

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Zergioti
Name	Ioanna
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CURRENT POSITION(S)

2019 - present	Professor at National Technical University of Athens/ Department of Physics/ School of Applied Mathematical and Physical Sciences/ Zografou Campus/ Athens, Greece
2019 - present	CEO and Co-Founder of PhosPrint IKE (spin off of ICCS / NTUA)/ Lefkippos Technology Park/Agia Paraskevi,Athens, Greece
2018-present	Collaborating researcher Biomedical Research Foundation Academy of Athens (BRFAA)

PREVIOUS POSITION(S)

2013-18	Associate Professor: National Technical University of Athens/ Department of Physics/ School of Applied Mathematical and Physical Sciences/ Zografou Campus/ Athens, Greece.
2008-13	Assistant Professor: National Technical University of Athens/ Department of Physics/ School of Applied Mathematical and Physical Sciences/ Zografou Campus/ Athens, Greece.
2013-16	Visiting Researcher for 8 months, as seconded at Oxford Lasers Ltd, UK , in the framework of Industrial-Academic Partnership (IAPP)
2003-08	Lecturer: National Technical University of Athens/ Department of Physics/ School of Applied Mathematical and Physical Sciences/ Zografou Campus/ Athens, Greece
2001-03	Visiting Associate Professor: University of Crete/ Department of Material Science and Engineering/Crete,Greece
2001-03	Lecturer Researcher: FORTH-IESL, Laser & Applications Division/ Heraklion,Crete, Greece
1999-01	Postdoctoral Researcher: FORTH-IESL, Laser & Applications Division/ Heraklion,Crete, Greece
1998-99	Researcher: PHILIPS CFT/ Parts Processing Department, Laser Materials Processing group/Eindhoven, The Netherlands
1998	Postdoctoral Researcher: Max-Planck-Institut fuer biophysikalische chemie/ Laser Physik department/ Göttingen, Germany
1996	Ph.D. Visiting Researcher: University of California/ Berkeley, Department of Mechanical Engineering/ California, USA
1991-97	Laboratory scientist: FORTH-IESL, Laser & Applications Division/ Heraklion, Crete, Greece

PUBLICATIONS (the last 5 years)

1	“From monolayer to thin films: engineered bandgap in CVD grown $\text{Bi}_2\text{Se}_{(3-x)}\text{S}_x$ topological insulator alloys”, Michal Poplinger, Dimitris Kaltsas, Chen Stern, Pilkhaz Nanikashvili, Adi Levi, Rajesh K Yadav, Sukanta Nandi, Yuxiao Wu, Avinash Patsha, Ariel Ismach, Ashwin Ramasubramaniam, Amaia Pesquera, Amaia Zurutuza, Ioanna Zergioti, Leonidas Tsetseris, Tomer Lewi, Doron Naveh, 2024, . Mater. Chem. C, 2024, 12 , 2723-2729, https://doi.org/10.1039/D3TC03428C
2	“A review on transfer methods of two-dimensional materials”, Ilias Cheliotis, Ioanna Zergioti,11, 2, 2024, 2D Materials, 2D Mater. 11 022004, https://doi.org/10.1088/2053-1583/ad2f43
3	“Conformal laser printing and laser sintering of Ag nanoparticle inks: a digital approach for the additive manufacturing of micro-conductive patterns on patterned flexible substrates”, Kostas Andritsos, Ioannis Theodorakos, Filimon Zacharatos, Ayala Kabla, Semyon Melamed, Fernando de la Vega, Yoann Porte, Patrick Too and Ioanna Zergioti, Virtual and Physical Prototyping, 18(1), e213846, (2023). DOI: 10.1080/17452759.2022.2138462
4	“Digital laser-induced printing of MoS_2 ” Adamantia Logotheti, Adi Levi, Doron Naveh, Leonidas Tsetseris and Ioanna Zergioti, Nanophotonics, 12(8) , pp. 1491-1498 (2023). https://doi.org/10.1515/nanoph-2022-0736
5	“Printed cisplatin on microneedle arrays for transdermal delivery enhances olaparib-induced synthetic lethality in a mouse model of homologous recombination deficiency”, Z. Kanaki, A. Smina, C.

	Chandrinou, F.E. Koukouzeli, Y. Ntounias, N. Paschalidis, I. Cheliotis, M. Makrygianni, J. Ziesmer, G. A. Sotiriou, I. Zergioti, C. Tamvakopoulos, A. Klinakis, International Journal of Bioprinting, 2023, DOI 10.36922, https://doi.org/10.36922/ijb.0048
6	“Bioprinting on organ-on-chip: development and applications”, M.A Chliara, S. Elezoglou and I. Zergioti, Biosensors, 12(12), 1135 (2022). https://www.mdpi.com/2079-6374/12/12/1135
7	“Laser-Induced Forward Transfer on Regenerative Medicine Applications”, C. Kryou and I. Zergioti, Biomedical Materials & Devices (2022). https://doi.org/10.1007/s44174-022-00040-1
8	Laser Bioprinting of Cells Using UV and Visible Wavelengths: A Comparative DNA Damage Study”, P. Karakaidos, C. Kryou, N. Simigdala, A. Klinakis, and I. Zergioti, Bioengineering, 9(8), 378, (2022). https://doi.org/10.3390/bioengineering9080378
9	“Indium tin oxide-free inverted organic photovoltaics using laser-induced forward transfer silver nanoparticle embedded metal grids”, Sergey M. Pozov, Kostas Andritsos, Ioannis Theodorakos, Efthymios Georgiou, Apostolos Ioakeimidis, Ayala Kabla, Semyon Melamed, Fernando de la Vega, Ioanna Zergioti, and Stelios A. Choulis, ACS Applied Electronic Materials, 4(6), 2689-2698, (2022). https://doi.org/10.1021/acsaelm.2c00217
10	Laser-Induced Forward Transfer Printing on Microneedles for Transdermal Delivery of Gemcitabine”, Z. Kanaki, C. Chandrinou, I.M. Orfanou, C. Kryou, J. Ziesmer, G. A. Sotiriou, A. Klinakis, C. Tamvakopoulos, I. Zergioti, International Journal of Bioprinting, [S.l.], 8(2), (2022), https://doi.org/10.18063/ijb.v8i2.554
11	“Parametric Study of Jet/Droplet Formation Process during LIFT Printing of Living Cell-Laden Bioink”, C. Kryou, I. Theodorakos, P. Karakaidos, A. Klinakis, A. Hatzia Apostolou and I. Zergioti, Micromachines, 12, 1408, (2021). https://doi.org/10.3390/mi12111408
12	“Eco-Friendly Lead-Free Solder Paste Printing via Laser-Induced Forward Transfer for the Assembly of Ultra-Fine Pitch Electronic Components”, M. Makrygianni, F. Zacharatos, K. Andritsos, I. Theodorakos, D. Reppas, N. Oikonomidis, C. Spandonidis, I. Zergioti, Materials, 14, 3353, (2021). DOI: 10.3390/ma14123353
13	“Laser-Induced Forward Transfer (LIFT) technique as an alternative for assembly and packaging of electronic components”, F. Zacharatos, M. Makrygianni and I. Zergioti, in IEEE Journal of Selected Topics in Quantum Electronics, 27(6), 1-8, (2021). 10.1109/JSTQE.2021.3084443
14	“Laser printing of Au nanoparticles with sub-micron resolution for the fabrication of monochromatic reflectors on stretchable substrates”, Filimon Zacharatos, Martin Duderstadt, Evangelos Almpanis, Lampros Patsiouras, Kestutis Kurselis, Dimitris Tsoukalas, Carsten Reinhardt, Nikolaos Papanikolaou, Boris N. Chichkov, Ioanna Zergioti, Optics & Laser Technology, 135, 106660, (2021). https://doi.org/10.1016/j.optlastec.2020.106660
15	“A Miniature Bio-Photonics Companion Diagnostics Platform for Reliable Cancer Treatment Monitoring in Blood Fluids”, M. Chatzipetrou, L. Gounaridis, G. Tsekenis, M. Dimadi, R. Vestering-Stenger, E. F. Schreuder, A. Trilling, G. Besselink, L. Scheres, A. van der Meer, E. Lindhout, R. G. Heideman, H. Leeuwis, S. Graf, T. Volden, M. Ningler, C. Kouloumentas, C. Strehle, V. Revol, A. Klinakis, H. Avramopoulos and I. Zergioti, Sensors, 21(6), 2230, (2021), https://doi.org/10.3390/s21062230
16	“Digital printing and functionalization of Surfaces for Biosensing Applications”, M. Chatzipetrou and I. Zergioti, IEEE Sens. J., pp. 1–1, (2021). DOI: 10.1109/JSEN.2021.3108703
17	“Facile and low-cost SPE modification towards the ultra-sensitive organophosphorus and carbamate pesticide detection in olive oil”, D. Soulis, M. Trigazi, G. Tsekenis, C. Chandrinou and I. Zergioti, Molecules, 25 (21), 4988, (2020). https://doi.org/10.3390/molecules25214988
18	“High speed soldering using laser printing for the assembly of electronic components”, Marina Makrygianni, Kostas Andritsos, Dimitris Reppas, Filimon Zacharatos, Nikos Oikonomidis, Christos Spandonidis, Ioanna Zergioti, JLMN-Journal of Laser Micro/Nanoengineering, 15, No. 3, (2020). DOI: 10.2961/jlmn.2020.03.2008
19	“Laser Induced Backward Transfer of ultra-thin metal structures”, Adamantia Logotheti, Filimon Zacharatos, Marina Makrygianni, Ioanna Zergioti, Appl. Surf. Sci. 512, 145730 (2020), https://doi.org/10.1016/j.apsusc.2020.145730
20	“The effect of electromigration on the lifetime and performance of flexible interconnections fabricated by laser printing and sintering”, Kostas Andritsos, Ioannis Theodorakos, Filimon Zacharatos, Ioanna Zergioti, Appl. Surf. Sci. 506, 144968 (2020), https://doi.org/10.1016/j.apsusc.2019.144968
21	“Laser-Induced Backward Transfer of Monolayer Graphene”, Matthew Praeger, Symeon Papazoglou, Amaia Pesquera, Amaia Zurutuza, Adi Levi, Doron Naveh, Ioanna Zergioti, Robert W. Eason, Ben Mills, Appl. Surf. Sci. 533, 147488 (2020), 147488, https://doi.org/10.1016/j.apsusc.2020.147488

- 22 "Investigation on high speed laser printing of silver nanoparticle inks on flexible substrates", D. Tsakona, I. Theodorakos, A. Kalaitzis, I. Zergioti, Appl. Surf. Sci. 513, 145912 (2020), <https://doi.org/10.1016/j.apsusc.2020.145912>
- 23 Bioprinting for Liver Transplantation", C. Kryou, V. Leva, M. Chatzipetrou and I. Zergioti, Bioengineering 2019, 6(4), 95; <https://doi.org/10.3390/bioengineering6040095>
- 24 "Laser Induced Forward Transfer of high viscous, non-Newtonian silver nanoparticle inks: Jet dynamics and temporal evolution of the printed droplet stud", Ioannis Theodorakos, Agamemnon Kalaitzis, Marina Makrygianni, Antonios Hatzia Apostolou, Ayala Kabla, Semyon Melamed, Fernando de la Vega and Ioanna Zergioti, Adv. Eng. Mater. **21**, 1900605, (2019), <https://doi.org/10.1002/adem.201900605>
- 25 "Erratum to "Comparative Assessment of Affinity-Based Techniques for Oriented Antibody Immobilization towards Immunosensor Performance Optimizatio", G. Tsekenis, M. Chatzipetrou, M. Massaouti, I. Zergioti, Journal of Sensors, (2019), Volume 2019, Article ID 4758382, 1 page, <https://doi.org/10.1155/2019/4758382>
- 26 "Comparative Assessment of Affinity-Based Techniques for Oriented Antibody Immobilization towards Immunosensor Performance Optimizatio", G. Tsekenis, M. Chatzipetrou, M. Massaouti and I. Zergioti, Journal of Sensors, (2019), <https://doi.org/10.1155/2019/6754398>
- 27 "Copper micro-electrode fabrication using laser printing and laser sintering processes for on-chip antennas on flexible integrated circuit", O. Koritsoglou, I. Theodorakos, F. Zacharatos, M. Makrygianni, D. Kariyapperuma, R. Price, B. Cobb, S. Melamed, A. Kabla, F. de la Vega, and I. Zergioti, Opt. Mater. Express 9, 3046-3058 (2019). <https://doi.org/10.1364/OME.9.003046>
- 28 "Jetting dynamics of Newtonian and non-Newtonian fluids via laser-induced forward transfer: Experimental and simulation studies", A. Kalaitzis, M. Makrygianni, I. Theodorakos, A. Hatzia Apostolou, S. Melamed, A. Kabla, F. de la Vega, I. Zergioti, Applied Surface Science 465, 136-142 (2019), <https://doi.org/10.1016/j.apsusc.2018.09.084>

Invited talks in International Conferences, Science Events and Fora (the last 5 years)

I. Zergioti participated in 218 international and national conferences from which the 64 conferences with invited talks. The most recent ones are listed below:

1. "Laser printing and laser sintering for additive manufacturing on patterned flexible substrates", **Invited Paper, Presenter Ioanna Zergioti** at SPIE Photonics West, 27 January - 1 February 2024 San Francisco, California, United States.
2. "The future of 2D materials and their application", **presenter I. Zergioti**, PRAGUE NEXT-GEN TECHNOLOGY MEET-UP, Prague, Czech Republic, September 20, 2023. (Clustering activities).
3. "Laser Induced Transfer of 2D materials: a digital fabrication solution for 2D optoelectronics and sensing applications", K. Andritsos, I. Cheliotis, F. Zacharatos, A. Pesquera, A. Zurutuza, D. Naveh, L. Tsetseris and I. Zergioti, oral presentation, FEMS Euromat 2023 conference, Frankfurt, Germany, 03-07 September, 2023.
4. "Laser bioprinting current advancements and challenges", **invited talk I. Zergioti**, on the I3D23-Nanotextology 2023, 5-6 July 2023, Thessaloniki, Greece.
5. "Laser Induced Forward transfer: Digital Additive Manufacturing solution for electronics", **invited talk I. Zergioti**, on the CLEO®/Europe-EQEC 2023 from 26 to 30 June 2023, Munich, Germany.
6. Laser Bioprinting For Regenerative Applications and Organ on Chips, **invited talk, I. Zergioti**, International Conference of Additive Manufacturing for a Better World (SUTD), 23-25 August 2022, Tampines, Singapore.
7. Laser Induced Forward Transfer as an enabling bioprinting technology, invited talk, I. Zergioti, VI 'Photonics Meets Biology' Summer School and Workshop, 27 July -1 August 2022, Spetses Island, Greece.
8. Laser Induced Forward Transfer as an enabling bioprinting technology, invited talk, I. Zergioti, 5th International Conference on 3D Printing & Bioprinting, AI, Digital and Additive Manufacturing (I3D22), 6-7 July 2022, Thessaloniki, Greece.
9. Laser Bioprinting for sensor applications, invited talk, I. Zergioti, BERLIN, [Photonics Days Berlin Brandenburg 2021](https://www.photonics-days-berlin.com/brandenburg-2021) October 4 - October 7, 2021 | Berlin-Adlershof | WISTA, Germany
10. Women in STEM, Keynote I. Zergioti, "Career in STEM: Laser Bioprinting", University of Bern, https://www.artorg.unibe.ch/about_us/news/women_in_stem/index_eng.html
11. "Laser precise printing for biomedical applications", **invited talk I. Zergioti**, on the I3D21-Nanotextology 2021, 7-8 July 2021, Thessaloniki, Greece.
12. "Laser direct printing for flexible electronic applications", **invited talk I. Zergioti**, on the OPTOEL 21, 2 July 2021, Spain
13. "Laser Induced Transfer layered Materials", invited talk I. Zergioti, on the Intensive Course in layered Materials & Applications, Hellenic Mediterranean University 12-16 July 2021, Greece

14. "Laser Induced Forward Transfer: an emerging 3D printing tool", **invited talk I. Zergioti**, on the virtual workshop FLA-2, 5-13 and 21 & 29 July 2021.
15. "Laser Induced Forward Transfer of 2D materials and computational modelling studies", **invited talk I. Zergioti**, on the virtual 22nd International Symposium on Laser Precision Microfabrication (LPM2021), 8-11 June 2021.
16. "Laser Induced Forward Transfer of 2D materials and metallic nanostructures: An advanced fabrication solution for the digital printing of optoelectronic components and sensors", **invited talk I. Zergioti**, at the virtual Conference on Lasers and Electro-Optics (CLEO 2021), 9-14 May 2021.
17. "Laser Induced Forward Transfer as a tool for precise bioprinting", **invited talk I. Zergioti**, on the virtual 13th International Symposium on Flexible Organic Electronics (ISFOE20), 6-9 July 2020, Thessaloniki, Greece.
18. "Laser Induced Forward Transfer as a tool for precise bioprinting", **invited talk I. Zergioti**, on the virtual 17th International Conference on Nanosciences & Nanotechnologies (NN20), 7-10 July 2020, Thessaloniki, Greece
19. "Laser induced forward transfer as a tool for precise bioprinting", **invited talk I. Zergioti**, on the SPIE Photonics West, 1 - 6 February 2020, San Francisco, California, United States
20. "High speed Laser Induced Forward Transfer for flexible electronics application", **invited talk (keynote) I. Zergioti**, on the 27th International Conference on Advanced Laser Technologies (ALT19), 15-20 September 2019, Prague, Czech Repub
21. "Laser direct writing and sintering for flexible electronic applications" **invited talk I. Zergioti**, 3rd International Conference on Applied Surface Science 17-20 June 2019, Pisa, Italy.
22. "Laser Induced Forward Transfer: an advanced tool for 3D bioprinting", **invited talk I. Zergioti**, International Conference on 3D Printing, 3D Bioprinting, Digital & Additive Manufacturing (I3D19), 1-5 July 2019, Thessaloniki, Greece
23. "Laser Induced Forward Transfer of Inorganic materials for Flexible Electronic Components and Sensors", **invited talk I. Zergioti**, 4th Global Summit & Expo on Laser Optics & Photonics, April 15-16, 2019 | Dubai, UAE

EDUCATION

1994 -1997	Ph.D., University of Thessaly in collaboration with the FORTH-IESL/ Thessaly and Crete, Greece/ Thesis title: Growth and Diagnostics of nanocrystalline thin films of TiC and TiB ₂ by Pulsed Laser Deposition, Ph.D. Field(s) of study: Engineering, manufacturing and construction
1983 - 1988	BSc. Physics, University of Crete / Department of Physics/Crete, Greece

MEMBERSHIPS & REVIEWING ACTIVITIES (if applicable)

2015-now	Member, SPIE
2019-now	Member, EUROoCS (European Organ on Chip Society)
2021-now	Member of the Facility Access Panel (FAP) in the framework of our joint project with STFC - "Hi LASE Centre of Excellence", Prague, Czech Republic
2020-now	Member of the Advisory Committee of the General Secretariat for Research and Innovation (Ministry of Development and Investments) for the sector Industrial Production-Materials-Processing
2016-now	Nominated member on the executive committee for Research Committee (E.L.K.E.) of National Technical University of Athens (N.T.U.A.), with turnover 50M€/year.
2017-19	Nominated as a National Representative for Greece to the EUREKA high level group (HLG).
2016-19	Member of the Advisory board of the ORCHID project (Organ-on-Chip in Development) granted by the H2020-FET-Open 03
2015-18	Member of the National Committee of Education, Research and Growth of the Ministry of Education and Research of Greece. The committee was appointed by the Deputy Minister Prof. C. Fotakis with the aim to formulate policy on linking research with the productive entities of the country and the industrial development.
2015-18	Member of the Industrial Forum, appointed by the Deputy Minister of Industrial Development, of the Ministry of Economy, Development, and Tourism of Greece with the aim to define links between innovation and the Industrial development of Greece.
2017-18	Member of the Advisory Committee of the General Secretariat for Research and Innovation for the sector Industrial Development
2018	Member of the investment committee (2018) of the Ministry of Economy in Greece and evaluate the investment plan for three companies: European Dynamics, ELPEN and Intersys.

2018	Member of the Program Committee, 19th International Symposium on Laser Precision Microfabrication (LPM2018) which will be held in Edinburgh, UK, from 25-28 June 2018
2017	Member of the organizing committee of the EUROMAT 2017, Thessaloniki, Greece, from 17 – 22 September, 2017
2017	Member of the scientific committee, International Conference on Laser Ablation (Cola 2017) held in Marseille, France, from 3-8 September, 2017
2016	Member of the scientific committee, 17th International Symposium on Laser Precision Microfabrication (LPM2016) held in Xi'an, China, from 23-26 May, 2016
2011-16	Member of the Organizing Committee of the “Laser Technologies in organic electronics” workshop”, at the International Symposium on Flexible Organic Electronics, ISFOE 2011, 2012, 2013, 2014, 2015, 2016, Thessaloniki, Greece
2008-24	Participation in evaluation committees in the evaluation of European research proposals - European Research Commission, FP6, FP7, H2020, Marie Curie (IF, ITN), in NMP and ICT (2008-2018) participation in the evaluations of RSF Megagrants-Russia, participation in the evaluations in FNRS-Belgium
2017-19	National representative in the High-Level Group of EUREKA, 2017-2019
2016	Participation in the National Committee for Education, Research and Development. Participation in the writing team for the preparation of a strategy study for research and development in Greece.

Teaching activities

2018-23	"Optoelectronics", undergraduate course, 7 th semester, SAMPS, NTUA, Greece
2014-21	"New Technological Materials", undergraduate course, 9 th semester, SAMPS, NTUA, Greece
2014-18	"Physics and Laser Technology", undergraduate course, 6th semester, SAMPS, NTUA, Greece
2009-12	"Optics", undergraduate course, 5th semester, SAMPS, NTUA, Greece
2007-23	Physics II", undergraduate course, 3d semester, Survey Engineering, NTUA, Greece
2003-24	"Integrated optics and micro-optics", postgraduate course at the MSc «Microsystems and Nanodevices», NTUA, Greece
2003-07	"Optoelectronics Laboratory", undergraduate course, 7 th semester, SAMPS, NTUA, Greece
2005-06	"Applied Optics", undergraduate course, 5th semester, SAMPS, NTUA, Greece
2003-07	"Laser and applications Laboratory", undergraduate course, 8 th semester, SAMPS, NTUA, Greece.
2001-03	"Optics Laboratory", undergraduate course, 5 th semester, Department of Materials Science and Technology University of Crete, Greece

FELLOWSHIPS and AWARDS

2023	Startup PhosPrint P.C., spin-off from ICCS-NTUA, won the 3rd prize in the Startup Challenge competition held as part of the SPIE (International Society for Optics and Photonics) annual 2023 meeting in San Francisco, USA.
2022 - 2025	Project "Laser digital transfer of 2D materials enabled photonics: from the lab 2 the fab (L2D2)". within the first selected EIC Transition projects for the project entitled EIC is a great initiative for Europe supporting innovation.
2016	2nd award-Hellenic Federation of Enterprise [10/02/2016], 3rd Applied Research & Innovation Competition jointly organized by Hellenic Federation of Enterprise (SEV) and Eurobank at 2016
2019	PhosPrint has gained the Bodossaki award for the support of our Intellectual Property
2019	PhosPrint received the Seal of Excellence on the 28/03/2019 for its participation in the SME instrument phase 1 call of H2020-EIC-SMEInst-2018-2020.
2019	Award of the research group of Pr. Zergioti at the IDTechEx Show, 10-11/4/2019, Berlin, Germany for the poster High speed laser sintering of silver nanoparticle inks for the digital fabrication of flexible microelectrodes
2020	3D Printing Award - SPIE Photonics West 2020 [03/02/2020], 1-6/2/2020 for our work on "Laser Induced Forward Transfer as a tool for precise bioprinting".
2020	Winner of an accelerator Science Park POC competition Greece [2020]. PhosPrint has gained the startup funding and training from business and market experts.
2020	PhosPrint qualified for the semi-finals of the SPIE Startup Challenge [2020].
1998-1999	Postdoctoral Researcher (Marie-Curie Fellow) at Philips Center for Manufacturing Technology, Laser Materials Processing group, Parts Processing Department, Eindhoven, The Netherlands. scholarship EU (Marie-Curie, TMR grant 1998)
1998	Postdoctoral researcher, Max-Planck-Institut fuer biophysikalische Chemie, Laser Physik department, Gottingen, Germany. Supervisor Prof. Michael Stuke.
1996	Visiting Ph.D. Scholar University of California, Berkeley, Department of Mechanical Engineering, California, USA. Supervisor Prof. C.Grigoropoulos.

1994-1997	Doctoral scholarship in the Laser and Applications Laboratory ITE-FORTH, Crete, Greece			
1989-1993	Scholarship for specialization and training in the Laser and Applications laboratory, ITE-FORTH, Crete, Greece			
RESEARCH GRANTS: Ioanna Zergioti has received funding from a plethora of EU and national grants and participated in equal projects either as the coordinator or as the PI of NTUA. Below, a list of the 10 most recent EU funded projects can be found.				
Project Title		Funding source	Period	Role of PI
HORIZON-CL4-2023-RESILIENCE-01-TWO-STAGE, HORIZON-RIA, “ULTRASENSE”, project number 101130192		EU: NTUA budget: 900k€	2024-28	Coord.
HORIZON-CL4-2022-DIGITAL-EMERGING-02, “Next-2Digits”, project number 101120651		EU: NTUA budget: 770k€	2023-26	Coord.
HORIZON-CL4-2022-RESILIENCE-01-10, “MatEI”, project number 101091774		EU NTUA budget: NTUA 812.5 k€	2023-26	Coord.
HORIZON-CL4-2022-DIGITAL-EMERGING-01, “LIBRA”, project number 101093150		EU, NTUA budget 686250€ PHOSPRINT P.C. 433750€	2023-26	Coord.
HORIZON-EIC-2021-TRANSITIONOPEN-01, "L2D2", project number: 101058079		EU: NTUA budget 680k€	2022-25	Coord.
H2020-DT-NMBP-18-2019, "Roll-2-Roll and Photolithography post processed with LAsER digital technology for FLEXible photovoltaics and wearable displays (RoLA-FLEX)" project 862474		EU NTUA budget NTUA 604.75 k€	2020-23	Coord.
H2020-FETOPEN-1-2016-2017, "Laser EnAbleD TransFer of 2D Materials, (LEAF-2D)", project number 801389		EU, NTUA budget 634 k€ (in collaboration with Prof. L. Tsetseris).	2018-22	Coord.
H2020 ICT-030-2016 SSI Smart System Integration, “A miniature Bio-photonics Companion Diagnostics platform for reliable cancer diagnosis and treatment monitoring (BIOCDx)”, project number 732309.		EU, ICCS/NTUA budget 700 k€ (in collaboration with Prof. H. Avramopoulos).	2017-19	Coord.
Factories of the Future- H2020- FOF-13-2016 Photonics Laser-based production, “High Performance Laser-based Additive Manufacturing (HIPERLAM)”, project number 723879		EU, NTUA budget 446 k€.	2016-19	Partner/PI
FP7-PEOPLE-2012-IAPP, “Laser Digital Micro-Nano fabrication for Organic Electronics and Sensor applications”		EU, NTUA budget 282 k€	2013-2017	Coord

1 SCIENTIFIC ACHIEVEMENTS

Dr. Ioanna Zergioti is a University Professor and Researcher in the field of laser bioprinting and additive manufacturing. She has h-index: 39 and Citations: 4,759. The last years she is focused on translating innovative research on laser bioprinting technology for regenerative medicine applications into commercially viable products within the spin-off PhosPrint P.C.

Currently, she is leading the Materials and Laser Micro Processing group at the Physics dept. of the NTUA with 20 young researchers including 5 post-doctoral researchers, 6 PhD student, 1 Administrative support, 3 engineers, 3 MSc students, and 2 BSc students. She has supervised 144 students in total, including 68 undergraduate students 58 post-graduate MSc (32 as main supervisor and 26 as member of the committee), 15 PhD students. In addition, 3 diploma students in the frame of ERASMUS project. In addition 10 senior postdoctoral researcher and 4 electrical and mechanical engineers.

Following up on the lab’s work on laser bioprinting for tissue engineering applications, Prof. Zergioti is coordinating an EU grant (Tumor-LN-oC; <https://tumor-ln-oc.eu/>) aiming to study the crosstalk between tumors and lymph node (LN) during LN metastasis. This project involves the development of collecting primary tumor samples from patients, generation of organoids, patient-derived xenografts and organ-on-chip platforms. In addition, I. Zergioti is partner in a FET H2020 grant (UroPrint) aiming towards the development of a bladder tissue transplants. Dr. Zergioti is also currently coordinating a Horizon Europe project named LIBRA for the development of a multisensing device for cell culture monitoring in bioreactors.

She is the acting CEO of the high-tech company PhosPrint which is developing laser bioprinters focusing on the highly precise and rapid delivery of cells and other bio-inks on the substrates of interest for tissue regeneration and biosensor applications. In the framework of this venture she interacted with Venture Capitals and received coaching to BMC, Assumptions Validation, Go to Market strategy.

Dr. I. Zergioti has served as expert in numerous National Institutes (Greece, Spain, Russia, Belgium, The Netherlands, Israel, Canada) and she has served since 2003 as evaluator and as vice-chair in EC (FP6, FP7 and H2020) evaluation calls (~ 30 calls), and as reviewer in EC funded running projects (~25 projects). She has also served as expert at the Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME). More specifically her scientific achievements are listed below:

1.1 Patents

- 1) "Dual Beam Laser Transfer" filed by ICCS (Applicant). (Exclusive rights from ICCS to PhosPrint P.C.): Patent PCT/EP2017/084740 filed December 28, 2017, Published as WO 2019/129349 A1 July 4, 2019, USA filing US20200324564A1 October 15 2020, European filing EPO 17 828 768.6 November 4 2020
- 2) "Laser ablation/removal and Laser Induced Forward Transfer of biological material" PhosPrint P.C (Applicant): US provisional patent application filed August 6, 2020, US non-provisional patent application August 6 2021, PCT patent application PCT/GR/2021/000052 filed August 4 2021, EP application, 21766206.3, 21/11/2022. Israel application, PHP2011IL, 6/12/2022, Canada application, P4299WO-CA,08/12/2022
- 3) "Laser Printing and Photopolymerization of Cell-Laden Hydrogels", PhosPrint P.C. (Applicant). European patent application EP21194805.4 filed September 3 2021, PCT/EP2022/074209, 31 August 2022, PCT application is claimed based on EP 21 194 805.4
- 4) Method for digital formation of 2D materials structures and applications thereof", I, Zergioti, S. Papazoglou, F. Zacharatos, A. Zurutuza, D. Naveh, US 63/193,968, June 7, 2021.
- 5) "Method for activating click reactions through laser induced forward transfer of molecules", M. Massaouti, M. Chatzipetrou, A.K. Schütz-Trilling, L. M. Wilhelmus Scheres, M. M. Johannes Smulders, J. Teunis Zuilhof, I. Zergioti, PCT P3808PC00, 2016/12/16
- 6) "Direct laser immobilization of biomolecules", C. Boutopoulos, M. Giardi, E. Touloupakis, I. Zergioti, 20120100368, 7/7/2012, OBI
- 7) "Biosensor by monitoring magnetically induced capacitance changes" D. Kafetzopoulos, P. Andrekou, S. Chatzandroulis, D. Goustouridis, C. Boutopoulos, I. Zergioti, P. Normand, and D. Tsoukalas, GR Patent No. 1006438 (16-JUN-2009)
- 8) "Printing of DNA and proteins microarrays using laser induced forward transfer method ", D. Kafetzopoulos, G. Thiraios, I. Zergioti, C. Fotakis, granted GR, 2002.
- 9) "Printing of DNA and proteins microarrays using laser induced forward transfer method ", D. Kafetzopoulos, G. Thiraios, I. Zergioti, C. Fotakis, pending European Patent Office, 2002

1.2 Organization of international conferences

Ioanna Zergioti has been involved in a series of organizing and scientific committees for organizing international conferences and symposia (i.e. SPIE Europe 2022 - 2024, LPM 2018, EUROMAT 2017, COLA 2017, LPM 2016, EMRS 2015). A detailed list is presented in Part 2.

1.3 Prizes/Awards/Academy memberships

- Startup PhosPrint P.C., spin-off from ICCS-NTUA, 3rd prize in the Startup Challenge competition held as part of the SPIE annual 2023 meeting in San Francisco, USA
- Among the first selected EIC Transition projects for the project titled "Laser digital transfer of 2D materials enabled photonics: from the lab 2 the fab (L2D2)".
- Award at SPIE Photonics West 2020, San Francisco, 1-6/2/20, for the work "Laser Induced Forward Transfer as a tool for precise bioprinting."
- 3D Printing Award at the SPIE Photonics West, San Francisco, 1-6/2/20, for her work presented at the invited paper "Laser Induced Forward Transfer as a tool for precise bioprinting," recognizing their fundamental work in the development of a single-step laser bioprinting and immobilization process.
- Award at IDTechEx Show, 10-11/4/19, Berlin, Germany, for the poster titled "High-speed laser sintering of Silver nanoparticle inks for the digital fabrication of flexible microelectrodes."
- 2nd prize award for Innovation at the 3rd Applied Research & Innovation Competition jointly organized by SEV and Eurobank at 2016 with the proposal entitled "Smart laser printing and immobilization of functional materials and microdevices".
- Member of European Material Research Society and Optical Society of America.
- 2nd Award at Industrial Technologies 2014, 9-11/4/14, Athens, Greece for the work on "Laser Digital Micro-Nano fabrication for Organic Electronics and Sensor applications".
- Special article from MIT Technology Review 10/11/2012 on the IZ's research work "Physicists Laser Print Conducting Polymer Circuits".

1.4 Major contributions to the early careers of excellent researchers

She has trained over 50 graduate and post-graduate students, many of whom have gone on to successful early careers in academia (e.g. PhD students: L. Agiotis (Laser Processing and Plasmonics Laboratory, Polytechnique Montréal CA), G. Anastasiadi (Heriot-Watt University UK), A. Gkouzou (Delft University of Technology, NL)) and high level roles in the medical field (e.g. Dr. C. Boutopoulos (Researcher at the Hôpital Maisonneuve-Rosemont, HMR, Montreal CA), M. Chatzipetrou (Post doc at the McGill University, CA), A. Andreadaki (Point of Care medical group at Philips, NL), V. Zorba (MSc supervisor, currently group leader at the Lawrence Berkeley Labs)