis, A Manoli, S Michael, C Bernasconi, MI Bodnarchuk, *ACS nano* 13 (5), 5799-5809 (2019)
135. High-Temperature Pb Doping of SnO<sub>2</sub> and Growth Limitations of Pb<sub>x</sub>Sn<sub>1-x</sub>O<sub>2</sub> Nanowires Versus Low-Temperature Growth of Pb<sub>x</sub>Sn<sub>1-x</sub>O for Energy Storage and Conversion M Zervos, A Othonos, E Tanasã, E Vasile *Journal of physical chemistry* (2019)
134. Epitaxial highly ordered Sb: SnO<sub>2</sub> nanowires grown by the vapor liquid solid mechanism on m-, r- and a-Al<sub>2</sub>O<sub>3</sub> M Zervos, N Lathiotakis, N Kelaidis, A Othonos, E Tanasa, E Vasile *Nanoscale Advances* 1 (5), 1980-1990 (2019).
133. SnO<sub>2</sub>/PbO<sub>x</sub> (x = 1, 2) Core-Shell Nanowires and Their Growth on C-Fiber Networks for Energy Storage, Matthew Zervos, Andreas Othonos, Eugenia Tanasa, Eugeniu Vasile, Epameinondas Leontidis, *The Journal of Physical Chemistry C*, 122, 25813-25821, (2018).
132. Doping and Conductivity Limitations in Sb:SnO<sub>2</sub> Nanowires Grown by the Vapor Liquid Solid Mechanism, Matthew Zervos, Andreas Othonos, Eugenia Tanasa, Eugeniu Vasile, *The Journal of Physical Chemistry C* 122, 22709-22716, (2018).
131. Efficient Optical Amplification in the Nanosecond Regime from Formamidinium Lead Iodide Nanocrystals, Paris Papagiorgis, Andreas Manoli, Loredana Protesescu, Charis Achilleos, Miltiadis Violaris, Konstantinos Nicolaidis, Theodosios Trypiniotis, Maryna I Bodnarchuk, Maksym V Kovalenko, Andreas Othonos, Grigorios Itskos *ACS Photonics*, 5, 907-917, (2018)
130. Sn:In<sub>2</sub>O<sub>3</sub> and Sn:In<sub>2</sub>O<sub>3</sub>/NiS<sub>2</sub> Core-Shell Nanowires on Ni, Mo Foils and C Fibers for H<sub>2</sub> and O<sub>2</sub> Generation, Matthew Zervos, Epameinondas Leontidis, Eugenia Tanasã, Eugeniu Vasile, Andreas Othonos *The Journal of Physical Chemistry C*, 121, 27839-27848 (2017)

129. The influence of additives in the stoichiometry of hybrid lead halide perovskites, Ignasi Burgués-Ceballos, Achilleas Savva, Efthymios Georgiou, Konstantinos Kapnisis, Paris Papagiorgis, Androniki Mousikou, Grigorios Itskos, Andreas Othonos, Stelios A Choulis *AIP Advances*, 7, 115304 (2017).
128. Long-lived hot carriers in formamidinium lead iodide nanocrystals, Paris Papagiorgis, Loredana Protesescu, Maksym V Kovalenko, Andreas Othonos, Grigorios Itskos *The Journal of Physics Chemistry C*, 121, 12434-12440, (2017)
127. Photovoltaic limitations of BODIPY:fullerene based bulk heterojunction solar cells, Derya Baran, Sachetan Tuladhar, Solon P Economopoulos, Marios Neophytou, Achilleas Savva, Grigorios Itskos, Andreas Othonos, Donal DC Bradley, Christoph J Brabec, Jenny Nelson, Stelios A Choulis *Synthetic Metals*, 226, 25-30 (2017).
126. Core-shell PbS/Sn: In<sub>2</sub>O<sub>3</sub> and branched PbIn<sub>2</sub>S<sub>4</sub>/Sn: In<sub>2</sub>O<sub>3</sub> nanowires in quantum dot sensitized solar cells, Matthew Zervos, Eugenia Vasile, Eugeniu Vasile, Andreas Othonos *Nanotechnology* 28, (2016)
125. Pb doping of In<sub>2</sub>O<sub>3</sub> and their conversion to highly conductive PbS/In<sub>2</sub>S<sub>3</sub>-3xO<sub>3x</sub> nanowires with infrared emission, M Zervos, A Othonos, V Gianetta, AG Nassiopoulou, *Materials Letters* 166, 129-132, (2016).
124. The Influence of Doping on the Optoelectronic Properties of PbS Colloidal Quantum Dot Solids, P Papagiorgis, A Stavrinadis, A Othonos, G Konstantatos, G Itskos *Scientific reports* 6, (2016).
123. Current Transport Properties of CuS/Sn: In<sub>2</sub>O<sub>3</sub> Versus CuS/SnO<sub>2</sub> Nanowires and Negative Differential Resistance in Quantum Dot Sensitized Solar Cells, M Zervos, E Vasile, E Vasile, E Karageorgou, A Othonos *The Journal of Physical Chemistry C* (2015).
122. Förster resonant energy transfer from an inorganic quantum well to a molecular material: Unexplored aspects, losses, and implications to applications, G Itskos, A Othonos, SA Choulis, E Iliopoulos, *The Journal of chemical physics* 143 (21), 214701 (2015)
121. Electrical, structural, and optical properties of sulfurized Sn-doped In<sub>2</sub>O<sub>3</sub> nanowires, M Zervos, CN Mihailescu, J Giapintzakis, A Othonos, A Travlos, *Nanoscale research letters* 10 (1), 1-6 (2015)
120. Ultrafast Spectroscopy and Red Emission from β-Ga<sub>2</sub>O<sub>3</sub>/β-Ga<sub>2</sub>S<sub>3</sub> Nanowires, KM Othonos, M Zervos, C Christofides, A Othonos, *Nanoscale research letters* 10 (1), 1-7 (2015)
119. Sn doped β-Ga<sub>2</sub>O<sub>3</sub> and β-Ga<sub>2</sub>S<sub>3</sub> nanowires with red emission for solar energy spectral shifting, M Zervos, A Othonos, V Gianneta, A Travlos, AG Nassiopoulou, *Journal of Applied Physics* 118 (19), 194302 (2015)
118. Surface passivation and conversion of SnO<sub>2</sub> to SnS<sub>2</sub> nanowires, M Zervos, CN Mihailescu, J Giapintzakis, A Othonos, CR Luculescu *Materials Science and Engineering: B* 198, 10-13 (2015)
117. Photophysics of PbS Quantum Dot Films Capped with Arsenic Sulfide Ligands, Demetra Tsokkou, Paris Papagiorgis, Loredana Protesescu, Maksym V. Kovalenko, Stelios A. Choulis, Constantinos Christofides, Grigorios Itskos and Andreas Othonos *Advanced Energy Materials*, Volume 4, Issue 7, May 13, 2014
116. Ultraviolet emission from low resistance Cu<sub>2</sub>SnS<sub>3</sub>/SnO<sub>2</sub> and CuInS<sub>2</sub>/Sn: In<sub>2</sub>O<sub>3</sub> nanowires, E Karageorgou, M Zervos, A Othonos *Applied Physics Letters APL Materials*, 2, 116107 (2014); <http://dx.doi.org/10.1063/1.4901295>
115. Broad compositional tunability of indium tin oxide nanowires grown by the vapor-liquid-solid mechanism, M. Zervos, C. N. Mihailescu, J. Giapintzakis, C. R. Luculescu, N. Florini, Ph. Komninou<sup>4</sup>, J. Kioseoglou<sup>4</sup> and A. Othonos *Applied Physics Letters APL Materials* 2, 056104 (2014); <http://dx.doi.org/10.1063/1.4875457>
114. Ultrafast transient spectroscopy and photoluminescence properties of V<sub>2</sub>O<sub>5</sub> nanowires, A. Othonos, C.Christofides and, M.Zervos *Applied Physics Letters*, 103, 133112 doi: 10.1063/1.4823506 (2013);
113. Concentration and excitation effects on the exciton dynamics of poly(3-hexylthiophene)/PbS quantum dot blend films, D Tsokkou, G Itskos, S Choulis, M Yarema, WHeiss and A Othonos *Nanotechnology* 24, 235707 (2013)
112. Size-Dependent Charge Transfer in Blends of PbS Quantum Dots with a Low-Gap Silicon-Bridged Copolymer, G. Itskos, P. Papagiorgis, D. Tsokkou, A. Othonos, F. Hermerschmidt, S. P. Economopoulos, M. Yarema, W. Heiss and S. Choulis *Advanced Energy Material*, DOI:10.1002 (2013)
111. Ultrafast pulsed laser deposition of carbon nanostructures: Structural and optical characterization, M. Pervolaraki, Ph. Komninou, J. Kioseoglou, A. Othonos, J. Giapintzakis *Applied Surface Science*, 278, p.101 (2013).



110. Structural properties of SnO<sub>2</sub> nanowires and the effect of donor like defects on the charge distribution, M. Zervos, A. Othonos, D. Tsokkou, J. Kioseoglou, E. Pavlidou and P. Komninou *Physica Status Solidi A*, **210** p.226 (2013).
109. Zinc nitride nanowires: growth, properties and oxidation, M. Zervos, C. Karipi and A. Othonos *Nanoscale Research Letters* **8**, p.221 (2013).
108. Excitation dynamics of a low bandgap silicon-bridged dithiophene copolymer and its composites with fullerenes, Othonos, Andreas, Itskos, Grigorios, Neophytou, Marios, Choulis, Stelios A *Applied Physics Letters*, **100** Issue: 15 Article Number: 153303 DOI: 10.1063/1.3703601 Published: APR 9 2012
107. Carrier dynamics and conductivity of SnO<sub>2</sub> nanowires investigated by time-resolved terahertz spectroscopy, Tsokkou, Demetra; Othonos, Andreas; Zervos, Matthew *Applied Physics Letters*, **100**, Issue: 13 Article Number: 133101 DOI: 10.1063/1.3698097 Published: MAR 26 2012
106. The nitridation of ZnO nanowires, Zervos, Matthew; Karipi, Chrystalla; Othonos, Andreas *Nanoscale Research Letters* **7** Article Number: 175 DOI: 10.1186/1556-276X-7-175 Published: MAR 8 2012
105. A systematic study of the nitridation of SnO<sub>2</sub> nanowires grown by the vapor liquid solid mechanism, Zervos, Matthew; Othonos, Andreas *Journal of Crystal Growth* **340** Issue: 1 Pages: 28-33 DOI: 10.1016/j.jcrysgr.2011.11.063 Published: FEB 1 2012
104. Synthesis of hybrid polymethacrylate-noble metal (M = Au, Pd) nanoparticles for the growth of metal-oxide semiconductor nanowires, Zervos, M.; Demetriou, M.; Krasia-Christoforou, T; Othonos, Andreas *RSC ADVANCES* Volume: 2 Issue: 10 Pages: 4370-4376 DOI: 10.1039/c2ra01072k Published: 2012
103. Gallium hydride vapor phase epitaxy of GaN nanowires, M. Zervos and A. Othonos, doi:10.1186/1556-276X-6-262, *Nanoscale Research Letters* (2011).
102. An investigation into the conversion of In<sub>2</sub>O<sub>3</sub> to InN nanowires P. Papageorgiou, M. Zervos and A. Othonos' doi:10.1186/1556-276X-6-311, *Nanoscale Research Letters* (2011).
101. Enhanced growth and photoluminescence properties of Sn<sub>x</sub>N<sub>y</sub> (x > y) nanowires grown by halide chemical vapor deposition, M. Zervos and A. Othonos *Journal of Crystal Growth* August, **316**, p.25 (2011).
100. An investigation into the conversion of β-Ga<sub>2</sub>O<sub>3</sub> to GaN nanowires using NH<sub>3</sub> and H<sub>2</sub>: Steady state and time resolved photoluminescence, A. Othonos, M. Zervos and C. Christofides *Journal of Applied Physics*, **108**, p.124319 (2010).
99. Carrier dynamics in β-Ga<sub>2</sub>O<sub>3</sub> nanowires, A. Othonos, M. Zervos and C. Christofides *Journal of Applied Physics*, **108**, p.124302 (2010).
98. Hydride assisted growth of GaN nanowires on Au/Si(001) via the direct reaction of Ga with NH<sub>3</sub> and H<sub>2</sub>, M. Zervos and A. Othonos, *Journal of Crystal Growth*, **312**, p.2631 (2010).
97. Carrier dynamics in indium sulphide nanowires grown by chemical vapor deposition, A. Othonos and M. Zervos *Physica Status Solidi A* **207**, p. 2258 (2010).
96. High yield-low temperature growth of indium sulphide nanowires via chemical vapor deposition, M. Zervos, P. Papageorgiou and A. Othonos *Journal of Crystal Growth*, **312**, p.656 (2010).
95. Carrier relaxation dynamics in Sn<sub>x</sub>N<sub>y</sub> nanowires grown by chemical vapor deposition, A. Othonos, M. Zervos *Journal of Applied Physics*, **106**, 114303 (2009).
94. Ultrafast time-resolved spectroscopy of In<sub>2</sub>O<sub>3</sub> nanowires, D Tsokkou, A. Othonos, and M. Zervos *Journal of Applied Physics*, **106**, 084307 (2009).
93. Defect states of chemical vapor deposition grown GaN nanowires: Effects and mechanisms in the relaxation of carriers, D. Tsokkou, A. Othonos, and M. Zervos *Journal of Applied Physics*, **106**, 054311 (2009).
92. Synthesis of Tin Nitride Sn<sub>x</sub>N<sub>y</sub> Nanowires by Chemical Vapour Deposition, M. Zervos, A. Othonos *Nanoscale Res Lett*, **4**, p. 1103, (2009).
91. Influence of surface related states on the carrier dynamics in (Ga,In)N/GaN single quantum wells, A. Othonos, G. Itskos, D. D. C. Bradley, M. D. Dawson, and I. M. Watson *Applied Physics Letters*, **94**, 203102, (2009).
90. Tin Oxide Nanowires: the influence of trap states on ultrafast carrier relaxation, A. Othonos, M. Zervos and Demetra Tsokkou *Nanoscale Res Lett*, **4**, p. 828, (2009).



89. Low Temperature Growth of  $\text{In}_2\text{O}_3$  and InN Nanocrystals on Si(111) via Chemical Vapour Deposition Based on the Sublimation of  $\text{NH}_4\text{Cl}$  in In, M. Zervos, D. Tsokkou, M. Pervolaraki and A. Othonos *Nanoscale Res Lett*, **4**, p. 491 (2009).
88. Femtosecond Carrier Dynamics in  $\text{In}_2\text{O}_3$  Nanocrystals, A. Othonos, M. Zervos and D. Tsokkou *Nanoscale Res Lett*, **4**, p.526, (2009).
87. Ultrafast Carrier Relaxation in InN Nanowires Grown by Reactive Vapor Transport, A. Othonos, M. Zervos and M. Pervolaraki *Nanoscale Res Lett*, **4**, p.122, (2009).
86. Ultrafast time-resolved spectroscopy of ZnSe nanowires: Carrier dynamics of defect-related states, A. Othonos, E. Lioudakis, D. Tsokkou, U. Philipose and Harry E. Ruda *Journal of Alloys and Compounds*, **483**, p. 600, (2009).
85. Ultrafast Dynamics of Localized and Delocalized Polaron Transitions in P3HT/PCBM Blend Materials: The Effects of PCBM Concentration” E. Lioudakis, I. Alexandrou, A. Othonos *Nanoscale Res Lett*, **4** p.1474 (2009).
84. Surface-Related States in Oxidized Silicon Nanocrystals Enhance Carrier Relaxation and Inhibit Auger Recombination, A. Othonos, E. Lioudakis, A.G. Nassiopoulou *Nanoscale Res Lett*, **3**, p. 315, (2008).
83. Femtosecond Dynamics in Single Wall Carbon Nanotube /Poly(3-Hexylthiophene) Composites, E. Lioudakis, A. Othonos, I. Alexandrou *Nanoscale Res Lett*, **3** p. 278 (2008).
82. Transient Photoinduced Absorption in Ultrathin As-grown Nanocrystalline Silicon Films, E. Lioudakis, A. Othonos, Ch. B. Lioutas and N. Vouroutzis *Nanoscale Res Lett*, **3** p.1 (2008).
81. Observation of Quantum Confinement Effects with Ultrashort Excitation in the Vicinity of Direct Critical Points in Silicon Nanofilms, A. Othonos, D. Tsokkou, E. Lioudakis *Research Letters in Physics*, Vol 2008 doi:10.1155/2008/837503, (2008).
80. Optical properties of polyelectrolyte quantum dot multilayer films prepared using the layer by layer self-assembly method, E. Lioudakis, E. Koupanou, C. Kanari, E. Leontidis, and A. Othonos *Journal of Applied Physics*, Vol. **103**, p. 83511 (2008)
79. Direct observation of excitons in polymer/carbon nanotube composites at room temperature: The influence of nanotube concentration, E. Lioudakis, C. Kanari, A. Othonos, I. Alexandrou *Diamond and Related Materials* **17** p.:1600 (2008).
78. Ultrafast carrier dynamics in band edge and broad deep defect emission ZnSe nanowires, A. Othonos, E. Lioudakis, U. Philipose and Harry E. Ruda *Applied Physics Letters*, **91** p. 241113 (2007).
77. Time-resolved ultrafast carrier dynamics in as-grown nanocrystalline silicon films:the effect of film thickness and grain boundaries, E. Lioudakis, A. Othonos *Rapid Research Letters*, **2** p.19 (2008).
76. Optical properties of conjugated poly(3-hexylthiophene)/ 6,6.-phenylC<sub>61</sub>-butyric acid methyl ester composites, E. Lioudakis, A. Othonos I. Alexandrou Y. Hayashi *Journal of Applied Physics*, **102** p. 83104 (2007).
75. The role of surface vibrations and quantum confinement effect to the optical properties of very thin nanocrystalline silicon films, E. Lioudakis, A. Antoniou, A. Othonos, C. Christofides, A.G. Nassiopoulou, Ch. B. Lioutas and N. Frangis *Journal of Applied Physics*, **102** p. 83534 (2007).
74. Ultrafast carrier dynamics on conjugated poly (3-hexylthiophene)/ 6,6.-phenylC<sub>61</sub>-butyric acid methyl ester composites, E. Lioudakis, A. Othonos, I. Alexandrou, Y. Hayashi, *Applied Physics Letters*, **91** p. 111117 (2007).
73. Influence of grain size on ultrafast carrier dynamics in thin nanocrystalline silicon films, E. Lioudakis, A. Othonos, A.G. Nassiopoulou *Applied Physics Letters*, **90** p.191114 (2007).
72. Ultrafast transient photoinduced absorption in silicon nanocrystals: Coupling of oxygen-related states to quantized sublevels, E. Lioudakis, A.G. Nassiopoulou, A. Othonos *Applied Physics Letters*, **90** p. 171103 (2007).
71. Temporal evolution of effects of ultrafast carrier dynamics in  $\text{In}_{0.33}\text{Ga}_{0.67}\text{N}$ : above and near the bandgap, E. Lioudakis, E. Iliopoulos, A. Georgakilas and A. Othonos *Semicond. Sci. Technol.* **22** p.158 (2007).
70. *Quantum confinement and interface structure of large Si nanocrystals embedded in a-SiO<sub>2</sub>*, E. Lioudakis, G. Hadjisavvas, P. C. Kelires, A. G. Nassiopoulou and A. Othonos *Physica* **E38** p.128 (2007).
69. Fibre Bragg Gratings, A. Othonos, K. Kalli, D. Pureur, and A. Mugnier (*Invited Chapter*) in “Wavelength Filters in Fibre Optics”, H. Venghaus, ed. Springer, (2006).

68. Optical and structural properties of implanted Si wafers: effects of implantation energy and subsequent isochronal annealing temperatures, E. Lioudakis, C. Christofides and A. Othonos *Semicond. Sci. Technol.*, **21** p.1059 (2006).
67. Femtosecond Carrier Dynamics in Implanted and highly Annealed Polycrystalline Silicon: the influence of intensity, E. Lioudakis, A.G. Nassiopoulou and A. Othonos *Semicond. Sci. Technol*, **21** p.1041. (2006).
66. Study of Annealing Kinetic Effect and Implantation Energy on Phosphorus-Implanted Silicon Wafers using Spectroscopic Ellipsometry, E. Lioudakis, C. Christofides and A. Othonos *Journal of Applied Physics*, Vol. **99** p.123514 (2006).
65. Probing Carrier Dynamics in Implanted and Annealed Polycrystalline Silicon Thin Films using white light, E. Lioudakis, A.G. Nassiopoulou and A. Othonos *Appl. Phys. Lett.*, Vol. **88** (18), p. 181107, (2006).
64. Ultrafast carrier dynamics in  $\text{In}_x\text{Ga}_{1-x}\text{N}$  (0001) epilayers: effects of high fluence excitation, E. Lioudakis, E. Dimakis, E. Iliopoulos, A. Georgakilas and A. Othonos *Appl. Phys. Lett.*, Vol.**88** (12), p.121128, (2006).
63. *Ellipsometric Analysis of Ion Implanted Polycrystalline Silicon Films before and after annealing*, E. Lioudakis, A. Nassiopoulou and A. Othonos *Thin Solid Films*, Vol. **496** (2), p.235 (2006).
62. Ultrafast Carrier Dynamics in Highly Implanted and Annealed Polycrystalline Silicon Films, E. Lioudakis, A.G. Nassiopoulou, and A. Othonos *Journal of Physics: Conference Series*, Vol. **10**, p.263, (2005).
61. Prism Based Ultrafast Pulse Shaping Apparatus”, E. Lioudakis, K. Adamou and A. Othonos *Opt. Eng.*, Vol. **44** (3), 034203, (2005).
60. Ellipsometry on optically thin palladium films on silicon-based substrate: Effects of low concentration of hydrogen, E. Lioudakis and A. Othonos *Opt. Eng.*, Vol. **44** (2), 023802, February (2005).
59. Effects of Ge concentration, B co-doping and hydrogenation on fiber Bragg grating characteristics, M. Konstantaki, G. Tamiolakis, A. Argyris, A. Othonos and A. Ikiades *Microwave and Optical Technology Letters* **44**, p.148 (2005).
58. Fine art painting characterization by spectroscopic ellipsometry:preliminary measurements on varnish layers, C. Christofides B.Castellon, A.Othonos, K. Polikretia, C.de Deynec *Thin Solid Films*, **455**, p.207 (2004).
57. High Temperature Photomodulated Thermoreflectance Measurements on Phosphorous Implanted and Annealed Silicon Wafers, A. Othonos, C. Christofides, and Efi Loizidou *Journal of Applied Physics*, **92**, p. 7121 (2003).
56. A. Othonos and C. Christofides, Photomodulated Thermoreflectance Detection of Hydrogen at Elevated Temperatures: New Detection Limit, *Applied Physics Letters* **82**, p. 904 (2003).
55. C. Christofides and A. Othonos, and Efi Loizidou, Photomodulated Thermoreflectance Investigation at Elevated Temperatures: Plasma versus Thermal Effect, *Applied Physics Letters* **82**, p.1132 (2003).
54. A. Othonos and C. Christofides, “Spatial Dependence of Ultrafast Carrier Recombination Centers of Phosphorus Implanted and Annealed Silicon Wafers” *Applied Physics Letters* **81**, p.856 (2002).
53. A. Othonos and C. Christofides, “Ultrafast dynamics in phosphorus implanted silicon wafers: the effects of annealing”, *Physical Review B* **66**, 085206 (1-10) (2002).
52. C. Christofides, A. Othonos, and Efi Loizidou, The Influence of Temperature and Modulation Frequency on the Thermal Activation Coupling Term in Laser Photothermal Theory, *Journal of Applied Physics* **92**, p.1280 (2002).
51. K. Kalli, A. Othonos, C. Christofides, “Characterization of reflectivity inversion, a- and b-phase transitions and nanostructure formation in hydrogen activated thin Pd films on silicon based substrates”, *Journal of Applied Physics*, Vol. **91**, p 3829, (2002).
50. C. Christofides, A. Othonos, and K. Kalli, Non Destructive Photothermal Radiometric Measurements of Defects and Metallic Contaminating Impurities on Silicon Wafers in Crystalline Defects and Contamination,III, Edited by B.O. Kolbesen, C. Claeys, R. Stallhofer and F. Tardif, Electrochemical Society Proceeding Volume 2001-29, (2001). (Invited Paper).
49. A. Othonos, K. Kalli, Bragg Gratings in Optical Fibers, (*Invited Chapter*) Handbook of Advanced Electronic and Photonic Materials, Academic Press, ISBN 0-12-513759-1, Vol. **9**, Chapter 9, p.367-480, (2001).

48. A. Othonos, Bragg gratings in optical fibers: Fundamentals and Applications, (Invited Chapter) in "Optical Fiber Sensor Technology", Academic Press ISBN: 0792378520, (2000).
47. A. Othonos, K. Kalli, Din Ping Tsai, Optically thin palladium films on silicon based substrates and nanostructure formation: effects of hydrogen, *Applied Surface Science*, Vol **161**, p.54, (2000).
46. C. Christofides, K. Kalli, and A. Othonos, "Optical Response of Thin Supported Palladium Films to Hydrogen: non-destructive testing for hydrogen detection", Invited short review *Platinum Metals Review*, Vol. **43**, p. 155, (1999).
45. K. Kalli, A. Othonos, C. Christofides, and Tardiff, Non-Destructive Evaluation of Metal contaminated Silicon Wafers Using Radiometric Measurements", *Journal of Applied Physics*, Vol. **86**, p.3064, (1999).
44. A. Othonos, "Probing ultrafast carriers and phonon dynamics in semiconductors", *Invited Review paper, Applied Physics Reviews*, **83**, p.1789-1830, (1998).
43. K. Kalli, A. Othonos, C. Christofides, A. Spetz and L. Lundstrom, Temperature-induced reflectivity changes and activation of hydrogen sensitive optically Thin Palladium Film on Silicon Oxide, *Review of Scientific Instruments*, Vol.**69**, p.3331, (1998).
42. K. Kalli, A. Othonos, C. Christofides, A. Spetz and L. Lundstrom, Photo-modulated Thermo-reflectance Detection of Hydrogen Gas Using Optically Thin Palladium Film on Silicon Oxide, *Review of Scientific Instruments*, Vol. **69**, p.1505, (1998).
41. C. Christofides, A. Othonos, and M. Nestoros, "Photothermal Radiometry in Implanted Semiconductors", in *Progress in Photothermal Phenomena*, Edited by A. Mandelis, Vol. **16** Plenum Press, New York (1998).
40. M. Nestoros, A.G-Llorente, A. Othonos, C. Christofides, J.M. Martinez-Duart, "Photothermal Radiometric and Spectroscopic Measurements on Silicon Nitride Thin Films" *Journal of Applied Physics*, Vol. **82**, p. 6215, (1998).
39. A. Othonos, J. Bismuth, M. Sweeny, A. Kevorkian and J.M. Xu, "Supergrating WDM in Ge-doped SiO<sub>2</sub>/Si Planar Waveguides", *Optical Engineering*, Vol. **37**, p.717, (1998).
38. A. Othonos, "Fiber Bragg gratings" Invited Review paper, *Review of Scientific Instruments*, Vol. **68**, p. 4309-4341, (1997).
37. A. Salnick, A. Mandelis, A. Othonos and C. Christofides, "Noncontact lifetime reconstruction in continuously inhomogeneous semiconductors: Generalized theory and experimental results for ion-implanted Si", *Review of Progress in Quantitative Nondestructive Evaluation*, Vol. **16A**, 371-378 (D. O. Thompson and D. E. Chimenti, Eds., Plenum, New York, (1997).
36. J. Vanniasinkam, M. Munidasa, A. Othonos, M. Kokta and A. Mandelis, "Diagnostics of non-radiative defects in the bulk and surface of Brewster-cut Ti:Sapphire laser materials using photothermal radiometry", *IEEE Journal Quantum Electronics*, Vol. **33**, p.2301, (1997).
35. K. Kalli, A. Othonos, C. Christofides, "Hydrogen Gas Detection via Photothermal Deflection measurement", *Review of Scientific Instruments*, Vol. **66**, p.3552, (1997).
34. A. Othonos, M. Nestoros, D.Palmerio, C.Christofides, R.S. Bes, and J.P. Traverse, "Photothermal radiometry on Nickel (Pigmented Aluminium Oxide) Selective Solar Coatings" *Solar Energy Materials and Solar Cells*, Vol. **51**, p.171, (1997).
33. A. Othonos, A. Salnick, A. Mandelis, and C. Christofides, "Noncontact carrier lifetime depth profiling of ion-implanted Si using photothermal radiometry", *Phys. Stat. Sol. Rapid Research Note*, Vol. **161**, p. R13-R14, (1997).
32. A. Othonos, A. Mandelis, M. Nestoros and C. Christofides, Invited paper "Laser Photothermal Diagnostics of Genuine and Counterfeit British and U.S. Currency Bills" *Optical Engineering* Vol. **36**, p.400, (1997).
31. A. Mandelis, M. Nestoros, A. Othonos, and C. Christofides, "Thermophysical Characterization of Commercial Paper by Use of Laser Infrared Radiometry", *Journal of Pulp and Paper Science* Vol. **23**, p. J108-J112, (1997).
30. A. Mandelis, A. Othonos, C. Christofides and J. Boussey-Said, "Non-contacting measurements of photocarrier lifetimes in bulk-and polycrystalline thin-film Si photoconductive devices by photothermal radiometry", *Journal of Applied Physics*, Vol. **80**, p.5332, (1996).
29. A. Othonos, C. Christofides, and A. Mandelis, "Photothermal Radiometric Investigation of implanted Silicon: The influence of Dose and Thermal Annealing" *Applied Physics Letters*, Vol. **69**, p.821, (1996).
28. A. Othonos, X. Lee and Din P. Tsai, "Spectrally Broadband Bragg grating mirrors for an erbium-doped fiber laser", *Optical Engineering*, Vol. **35**, p.1088, (1996).

27. A. Othonos and C. Christofides, "Multi-wavelength Raman scattering of Phosphorus implanted Silicon wafers", *Nuclear Instruments and methods in Physics Research: Section B: Beam Interaction with Materials and atoms*, Vol. **B117**, p.367 (1996).
26. D. Uttamchandani, A. Othonos, "Phase shifted Bragg gratings formed in optical fibres by thermal post fabrication processing", *Optic Communications*, Vol. **127**, p.200, (1996).
25. S.D. Benjamin, H.S. Loka, A. Othonos, P.W.E. Smith, "Ultrafast dynamics of nonlinear absorption in low-temperature-grown GaAs", *Applied Physics Letters*, Vol. **68**, p.2544, (1996).
24. M. LeBlanc, S.Huag, M. Ohn, R. Measures, A. Guemes, and A. Othonos, "Distributed strain measurement based on a fiber Bragg grating and its reflection spectrum analysis", *Optics Letters*, Vol. **21**, p.1405, (1996).
23. A. Othonos and C. Christofides, "Raman and Photoluminescence Spectroscopy of Implanted Semiconductors" invited chapter in "*Semiconductors and Semimetals*", p. 73-114 (1996).
22. A. Othonos, J. Wheeldon and M. Hubert , "Determination of Erbium concentration in Erbium doped fiber", *Optical Engineering*, Vol. **34**, p.3451, (1995).
21. A. Othonos and C. Christofides, "Photoluminescence Measurements of Phosphorus implanted Silicon wafers", *Journal of Applied Physics*, Vol. **78**, p.796, (1995).
20. A. Othonos and X. Lee, "Narrow linewidth excimer laser for inscribing Bragg gratings in optical fibers", *Review of Scientific Instruments*, Vol. **66**, p.3112 (1995).
19. A. Othonos and X. Lee, "Novel and improved methods for inscribing Bragg gratings with phase masks", *IEEE Photonics Technology Letters*, Vol. **7**, p.1183, (1995).
18. A. Othonos, X. Lee and R.M. Measures, "Superimposed multiple Bragg gratings", *Electronics Letters*, Vol. **30**, p.1972, (1994).
17. C. Christofides, A. Seas and A. Othonos, "Reconstruction Mechanisms in Ion Implanted and Annealed Silicon Wafers", Invited paper in Defect and diffusion Forum, Vol. **117**, p.45, (1995).
16. J. Shen, A. Mandelis, A. Othonos, and Joseph Vanniasinkam, "High Resolution Quadrature Photopyroelectric Spectroscopy of a-Si:H Thin Films deposited on Silicon Wafers", *Applied Spectroscopy*, Vol. **49**, p.819, (1995).
15. A. Othonos, C. Christofides, J. Boussey-Said and M.Bisson, "Raman spectroscopy and spreading resistance analysis of phosphorus implanted and annealed silicon", *Journal of Applied Physics*, Vol. **75**, p. 8032, (1994).
14. S.D. Benjamin, A. Othonos, P.W.E. Smith, "Large Ultrafast Optical Nonlinearities in As-rich GaAs", *Electronic Letters*, Vol. **30**, p.1704, (1994).
13. C. Christofides, A. Othonos, M. Bisson and J. Boussey-Said "Optical spectroscopy on implanted and annealed silicon wafers: Plasma resonance wavelength", *Journal of Applied Physics*, Vol. **75**, p.3377-3384, (1994).
12. D. P.Tsai, A. Othonos, M. Moskovits and D. Uttamchandani "Raman spectroscopy using a fiber optic probe with sub-wavelength aperture", *Applied Physics Letters*, Vol. **64**, p.1768, (1994).
11. D. Uttamchandani, A. Othonos, A.T. Alavie, M. Hubert, "Determination of Erbium concentration in Single mode fiber using confocal microscopy", *IEEE Photonics Technology Letters*, Vol. **6**, p.437, (1994).
10. A.T. Alavie, S.E. Karr, A. Othonos, and R.M. Measures, "A Multiplexed Fiber Laser Strain Sensor System", *IEEE Photonics Technology Letters*, Vol. **5**, p.1112, (1993).
09. A. Mandelis, J. Vanniasinkam, S. Budhudu, A. Othonos and M. Kokta, "Absolute non-radiative energy conversion efficiency spectra in  $Ti^{3+}:Al_2O_3$  crystals measured by non-contact quadrature photopyroelectric spectroscopy", *Physical Review B*, Vol. **48**, p.6808, (1993).
08. A. Othonos, T. Alavie, S. Melle, S. Karr and R. M. Measures, "A Fiber Bragg Grating Laser Sensor", *Optical Engineering*, Vol. **32**, p.2841, (1993).
07. M. Grinberg, A. Mandelis, K. Fjeldsted and A. Othonos, "Spectroscopy and analysis of radiative and non-radiative processes in  $Ti^{3+}:Al_2O_3$  crystals", *Physical Review B*, Vol. **48**, p.5922, (1993).
06. A. Mandelis, M. Munidas, A. Othonos, "Single-Ended Infrared Photothermal Radiometric Measurement of Quantum Efficiency and Metastable Lifetime in Solid-State Laser Materials: The Case of Ruby ( $Cr^{3+}:Al_2O_3$ )", *IEEE J. Quantum Electronics*, Vol. **29**, p.1498, (1993).

05. A. Othonos, H.M. van Driel, Jeff F. Young, and J-M Baribeau, "Free Carrier and Lattice-Heating-Induced Changes to the Reflectivity of Epitaxial GeSi Alloys Following Picosecond Pulse Excitation", *Solid State Communications*, Vol. **82**, p.325, (1992).
04. A. Othonos, H.M. van Driel, J.F. Young and P. J. Kelly, "Correlating hot-phonon and hot-carrier kinetics in Ge on a picosecond timescale", *Physical Review*, Vol. **B43**, p.6682, (1991).
03. J.F. Young, A. Othonos, H.M. van Driel, D.J. Lockwood, J.M. Baribeau, and P.J. Kelly, "Non equilibrium phonon dynamics in Ge and GeSi alloys", *Light scattering in Semiconductor Structures and Superlattices* (1991).
02. H. K. Haugen and A. Othonos, "Fluorescence studies of multiphoton ionization processes: Four-and five-photon ionization of Sr at wavelengths of 558-590 nm" *Physical Review*, Vol. **A39**, p.3392, (1989).
01. H. K. Haugen and A. Othonos, "Fluorescence studies of multi-photon ionization of Sr Production of excited ionic states" *Physical Review (Rapid Communications)*, Vol. **A38**, p.6448, (1988).

### III. Conference Proceedings and talks

55. A. Othonos (*invited talk*), *Ultrafast carrier dynamics in semiconductor nanowires*, Workshop Nanomed on Nanowires, Department of Mechanical Engineering, University of Cyprus, March 23 2011.
54. A. Othonos (*invited talk*), *Ultrafast Spectroscopy in semiconductor nanowires*, Workshop on Nanomaterials for Optoelectronic and Biomedical Applications, Department of Mechanical Engineering, University of Cyprus, February 2011.
53. M. Zervos and A. Othonos, Gallium hydride vapor phase epitaxy of GaN nanowires Fourth International Conference "Micro&Nano2010" on Micro-Nanoelectronics, Nanotechnologies and MEMs NCSR Demokritos, Athens, 12-15 December 2010.
52. M. Zervos and A. Othonos, Gallium hydride vapor phase epitaxy of GaN nanowires: Growth mechanism and optical properties, 5<sup>th</sup> Workshop on Nanowire Growth, CNR building Rome, Italy, 4-5 November 2010.
51. Polina Papageorgiou, M. Zervos, A. Othonos, "An investigation into the conversion of In<sub>2</sub>O<sub>3</sub> to InN nanowires" Fourth International Conference "Micro&Nano2010" on Micro-Nanoelectronics, Nanotechnologies and MEMs NCSR Demokritos, Athens, 12-15 December 2010.
50. A. Othonos, (*invited talk*) 3<sup>rd</sup> North America-Greece-Cyprus Workshop on Paramagnetic Materials, June15-19, Protaras, Cyprus, (2009), *Ultrafast carriers dynamics in nanowires*.
49. Polina Papageorgiou, M. Zervos, A. Othonos, 1st International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems", Rhodes, Greece "Synthesis of indium sulphide nanowires and nanocrystals via chemical vapor deposition and the reaction of In and InCl<sub>3</sub> with H<sub>2</sub>S." 28-03/07/2009.
48. D. Tsokkou, A. Othonos, M. Zervos, 1st International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems", Rhodes, Greece "Synthesis, structural and optical characterization of straight and zigzag GaN nanowires" 28-03/07/2009.
47. A. Othonos (*invited talk*) , E. Lioudakis, and A. G. Nassiopoulou, *OAtube Nanotechnology* 1, 903 (2008). Peer-Review Video Access to Science, Surface states in oxidized silicon nanocrystals and Auger recombination. <http://www.oatube.org/2008/09/aathonos.html>
46. D. Tsokkou, E. Lioudakis, A. Othonos, Non-degenerate Probing of Ultrafast dynamics in nanocrystalline silicon films, 1<sup>st</sup> International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems, Halkidiki, Greece, June 16-18, 2008
45. A. Othonos (*invited talk*), E. Lioudakis, and A. G. Nassiopoulou, Surface-related states in oxidized silicon nanocrystals enhance carrier relaxation and inhibit Auger recombination, VC2008NST – Virtual Conference on Nanoscale Science and Technology, Session: Characterization of Nanostructured Materials for Solar and Optoelectronic Devices, (2008).
44. D. Tsokkou, E. Lioudakis, A. Othonos, UV-Femtosecond Non-Degenerate Transient Spectroscopy in Ultrathin Nanocrystalline Silicon Films, VC2008NST – Virtual Conference on Nanoscale Science and Technology, Session: Characterization of Nanostructured Materials for Solar and Optoelectronic Devices, (2008).

43. A. G. Nassiopoulou, S. Gardelis, V. Gianneta, E. Lioudakis and A. Othonos, Silicon nanocrystals in SiO<sub>2</sub> thin layers: Growth, ordering and light emitting properties, VC2008NST – Virtual Conference on Nanoscale Science and Technology, Session: Characterization of Nanostructured Materials for Solar and Optoelectronic Devices, (2008).
42. I. Alexandrou, E. Lioudakis, C. Markos and A. Othonos, Combination of electrical and optical characterization toward understanding the properties of P3HT-nanotube composites over a wide range of nanotube concentrations, VC2008NST – Virtual Conference on Nanoscale Science and Technology, Session: Characterization of Nanostructured Materials for Solar and Optoelectronic Devices, (2008).
41. A. Emporas, E. Lioudakis, A. Othonos, and A. G. Nassiopoulou, ISMANAM 14<sup>th</sup> international Symposium on Metastable and Nano Materials, August 26-30 Corfu, Greece, 2007, Ultrafast time-resolved spectroscopy of Si nanocrystals embedded in SiO<sub>2</sub> matrix.
40. C. Kanari, E. Lioudakis, A. Othonos and I. Alexandrou, 18<sup>th</sup> European Conference on Diamond, Diamond-Like Materials, Carbon Nanotubes and Nitrides, Berlin, Germany 9-14 September 2007, Direct observation of excitons in polymer/carbon nanotube composites at room temperature: the influence of nanotube concentration.
39. A. Othonos, E. Lioudakis, D. Tsokkou, U. Philipose and H.E. Ruda, ISMANAM 14<sup>th</sup> international Symposium on Metastable and Nano Materials, August 26-30 Corfu, Greece, 2007, Ultrafast time-resolved spectroscopy of ZnSe nanowires: carrier dynamics of defect-related states.
38. E. Lioudakis, A. Othonos, A. Emporas and A. G. Nassiopoulou, Micro&Nano 2007 International Conference, NCSR Demokritos, Athens 18-21 November 2007, Monitor the properties of silicon nanocrystals embedded in SiO<sub>2</sub> matrix using ultrashort laser pulses.
37. E. Lioudakis, L. Loumakos, A. G. Nassiopoulou and A. Othonos, "Ultrafast phenomena in ultrathin polycrystalline silicon films", XXII Panhellenic Solid State and Material Science conference, University of Patra -Greece, Proceedings conference (2006).
36. L. Loumakos and A. Othonos, "Computational simulation of a model for transport dynamics in group iv materials", XXI Panhellenic Solid State and Material Science conference, Nicosia-Cyprus, Proceedings conference (2005).
35. A. Othonos (*invited talk*), "Ultrafast Carrier Dynamics in Si Nanocrystals", Workshop on Silicon Nanocrystals, FORUM-FIB Fabrication ORganisation and Use of Memories obtained by Focused Ion Beam, (Athens, Dimokritos, March 2005)
34. E. Lioudakis and A. Othonos, "Demonstration of high efficiency arbitrary ultrashort laser pulses using computer-controlled prism-based pulse shaper apparatus", XXI Panhellenic Solid State and Material Science conference, Nicosia-Cyprus, Proceedings conference (2005).
33. E. Lioudakis, C. Christofides and A. Othonos, "Dynamic annealing of phosphorous-implanted silicon wafers using ellipsometric analysis", XXI Panhellenic Solid State and Material Science conference, Nicosia-Cyprus, Proceedings conference (2005).
32. E. Lioudakis and A., XXI Panhellenic Solid State and Material Science conference, held at and funded by the University of Cyprus, Nicosia-Cyprus 28-31 August, 2005 entitled "*Demonstration of high efficiency arbitrary ultrashort laser pulses using computer-controlled prism-based pulse shaper apparatus*"
31. A. Othonos (*invited talk*), "Application of Bragg gratings in fiber lasers", Workshop on Fiber Bragg gratings at K2 Optronics Inc (1288 Hannerwood Ave, Sunnyvale, CA USA (2004).
30. A. Othonos (*invited talk*), "Photosensitivity of fibers and fiber Bragg gratings", Workshop on Fiber Bragg gratings at K2 Optronics Inc (1288 Hannerwood Ave, Sunnyvale, CA USA (2004).
29. E. Lioudakis, A. Nassiopoulou and A. Othonos, "Ultrafast carrier dynamics in highly implanted and annealed polycrystalline silicon films" (Microelectronics Microsystems and Nanotechnology, Journal of Physics-Conference Series, November, 2004).
28. E. Lioudakis, A. Nassiopoulou and A. Othonos, "Ultrafast carrier dynamics in highly implanted and annealed polycrystalline silicon films" (Microelectronics Microsystems and Nanotechnology, November, 2004).
27. C. Christofides, A. Othonos and E. Loizidou "High temperature photomodulated thermoreflectance characterization of implanted and annealed silicon wafers" (Microelectronics Microsystems and Nanotechnology, Journal of Physics-Conference Series, November, 2004).
26. A. Othonos, (*invited talk*) "Optical Spectroscopy in Semiconductor nanostructures" Workshop on Silicon Nanocrystals, FORUM-FIB Fabrication ORganisation and Use of Memories obtained by Focused Ion Beam, Forschungszentrum Jülich GmbH (2002).

25. A. Othonos, (*invited talk*), "Applications of fiber Bragg gratings in sensing" Ministry of Defense, Government of Cyprus (1999).
24. K. Kalli, A. Othonos, C. Christofides and F. Tardiff, "Photothermal Radiometric Measurements on Metal Contaminated Silicon Wafers", X International Conference on Photoacoustic and Photothermal Phenomena, American Institute of Physics Conference Proceeding 463, pp. 386-388, 1998.
23. K. Kalli, A. Othonos and C. Christofides, "Thermal Wave Hydrogen Gas Sensor Characterized via Photothermal Deflection Measurements", X International Conference on Photoacoustic and Photothermal Phenomena, American Institute of Physics Conference Proceeding 463, pp. 247-249, 1998.
22. K. Kalli, A. Othonos, C. Christofides, A. Spetz and I. Lundström, "Room Temperature Hydrogen Gas Detection with Optically Thin Palladium Films on Silicon Oxide using Photo-modulated Thermo-reflectance", X International Conference on Photoacoustic and Photothermal Phenomena, American Institute of Physics Conference Proceeding 463, pp. 220-222, 1998.
21. C. Christofides, M. Nestoros, A. Othonos, A.G. Llorente and J.M. Duart, Photothermal Radiometric and Spectroscopic Characterization of Silicon Nitride Thin Films, X International Conference on Photoacoustic and Photothermal Phenomena, American Institute of Physics Conference Proceeding 463, pp. 411-412, 1998.
20. D. P. Tasi, Y. Chung and A. Othonos, "Study of optical fiber structures using atomic force microscopy and scanning near field optical microscopy", SPIE Proc. 2695, 204 (1996).
19. S.D. Benjamin, H.S. Loka, P.W.E. Smith and A. Othonos, "Ultrafast dynamics in low-temperature-grown GaAs", CLEO 1995 15, 377 (1995).
18. Din Ping Tasi, Y.Chung and A. Othonos, "Subwavelength imaging of an etched fiber with an intracore Bragg grating by apertured photon scanning tunneling microscope", SPIE Proc. 2384, 191 (1995).
17. R.L. Hyde, D. Barbier, A. Kevorkian, J-M. P. Delavaux, J. Bismuth, A. Othonos, M. Sweeny, J.M. Xu, "Optical Amplification, Lasing and Wavelength Division Multiplexing Integrated in Glass Waveguides" Proceeding NATO Advanced Workshop "Future Trend in Microelectronics, Ile de Bandor, France July 1995.
16. J. Bismuth, J.M. Xu, A.Othonos, Superimposed gratings WDM on Ge-Doped silica-on-silicon planar waveguide, CLEO (1996).
15. C.Wallace, D. Uttamchandani, A. Othonos, "Fiber Bragg grating based laser sensor", Conference on "Smart Structures: Optical Instrumentation and Sensing Systems" Munich, June (1995).
14. Din Ping Tasi, Y.Chung and A. Othonos, "Subwavelength imaging of an etched fiber with an intracore Bragg grating by apertured photon scanning tunneling microscope", Photonics West, December (1994).
13. A.T. Alavie, S.E. Karr, A. Othonos and R.M. Measures, "Fiber Laser Sensor Array", in SPIE Proceedings, Vol. 1918, February (1993).
12. S.J. Madsen, M.S. Patterson, B.C. Wilson, S.M. Jaywant and A. Othonos, "Numerical modelling and experimental studies of light pulse propagation in inhomogeneous random media" SPIE proceeding 1888, OE/LASE'93.
11. S.D. Benjamin, A. Othonos and P. W. Smith, "Ultrafast nonlinear optical properties of arsenic rich gallium arsenide", OSA annual meeting MUU9, Toronto, Canada, October (1993).
10. S.E. Karr, A.T. Alavie, S.Huang, A. Othonos and R.M. Measures, "Multiplexing Architectures for Fiber Laser Strain Sensor Employing Intracore Bragg Gratings", SPIE vol. 1796 Fiber optics and Laser Sensors X OE/Fibers, Boston (1993).
09. T. Alavie, A. Othonos, S.Melle, K.Liu and R. Measures, "Bragg Fiber laser Sensor" SPIE Vol. 1795 Fiber optics and Laser Sensors X OE/Fibers, Boston (1992).
08. C. Christofides, A. Mandelis and A. Othonos, "Infrared Absorption Measurements on Thin Films via Photothermal and FTIR Spectroscopies", 37th Canadian Spectroscopy Conference, Canada, (1991).
07. H.M. van Driel, A. Othonos, J.F. Young and P. J. Kelly, "Correlation of hot carrier and hot phonon effects in semiconductors on a picosecond time scale", The international society for optical engineering (SPIE), San Diego, California (1990).



06. A. Othonos, H.M. van Driel, J.F. Young and P. J. Kelly, "Hot-carrier dynamics in Ge on single picosecond timescales: comparing Raman and reflectivity experiments with a self-consistent kinetic model", Solid-State Electronics Proceedings of the International Conference on Hot Carriers, (1990).
05. J. F. Young, K. Wan, A. Othonos, and H.M. van Driel, "Picosecond Raman scattering from non-equilibrium collective modes in diamond and Zinblende semiconductors", SPIE Vol.942 Ultrafast Laser Probe Phenomena in Bulk and Microstructure Semiconductors II, (1988).
04. A. Othonos, H.M. van Driel, J.F. Young and Paul J. Kelly, " Hot-carrier dynamics in Ge on single picosecond timescales: comparing Raman and reflectivity experiments with a self-consistent kinetic model", The sixth international conference on hot carriers in semiconductors, Arizona, (1989).
03. A. Othonos, H.M. van Driel, J.F. Young, D.Lockwood, "Picosecond Raman scattering from non-equilibrium optical phonons in Ge and GeSi alloys", Can. Association of Physics annual meeting, Montreal, (1988).
02. A. Othonos, H.M. van Driel, J.F. Young, D.J. Lockwood, "Picosecond Raman scattering from hot phonons in Ge and GeSi", Fourth Canadian semiconductor technology conference, Ottawa (1988).
01. A. Othonos, and H. K. Haugen, "Fluorescence detection of Sr<sup>+</sup> following Sr multiphoton ionization", Optical society of America annual meeting (1988).