

MARIA KANDYLA

Curriculum Vitae

Current occupation: Senior Researcher, Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Athens, Greece.

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EDUCATION

- Ph.D. in Applied Physics, Harvard University, USA, 2006
- M.Sc. in Applied Physics, Harvard University, USA, 2002
- B.Sc. with Honors in Electrical and Computer Engineering, National Technical University of Athens, Greece, 2000

EMPLOYMENT

- Senior Researcher, Theoretical and Physical Chemistry Institute
National Hellenic Research Foundation (Greece) 2019 – present
- Associate Researcher, Theoretical and Physical Chemistry Institute
National Hellenic Research Foundation (Greece) 2014 – 2019
- Assistant Researcher, Theoretical and Physical Chemistry Institute
National Hellenic Research Foundation (Greece) 2010 – 2014
- Adjunct Lecturer, Physics Department
National Technical University of Athens (Greece) 2009 – 2011
- EU Marie-Curie Postdoctoral Researcher, Physics Department
National Technical University of Athens (Greece) 2008 – 2010
- Postdoctoral Associate, Department of Chemistry
Massachusetts Institute of Technology (MIT, USA) 2006 – 2008
- Research Assistant, School of Engineering and Applied Sciences
Harvard University (USA) 2002 – 2006
- Teaching Fellow, Harvard University (USA) 2001 – 2006

AWARDS AND HONORS

- Paper “Laser induced forward transfer of conducting polymers”, M. Kandyla, S. Chatzandroulis, and I. Zergioti, highlighted by [MIT Technology Review](#) and Physics Today 2012
- Invitation to participate to the World Materials Summit for energy and environmental science Organizers: MRS, EMRS, and CMRS, Washington DC, USA 2011
- Marie Curie International Reintegration Grant, European Union
Fabrication of capacitive biosensors using the Laser Induced Forward Transfer Process 2008 – 2012
- Paper “[Turning aluminum liquid in picoseconds](#)”, M. Kandyla, T. Shih, and E. Mazur selected by Optics and Photonics News (OSA) as one of the 30 most exciting optics papers in 2007 2007
- Graduate Study Fellowship, Harvard University, USA
Watson Endowment Fund and Gordon McKay Endowment 2001 – 2002

- Graduate Study Fellowship, Harvard University, USA
Watson Endowment Fund, Wright Scholarship Fund, and Jennings Scholarship Fund 2000 – 2001
- Undergraduate Study Scholarship, Hellenic Scholarships Foundation, Greece
Highest academic achievement 1998 – 1999
- Undergraduate Study Award, Technical Chamber of Greece
Highest academic achievement 1997 – 1998

EXTERNAL FUNDING

- Hellenic General Secretariat for Research and Technology (Co-PI) 2017 – 2020
Development of nanostructures and nanodevices via laser processing
- EU ERA.Net MED, Hydrogen production through photovoltaic energy (Co-PI) 2016 – 2020
- EU COST Action CA 15107 (Substitute MC member) 2016 – 2020
Multi-functional nano-carbon composite materials network
- Hellenic Foundation for Research and Innovation Ph.D. Fellowships (Supervisor) 2017 – 2019
Development and applications of hybrid nanomaterials and nanostructured surfaces
- EU H2020 Marie Skłodowska-Curie Individual Fellowships (Supervisor) 2016 – 2018
Optical distributed vibrational and acoustic sensing technology
- EU COST Action MPNS 1205 (Substitute MC member) 2013 – 2016
Advances in optofluidics: integration of optical control and photonics with microfluidics
- Hellenic General Secretariat for Research and Technology, KRIPIS-Polynano (Co-PI) 2013 – 2015
Laser fabrication of functionalized nanostructures
- EU ERA.Net Rus, Low-cost and efficient thin-film solar cells (Co-PI) 2013 – 2014
- Latsis Foundation Grant for Scientific Studies (Coordinator) 2013
- Laser nanostructuring of silicon for novel optoelectronic applications
- EU COST Action MP0803, Plasmonic components and devices (Substitute MC member) 2012
- Collaborations with industry

ACADEMIC AND RESEARCH TRAINING

Postdoctoral Researchers

- Massimo Filograno (EU Marie Curie fellow), “Optical distributed vibrational and acoustic sensing technology”, 2016 – 2018.
- Domna Kotsifaki, “Plasmonic optical trapping”, 2013 – 2014.

Ph.D. Theses

- Maria Kanidi (Hellenic ELIDEK fellow), “Development and applications of hybrid nanomaterials and nanostructured surfaces”, University of Patras, Department of Material Science (in progress).

M.Sc. Theses

- George Chatzigiannakis, “Development of optoelectronic devices based on Si/ZnO nano-heterostructures”, National Technical University of Athens, Joint Master’s Program in Materials Science and Technology (in progress).
- Melina Alexiadou, “Development and characterization of nanocomposite ZnO:Au and ZnO:Pd thin-film acetone sensors”, National Technical University of Athens, Joint Master’s Program in Materials Science and Technology, 2014.

- Christos Chatzimanolis, “Development and characterization of thin NiO films with Au nanoparticles and their application as low temperature hydrogen sensors”, National Technical University of Athens, Joint Master’s Program in Materials Science and Technology, 2012.

B.Sc. Theses

- Konstantina Nikolaidou, “Development of nanostructured optoelectronic devices”, National and Kapodistrian University of Athens, Department of Physics, 2018.
- Athanasios Mellos, “Development of thin-film, a-Si:H solar cells using pulsed laser deposition”, National Technical University of Athens, School of Applied Mathematical and Physical Sciences, 2013.

Ph.D. Committees

- External examiner for Yohann Franz, “Polycrystalline silicon waveguides for integrated photonics”, University of Southampton (UK), Faculty of Physical Sciences and Engineering, 2018.
- Ph.D. committee member for Angelos Giannoudakos, “Laser development of thin oxide films and study of their physicochemical properties”, National Technical University of Athens, School of Chemical Engineering, 2017.

RESEARCH EXPERIENCE

National Hellenic Research Foundation, Greece, Principal Investigator

2010 – present

Light-matter interaction
 Laser nanostructuring
 Plasmonics, nanophotonics
 Pulsed laser deposition
 Chemical sensors
 Thin-film optoelectronics
 Spectroscopy

National Technical University of Athens, Greece, Postdoctoral Researcher

2008 – 2010

Advisor: Professor Ioanna Zergioti
 EU Marie Curie International Reintegration Grant ‘Fabrication of capacitive biosensors using the Laser Induced Forward Transfer process’
 Laser printing for organic photovoltaics and chemical/biological microsensors
 Laser development of silicon photonic nanostructures
 Laser conservation of cultural heritage assets

Massachusetts Institute of Technology (MIT), USA, Postdoctoral Associate

2006 – 2008

Advisor: Professor Keith Nelson
 Femtosecond laser systems, ultrafast spectroscopy, optics, and condensed matter physics
 Ultrafast, single-shot, pump-probe spectroscopy
 Irreversible photoinduced phase transitions
 Modeling of experimental results

Harvard University, USA, Ph.D. student

2000 - 2006

Advisor: Professor Eric Mazur
 Femtosecond laser systems, ultrafast spectroscopy, optics, and condensed matter physics
 Ultrafast, broadband, pump-probe spectroscopy
 Dielectric function dynamics

In charge of the spectroscopic ellipsometer facility at Harvard University

TEACHING EXPERIENCE

National Technical University of Athens, Greece

- **Guest Lecturer**, “Seminars in Materials Science and Technology” 2012 – 2018
Joint Master’s Program, Materials Science and Technology
- **Adjunct Lecturer**, “Laboratory Physics” 2009 – 2011
School of Applied Mathematical and Physical Sciences

Harvard University (USA), Teaching Fellow

- “Mathematical Methods in the Sciences”, Applied Mathematics Department Spring 2006
- “Statistical Thermodynamics”, Applied Physics Department Fall 2003
- “Mathematical Methods in the Sciences”, Applied Mathematics Department Spring 2002
- “Quantum Mechanics b”, Physics Department Fall 2001
- “Signals and Systems”, Engineering Department Spring 2001

PROFESSIONAL ACTIVITIES AND SERVICE

Reviews

- Reviewer for research proposals
 - EU Horizon 2020 Information and Communication Technologies, 2018
 - EU ERA.Net Actions, 2017
 - Hellenic General Secretariat for Research and Technology, 2017
 - Hellenic State Scholarships Foundation, 2017
 - EU COST Actions, 2016
- Reviewer for scientific journals: Applied Physics Letters, Scientific Reports, Sensors and Actuators B, Optics Express, Biomedical Optics Express, Optics Letters, ACS Applied Nano Materials, Applied Surface Science, Microporous and Mesoporous Materials, International Journal of Hydrogen Energy, Journal of Alloys and Compounds, Journal of Applied Physics, Materials Letters, Optical Materials Express, Materials Science in Semiconductor Processing, Materials Chemistry and Physics, Optics and Laser Technology, Applied Optics, Applied Physics A, Thin Solid Films, Photonics and Nanostructures – Fundamentals and Applications, Microelectronic Engineering, Journal of Materials Science: Materials in Electronics.

Conference committees

- [Conference on Lasers and Electro-Optics \(CLEO\) 2019](#) Program Committee “Light-matter interactions and materials processing”, Optical Society of America, San Jose, CA USA (May 2019).
- Micro and Nano Engineering (MNE) 2019 Conference International Program Committee, Rhodes, Greece (September 2019).
- European Congress and Exhibition on Advanced Materials and Processes [EUROMAT 2017](#) Managing Committee, Thessaloniki, Greece (September 2017).
- Training Workshop on Materials for Future Energy Sources Organizing Committee, Athens, Greece (December 2017).
- Training Workshop on Advanced Material Characterization Techniques Organizing Committee, Athens, Greece (November 2016).

Editorial positions

- Editorial Board Member, [Euro-Mediterranean Journal for Environmental Integration](#), 2015 – 2017.

Professional Societies

- Board member of the [Hellenic Society for the Science and Technology of Condensed Matter](#), 2014 – 2018.
- Member of the Optical Society (OSA).
- Member of the European Technology Platform [Photonics 21](#).
- Member of the Technical Chamber of Greece.

PUBLICATIONS

A. Peer-reviewed journals

1. M. Kanidi, A. Dagkli, N. Kelaidis, D. Palles, S. Aminalragia-Giamini, J. Marquez-Velasco, A. Colli, A. Dimoulas, E. Lidorikis, M. Kandyla, and E.I. Kamitsos, *Surface-enhanced Raman spectroscopy of graphene integrated in plasmonic silicon platforms with a three-dimensional nanotopography*, [Journal of Physical Chemistry C](#) **123**, 3076 (2019).
2. M. Kanidi, A. Papagiannopoulos, A. Skandalis, M. Kandyla, and S. Pispas, *Thin films of PS/PS-*b*-PNIPAM and PS/PNIPAM polymer blends with tunable wettability*, *Journal of Polymer Science Part B: Polymer Physics*, DOI: [10.1002/polb.24822](#).
3. S.W. Teitelbaum, T. Shin, J.W. Wolfson, Y.-H. Cheng, I.J. Porter, M. Kandyla, and K.A. Nelson, *Real-time observation of a coherent lattice transformation into a high-symmetry phase*, [Physical Review X](#) **8**, 031081 (2018).
4. C. Moslah, M. Kandyla, G.A. Mousdis, G. Petropoulou, and M. Ksibi, *Photocatalytic properties of titanium dioxide thin films doped with noble metals (Ag, Au, Pd, and Pt)*, [Physica Status Solidi A](#) **215**, 1800023 (2018).
5. K. Sahbeni, I. Sta, M. Jlassi, M. Kandyla, M. Hajji, M. Kompitsas, and W. Dimassi, *Annealing temperature effect on the physical properties of titanium oxide thin films prepared by the sol-gel method*, [Journal of Physical Chemistry and Biophysics](#) **7**, 1000257 (2017).
6. M. Alexiadou, M. Kandyla, G. Mousdis, and M. Kompitsas, *Pulsed laser deposition of ZnO thin films decorated with Au and Pd nanoparticles with enhanced acetone sensing performance*, [Applied Physics A](#) **123**, 262 (2017).
7. A. Mellos, M. Kandyla, D. Palles, and M. Kompitsas, *Effects of hydrogen pressure on hydrogenated amorphous silicon thin films prepared by low-temperature reactive pulsed laser deposition*, [Physica Status Solidi C](#) **14**, 1600088 (2017).
8. D.G. Kotsifaki, M. Kandyla, and P.G. Lagoudakis, *Plasmon enhanced optical tweezers with gold-coated black silicon*, [Scientific Reports](#) **6**, 26275 (2016).

9. I. Sta, M. Jlassi, M. Kandyla, M. Hajji, P. Koralli, F. Krout, M. Kompitsas, and H. Ezzaouia, *Surface functionalization of sol-gel grown NiO thin films with palladium nanoparticles for hydrogen sensing*, [International Journal of Hydrogen Energy](#) **41**, 3291 (2016).
10. D.G. Kotsifaki, M. Kandyla, and P.G. Lagoudakis, *Near-field enhanced optical tweezers utilizing femtosecond-laser nanostructured substrates*, [Applied Physics Letters](#) **107**, 211111 (2015).
11. T. Shin, S.W. Teitelbaum, J. Wolfson, M. Kandyla, and K.A. Nelson, *Extended two-temperature model for ultrafast thermal response of band gap materials upon impulsive optical excitation*, [The Journal of Chemical Physics](#) **143**, 194705 (2015).
12. T. Shin, J.W. Wolfson, S.W. Teitelbaum, M. Kandyla, and K.A. Nelson, *Carrier confinement and bond softening in photoexcited bismuth films*, [Physical Review B](#) **92**, 184302 (2015).
13. I. Sta, M. Jlassi, M. Kandyla, M. Hajji, P. Koralli, R. Allagui, M. Kompitsas, and H. Ezzaouia, *Hydrogen sensing by sol-gel grown NiO and NiO:Li thin films*, [Journal of Alloys and Compounds](#) **626**, 87 (2015).
14. D.G. Georgiadou, M. Ulmeanu, M. Kompitsas, P. Argitis, and M. Kandyla, *Scalable fabrication of nanostructured p-Si/n-ZnO heterojunctions by femtosecond-laser processing*, [Materials Research Express](#) **1**, 045902 (2014).
15. I. Sta, M. Jlassi, M. Hajji, M.F. Boujmil, R. Jerbi, M. Kandyla, M. Kompitsas, and H. Ezzaouia, *Structural and optical properties of TiO₂ thin films prepared by spin coating*, [Journal of Sol-Gel Science and Technology](#) **72**, 421 (2014).
16. T. Shin, J.W. Wolfson, S.W. Teitelbaum, M. Kandyla, and K.A. Nelson, *Dual echelon femtosecond single-shot spectroscopy*, [Review of Scientific Instruments](#) **85**, 083115 (2014).
17. M. Kandyla, C. Chatzimanolis-Moustakas, M. Guziewicz, and M. Kompitsas, *Nanocomposite NiO:Pd hydrogen sensors with sub-ppm detection limit and low operating temperature*, [Materials Letters](#) **119**, 51 (2014).
18. M. Kandyla, C. Chatzimanolis-Moustakas, E.P. Koumoulos, C. Charitidis, and M. Kompitsas, *Nanocomposite NiO:Au hydrogen sensors with high sensitivity and low operating temperature*, [Materials Research Bulletin](#) **49**, 552 (2014).
19. I. Fasaki, M. Kandyla, M.G. Tsoutsouva, and M. Kompitsas, *Optimized hydrogen sensing properties of nanocomposite NiO:Au thin films grown by dual Pulsed Laser Deposition*, [Sensors and Actuators B: Chemical](#) **176**, 103 (2013).

20. M. Kandyla, C. Pandis, S. Chatzandroulis, P. Pissis, and I. Zergioti, *Direct laser printing of thin-film polyaniline devices*, [Applied Physics A **110**, 623 \(2013\)](#).
21. D.G. Kotsifaki, M. Kandyla, I. Zergioti, M. Makropoulou, E. Chatzitheodoridis, and A.A. Serafetinides, *Optical tweezers with enhanced efficiency based on laser-structured substrates*, [Applied Physics Letters **101**, 011102 \(2012\)](#).
22. I. Fasaki, M. Kandyla, and M. Kompitsas, *Properties of pulsed laser deposited nanocomposite NiO:Au thin films for gas sensing applications*, [Applied Physics A **107**, 899 \(2012\)](#).
23. M. Kandyla, S. Chatzandroulis, and I. Zergioti, *Laser induced forward transfer of conducting polymers*, [Opto-electronics Review **18**, 345 \(2010\)](#). Also selected for presentation at the [MIT Technology Review](#) and Physics Today.
24. E. Drakaki, M. Kandyla, E. Chatzitheodoridis, I. Zergioti, A.A. Serafetinides, A. Terlixi, E. Kouloumpi, A. Moutsatsou, M. Doulgerides, V. Kantarelou, A. Karydas, and C. Vlachou-Mogire, *Laser studies of metallic artworks*, [Applied Physics A **101**, 349 \(2010\)](#).
25. C.R. Mendonca, M. Kandyla, T. Shih, R.F. Aroca, C.J.L. Constantino, and E. Mazur, *Ultrafast dynamics of bis (n-butylimido) perylene thin films excited by two-photon absorption*, [Applied Physics A **96**, 369 \(2009\)](#).
26. M. Shen, J.E. Carey, C.H. Crouch, M. Kandyla, H.A. Stone, and E. Mazur, *High-density regular arrays of nanometer-scale rods formed on silicon surfaces via femtosecond laser irradiation in water*, [Nano Letters **8**, 2087 \(2008\)](#).
27. M. Kandyla, T. Shih, and E. Mazur, *Turning aluminum liquid in picoseconds*, [Optics and Photonics News **18**, 44 \(2007\)](#).
28. M. Kandyla, T. Shih, and E. Mazur, *Femtosecond dynamics of the laser-induced solid-to-liquid phase transition in aluminum*, [Physical Review B **75**, 214107 \(2007\)](#).
29. S.I. Kudryashov, M. Kandyla, C.A.D. Roeser, and E. Mazur, *Intraband and interband optical deformation potentials in femtosecond-laser excited α -Te*, [Physical Review B **75**, 085207 \(2007\)](#).
30. C.A.D. Roeser, M. Kandyla, A. Mendioroz, and E. Mazur, *Optical control of coherent lattice vibrations in tellurium*, [Physical Review B **70**, 212302 \(2004\)](#).

B. Book chapters

1. C. Moslah, G.A. Mousdis, M. Kandyla, G. Petropoulou, and M. Ksibi, *Photocatalytic properties of TiO₂ thin films doped with noble metals (Ag, Au, Pd, and Pt) for water decontamination*, NATO Science for

Peace and Security Series A: Chemistry and Biology, Nanostructured Materials for the Detection of CBRN (2018); J. Bonca and S. Kruchinin (Eds.), Springer, Dordrecht, The Netherlands, Chapter 6, pp. 71 – 89. ISBN: 978-9402413038.

[DOI: 10.1007/978-94-024-1304-5_6](https://doi.org/10.1007/978-94-024-1304-5_6)

C. Conference proceedings

1. M. Guziewicz, P. Klata, J. Grochowski, K. Golaszewska, E. Kaminska, J.Z. Domagala, B.A. Witkowski, M. Kandyla, Ch. Chatzimanolis, M. Kompitsas, and A. Piotrowska, *Hydrogen sensing properties of thin NiO films deposited by RF sputtering*, [Procedia Engineering 47](#), pp. 746-749 (2012).
2. M. Kandyla, C. Pandis, G. Tsekenis, P. Dimitrakis, S. Chatzandroulis, and I. Zergioti, *Biosensor fabrication by direct laser microprinting*, 2010 Frontiers in Optics/Laser Science Conference, Optics InfoBase Conference Papers 2010, Code 103082 (2010).
3. A.A. Serafetinides, E. Drakaki, E. Fabrikesi, M. Kandyla, I. Zergioti, C. Vlachou-Mogire, R.R. Thomson, A.K. Kar, N. Boukos, and A.G. Karydas, *Comparative evaluation of ultrafast laser beam interactions with the silvering in late Roman coins*, [Proceedings of SPIE 7391, Article No. 73910P](#) (2009).
4. C.R. Mendonca, M. Kandyla, T. Shih, R.F. Aroca, C.J.L. Constantino, and E. Mazur, *Ultrafast reflectivity dynamics in bis (n-butylimido) perylene thin films*, 2008 Conference on Lasers and Electro-Optics & Quantum Electronics and Laser Science Conference [1-9](#), pp. 2459-2460 (2008).
5. M. Kandyla, T. Shih, and E. Mazur, *Femtosecond dynamics of the laser-induced solid-to-liquid phase transition in aluminum*, 2007 Conference on Lasers and Electro-Optics & Quantum Electronics and Laser Science Conference [1-5](#), pp. 2488-2489 (2007).
6. S. Kudryashov, M. Kandyla, C.A.D. Roeser, and E. Mazur, *Transient picometer atomic displacements in a-Te photoexcited by femtosecond laser pulses*, [Proceedings of SPIE 6727, Article No. 672709](#), (2007).

D. Conference presentations

1. M.L. Filograno, G. Piniotis, V. Gikas, V. Papavassiliou, C. Gantes, M. Kandyla, and C. Riziotis, *A hybrid photonic-geodetic approach for the assessment of dynamic testing and structural health monitoring in large-scale infrastructures*, 4th Joint International Symposium on Deformation Monitoring (JISDM), Athens, Greece (May 2019).
2. S. Gardelis, M. Kandyla, K. Nikolaidou, G. Chatzigiannakis, and V. Lykodimos, *Enhancement of responsivity of a ZnO/Si heterojunction formed on laser-microstructured Si substrates*, Micro & Nano 2018 International Conference, Thessaloniki, Greece (November 2018).

3. M. Kanidi, A. Dagkli, M. Kandyla, N. Kelaidis, D. Palles, A. Colli, E. Lidorikis, S. Aminalragia-Giamini, J. Marquez-Velasco, A. Dimoulas, and E.I. Kamitsos, *Surface-enhanced Raman spectroscopy of graphene integrated in plasmonic silicon nanostructures*, 33rd Panhellenic Conference on Solid-State Physics and Materials Science, Nicosia, Cyprus (September 2018).
4. M. Kanidi, A. Papagiannopoulos, A. Skandalis, S. Pispas, and M. Kandyla, *Tunable wettability of thin polymer films on microstructured silicon surfaces*, European Congress and Exhibition on Advanced Materials and Processes (EUROMAT 2017), Thessaloniki, Greece (September 2017).
5. M. Kandyla, C. Moslah, M.M. Islam, G. Petropoulou, G.A. Mousdis, and M. Ksibi, *Photocatalytic properties of TiO₂ thin films doped with noble metals (Ag, Au, Pd, and Pt)*, European Congress and Exhibition on Advanced Materials and Processes (EUROMAT 2017), Thessaloniki, Greece (September 2017).
6. M. Alexiadou, M. Kandyla, G. Mousdis, and M. Kompitsas, *Pulsed laser deposition of ZnO thin films decorated with Au and Pd nanoparticles with enhanced acetone sensing performance*, 6th International Symposium on Transparent Conductive Materials, Chania, Greece (October 2016).
7. M. Kandyla, N. Kelaidis, D. Palles, S.A. Giamini, M. Kanidi, J. Marquez, A. Dimoulas, and E.I. Kamitsos, *Properties of graphene supported on gold-coated black silicon*, 32nd Panhellenic Conference on Solid-State Physics and Materials Science, Ioannina, Greece (September 2016).
8. [Invited] M. Kandyla, *Laser processing of micro/nanodevices*, 1st Panhellenic Conference on Photonics, Athens, Greece (May 2016).
9. N. Latsis, M. Ulmeanu, D. Palles, and M. Kandyla, *Femtosecond-laser nanostructured silicon substrates for UV photodiodes based on p-Si/n-ZnO heterojunctions*, 6th International Conference on Micro-Nanoelectronics, Nanotechnologies and MEMS, Athens, Greece (October 2015).
10. D.G. Kotsifaki, D. Georgiadou, M. Ulmeanu, P.G. Lagoudakis, and M. Kandyla, *Silicon nanostructures for photonic and optoelectronic applications*, European Materials Research Society (E-MRS) 2015 Spring Meeting, Lille, France (May 2015).
11. [Invited] D.G. Kotsifaki, M. Kandyla, and P.G. Lagoudakis, *Tunable femtosecond-pulsed plasmonic nanotweezers based on laser-fabricated substrates*, 11th International Conference of Computational Methods in Sciences and Engineering (ICCMSE), Athens, Greece (March 2015).
12. I. Sta, M. Jlassi, P. Koralli, M. Hajji, M. Kandyla, G. Mousdis, M. Kompitsas, and H. Ezzaouia, *Effect of palladium doping on the structural, optical, and electrical properties of NiO films prepared by spin coating*, 5th International Symposium on Transparent Conductive Materials, Chania, Greece (October 2014).

13. P. Koralli, M. Kandyla, G. Mousdis, M. Sideris, M. Kompitsas, M. Girtan, and D.E. Manolakos, *Sol-gel grown compound ZnO thin films for photovoltaic applications*, 5th International Symposium on Transparent Conductive Materials, Chania, Greece (October 2014).
14. D. Kotsifaki, M. Kandyla, and P. Lagoudakis, *Plasmonic nanotweezers based on femtosecond-laser nanostructured substrates*, 30th Panhellenic Conference on Solid-State Physics and Materials Science, Heraclion, Greece (September 2014).
15. I. Sta, M. Jlassi, M. Kandyla, M. Hajji, P. Koralli, M. Kompitsas, and H. Ezzaouia, *Sensing characteristics of NiO and NiO:Li thin films deposited by the sol-gel method on glass substrates*, 30th Panhellenic Conference on Solid-State Physics and Materials Science, Heraclion, Greece (September 2014).
16. M. Kompitsas, P. Koralli, M. Kandyla, G. Mousdis, and M. Girtan, *Low cost and high efficiency, second generation thin film solar cells*, 10th International Conference on Physics of Advanced Materials (ICPAM-10), Iasi, Romania (September 2014).
17. [Invited] M. Kompitsas, M. Kandyla, P. Koralli, and G. Mousdis, *Thin-film, metal oxide electrochemical gas sensors functionalized with noble metal nanoparticles*, 1st Autumn School on Physics of Advanced Materials (PAMS-1), Iasi, Romania (September 2014).
18. D. Kotsifaki, M. Kandyla, and P. Lagoudakis, *Optical forces in nanostructure-enhanced plasmonic tweezers*, European Materials Research Society (E-MRS) 2014 Spring Meeting, Lille, France (May 2014).
19. D. Kotsifaki, P. Lagoudakis, and M. Kandyla, *Near-field enhanced optical nanotweezers based on laser-structured substrates*, SPIE Photonics Europe, Brussels, Belgium (April 2014).
20. M. Kandyla, A. Mellos, and M. Kompitsas, *Reactive pulsed laser deposition of amorphous hydrogenated silicon thin films for solar cell applications*, SPIE Photonics Europe, Brussels, Belgium (April 2014).
21. D. Kotsifaki, P. Lagoudakis, and M. Kandyla, *Optical nanotrapping*, 2nd International Conference on Research Infrastructures, Athens, Greece (April 2014).
22. A. Mellos, P. Koralli, M. Kandyla, M. Kompitsas, and D.E. Manolakos, *Structural, optical, and electrical properties of hydrogenated Si:H thin films grown by pulsed laser deposition*, XXIX Panhellenic Conference of Solid State Physics and Materials Science, Athens, Greece (September 2013).
23. P. Koralli, M. Kandyla, M. Kompitsas, G. Mousdis, M. Girtan, and D.E. Manolakos, *Laser scribing of thin films for second generation, large scale monolithic photovoltaics*, XXIX Panhellenic Conference of Solid State Physics and Materials Science, Athens, Greece (September 2013).

24. M. Kandyla, A. Mellos, and M. Kompitsas, *Hydrogenated amorphous silicon films grown by pulsed laser deposition*, Conference on Lasers and Electro-Optics Europe (CLEO/Europe-IQEC 2013), Munich, Germany (May 2013).
25. M. Kandyla, C. Chatzimanolis, C. Charitidis, M. Guziewicz, and M. Kompitsas, *Optimized hydrogen sensing properties of PLD-grown nanocomposite NiO:Au and NiO:Pd thin films at ppb-concentration levels*, Conference on Lasers and Electro-Optics Europe (CLEO/Europe-IQEC 2013), Munich, Germany (May 2013).
26. M. Kandyla, C. Chatzimanolis, V. Tsikourkitoudi, I. Kartsonakis, C. Charitidis, M. Kompitsas, and M. Guziewicz, *Structural and mechanical properties of RF magnetron-sputtered NiO thin films and their surface sensitizing by Pd-nanoparticles for hydrogen sensing below the one ppm limit*, 4th International Symposium on Transparent Conductive Materials, Hersonissos, Greece (October 2012).
27. C. Chatzimanolis, M. Kandyla, C. Charitidis, M. Kompitsas, and I. Hotovy, *Growth and characterization of Au-nanoparticles sensitized NiO thin films for hydrogen sensing down to a few ppm*, 4th International Symposium on Transparent Conductive Materials, Hersonissos, Greece (October 2012).
28. C. Popescu, A. Popescu, I. Iordache, M. Kandyla, E. Markou, N. Koralli, D.E. Manolacos, and M. Kompitsas, *Optical sensor based on the surface plasmon resonance of noble metal nanoparticles on the surface of a transparent conductive oxide for cholesterol detection*, 4th International Symposium on Transparent Conductive Materials, Hersonissos, Greece (October 2012).
29. M. Guziewicz, J. Grochowski, K. Golaszewska, J.Z. Domagala, B. Witkowski, E. Kamińska, M. Kandyla, C. Chatzimanolis, M. Kompitsas, and A. Piotrowska, *Hydrogen sensing properties of thin NiO films deposited by RF sputtering*, Eurosensors 2012, Krakow, Poland (September 2012).
30. M. Kandyla, D.G. Kotsifaki, I. Zergioti, M. Makropoulou, E. Chatzitheodoridis, and A.A. Serafetinides, *Optical tweezers with enhanced efficiency based on laser-structured substrates*, European Materials Research Society (E-MRS) 2012 Spring Meeting, Strasbourg, France (May 2012).
31. M. Kandyla, C. Chatzimanolis, V. Tsikourkitoudi, I.A. Kartsonakis, I. Hotovy, C. Charitidis, and M. Kompitsas, *Nanocomposite NiO:Au hydrogen sensors with a few ppm sensitivity and low operating temperature*, European Materials Research Society (E-MRS) 2012 Spring Meeting, Strasbourg, France (May 2012).
32. M. Kandyla, I. Fasaki, and M. Kompitsas, *NiO:Au thin-film hydrogen sensors grown by a two-laser, two-target PLD technique*, International Conference on Laser Ablation, Playa del Carmen, Mexico (November 2011).

33. M. Kandyla, C. Pandis, S. Chatzandroulis, P. Pissis, and I. Zergioti, *Direct laser printing of thin-film polyaniline devices*, International Conference on Laser Ablation, Playa del Carmen, Mexico (November 2011).
34. [Invited] M. Kandyla, I. Kalpyris, M.M. Stylianakis, E. Kymakis, N. Boukos, and I. Zergioti, *Laser fabrication of organic solar cells*, World Materials Summit, Washington, DC USA (October 2011).
35. M. Kandyla, P. Perdika, I. Fasaki, and M. Kompitsas, *Stability and high sensitivity of a compound NiO:Au thin film hydrogen sensor grown by a two-laser, two-target PLD technique*, Euroensors 2011, Athens, Greece (September 2011).
36. I. Kalpyris, M. Kandyla, M.M. Stylianakis, E. Kymakis, N. Boukos, and I. Zergioti, *Laser printing of semiconducting polymer materials for organic solar cells*, International Symposium on Flexible Organic Electronics, Thessaloniki, Greece (July 2011).
37. I. Kalpyris, M. Kandyla, and I. Zergioti, *Laser printing of semiconducting polymer materials for organic solar cells*, European Materials Research Society (E-MRS) 2011 Spring Meeting, Nice, France (May 2011).
38. M. Kandyla, C. Pandis, G. Tsekenis, P. Dimitrakis, S. Chatzandroulis, and I. Zergioti, *Biosensor fabrication by direct laser microprinting*, 2010 Frontiers in Optics/Laser Science Conference, Rochester, NY USA (October 2010).
39. M. Kandyla, G. Tsekenis, P. Dimitrakis, S. Chatzandroulis, C. Pandis, and I. Zergioti, *Fabrication of polyaniline biosensors using the laser induced forward transfer process*, European Materials Research Society (E-MRS) 2010 Spring Meeting, Strasbourg, France (June 2010).
40. M. Kandyla, G. Tsekenis, C. Boutopoulos, S. Chatzandroulis, P. Dimitrakis, and I. Zergioti, *Fabrication of biosensors using the laser induced forward transfer process*, International Conference on Laser Ablation, Singapore (November 2009).
41. E. Drakaki, M. Kandyla, E. Chatzitheodoridis, I. Zergioti, A.A. Serafetinides, A. Terlix, E. Kouloumpi, A. Moutsatsou, M. Doulgierides, V. Kantarelou, A. Karydas, and C. Vlachou-Mogire, *Laser conservation of metallic objects of historical significance*, International Conference on Laser Ablation, Singapore (November 2009).
42. E. Drakaki, B. Klingenberg, I. Tsilikas, E. Zoros, M. Kandyla, and A.A. Serafetinides, *Laser cleaning and characterization of old corroded metal coins*, International Conference on Laser Ablation, Singapore (November 2009).
43. E. Drakaki, B. Klingenberg, I. Tsilikas, E. Zoros, M. Kandyla, and A.A. Serafetinides, *Laser cleaning of corroded metal coins using laser techniques*, International Conference on Laser Technologies and Lasers, Smolyan, Bulgaria (October 2009).

44. E. Drakaki, B. Klingenberg, I. Tsilikas, E. Zoros, M. Kandyla, A.A. Serafetinides, V. Kantarelou, A.G. Karydas, E. Kontou, N. Katsikosta, P. Tselekas, and D. Evgenidou, *Evaluation of laser cleaning of ancient Greek, Roman and Byzantine coins*, European Conference on Applications of Surface and Interface Analysis, Antalya, Turkey (October 2009).
45. E. Drakaki, M. Kandyla, E. Chatzitheodoridis, I. Zergioti, A.A. Serafetinides, A. Terlix, E. Kouloumpi, A. Moutsatsou, M. Doulgierides, V. Kantarelou, A. Karydas, and C. Vlachou-Mogire, *Laser studies of metallic artworks*, European Conference on Applications of Surface and Interface Analysis, Antalya, Turkey (October 2009).
46. A.A. Serafetinides, E. Drakaki, E. Fabrikesi, M. Kandyla, I. Zergioti, C. Vlachou-Mogire, R.R. Thomson, A.K. Kar, N. Boukos, and A.G. Karydas, *Comparative evaluation of ultrafast laser beam interactions with the silvering in late roman coins*, World of Photonics Congress 2009, Munich, Germany (June 2009).
47. T. Shih, C. R. Mendonca, M. Kandyla, , R. F. Aroca, C. J. L. Constantino, and E. Mazur, *Ultrafast reflectivity dynamics in bis (n-butylimido) perylene thin films*, Conference on Lasers and Electro-Optics (CLEO/QELS) 2008, San Jose, CA USA (May 2008).
48. S. Kudryashov, M. Kandyla, C.A.D. Roeser, and E. Mazur, *Transient picometer atomic displacements in a-Te photoexcited by femtosecond laser pulses*, International conference on coherent and nonlinear optics, Minsk, Belarus (June 2007).
49. M. Kandyla, T. Shih, and E. Mazur, *Femtosecond dynamics of the laser-induced solid-to-liquid phase transition in aluminum*, Conference on Lasers and Electro-Optics (CLEO/QELS) 2007, Baltimore, MD USA (May 2007).
50. M. Kandyla, C. Roeser, and E. Mazur, *Ultrafast frequency dynamics of coherent phonons in Te under high density photoexcitation*, Photonics West 2006 conference, San Jose, CA USA (January 2006).
51. J. Orcutt, P. Tayalia, M. Kandyla, and E. Mazur, *Femtosecond time-resolved dual-angle reflectometry to observe laser-induced dynamics in solids*, Gordon Research Conference on Laser Interactions with Materials, Proctor Academy, Andover, NH USA (August 2004).
52. [Invited] C. Roeser, M. Kandyla, and E. Mazur, *Control of coherent optical phonons in tellurium*, Photonics West 2004 Conference, San Jose, CA USA (January 2004).
53. M. Kandyla, C.A.D. Roeser, A.M.-T. Kim, and E. Mazur, *Ultrafast phase transitions in solids*, International School of Atomic and Molecular Spectroscopy, Erice, Italy (May 2003).

SEMINARS (INVITED)

- *Development and applications of laser-processed nanostructures*, Skolkovo Institute of Science and Technology, Russian Federation (November 2018).
- *Development and applications of laser-processed hybrid nanomaterials*, HSSTCM Workshop “Materials at the Nanoscale”, School of Physics, Aristotle University of Thessaloniki, Greece (November 2018).
- *Laser processing of functional micro/nanostructures*, Physics Department, National and Kapodistrian University of Athens, Athens, Greece (November 2016).
- *Ultrafast material dynamics*, 60th Birthday Symposium in Honor of Eric Mazur, Harvard University, Cambridge, MA USA (November 2014).
- *Laser deposition and patterning of thin-film and nanocomposite devices*, Ecole Telecom Paris Tech, Paris, France (March 2012).
- *Laser – matter interaction: spectroscopy, nanotechnology, and biotechnology*, Applied Physics Department, National Technical University of Athens, Athens, Greece (April 2010).
- *Optical excitation and coherent control of high amplitude lattice vibrations in semiconductors*, Laboratoire d’Optique Appliquée, Paris, France (February 2008).
- *Ultrafast dynamics in highly excited materials*, University of Oxford, Oxford, UK (January 2008).
- *An optical study of the solid-to-liquid phase transition in aluminum*, Harvard University, Cambridge, USA (November 2006).
- *Ultrafast dynamics in highly excited semiconductors*, Foundation for Research and Technology – Hellas (FORTH), Heraclion, Greece (January 2005).