

MARIA KONSTANTAKI

Principal application Scientist
Institute of Electronic Structure and Laser
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[Laboratory web page](#)

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BIOGRAPHY

Dr. Maria Konstantaki is a Principal Application Scientist at the Institute of Electronic Structure and Laser, Foundation for Research and Technology – Hellas (FORTH). She holds a Ph.D. in Electronic and Electrical Engineering from the University of Strathclyde, Scotland, and a B.Sc. in Physics from the University of Crete, Greece. She has over two decades of expertise in advancing the science and technology of optical fiber sensor design and development.

She has played a key role in numerous European research initiatives as Deputy Principal Investigator in major Horizon Europe and Horizon 2020 projects, including PhotonHub Europe, ACTPHAST 4.0, and REMADE@ARI, contributing to the development of photonic technologies and innovation networks across Europe. She has coordinated bilateral research projects with SMEs to facilitate effective technology transfer and innovation collaboration.

Alongside her research, Dr. Konstantaki has broad experience in academic teaching and mentoring. She has supervised undergraduate and MSc theses, introduced courses on optical fibers at the Technological Educational Institute of Crete (now the Hellenic Mediterranean University), and contributed to experimental physics courses at the University of Crete. She is also very active in STEM outreach activities at IESL, aimed at engaging high school students.

Dr. Konstantaki has authored 44 publications in peer-reviewed international journals and more than 60 conference proceedings, including invited papers, accumulating over 1,500 citations and an h-index of 23. She has been the recipient of Marie Skłodowska-Curie PhD research fellowship and her research has been featured by OPTICA and recognized in competitions such as Greece Innovates! for applied photonic sensor technology. She has collaborated extensively with international research teams across Europe and beyond, contributing to multi-institutional projects in photonics.

Dr. Konstantaki is actively involved in the international photonics community through participation in technical program committees, session chairing, and conference organization. She has co-organized scientific workshops that promote the dissemination of advanced research and foster interdisciplinary collaboration within the photonics field in the area of circular economy and laser manufacturing. She also maintains a continuous record of peer-review service for leading international journals in photonics and optical engineering, as well as for national and European research funding bodies. She is a member of OPTICA and SPIE.

RESEARCH INTERESTS

- **Optical fiber sensors:** Design, fabrication, and characterization of optical fiber sensors for precise measurement of physical, chemical, and biological parameters.
 - **Novel optical fibers for sensing application:** Exploration of advanced optical fibers (bioresorbable, microstructure etc.) to enhance sensor performance and functionality.
 - **Functional coatings and nanomaterials:** Use of thin films, nanostructures, and hybrid materials to enable selective and enhanced optical transduction mechanisms.
 - **Environmental, biomedical, and industrial sensing:** Application of fiber-based photonic sensors to address challenges in environmental monitoring, medical diagnostics, and industrial process control.
 - **Precision agriculture:** Development and deployment of optical fiber sensor systems for monitoring soil conditions, environmental parameters and equipment performance to enable sustainable and efficient agriculture.
 - **Technology translation and user adoption:** Committed to facilitating the integration and practical adoption of optical fiber sensor technologies by end users through design optimization, system simplification, and interdisciplinary collaboration.
 - **Photonics for sustainability and circular economy:** Promoting the use of photonic technologies to resource-efficient manufacturing, recycling processes, and environmental impact assessment.
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EDUCATION

PhD Electronic and Electrical Engineering | University of Strathclyde **1994 – 1997**

Department of Electronic and Electrical Engineering, University of Strathclyde, Glasgow, Scotland, UK,

Thesis: “Simultaneous sensing of strain and temperature using optical fibres”

Supervisor: Prof. Brian Culshaw (Emeritus)

B.Sc Physics | University of Crete **1989 – 1993**

Department of Physics, University of Crete, Greece

Final year project: “Study of the excited states of CS₂ using multiphoton ionization”

RESEARCH EXPERIENCE

Principal Application Scientist | Foundation for Research and Technology - Hellas **2017 – Pres.**

Institute of Electronic Structure and Laser

Research focus: Optical fiber sensors design and development

Technical Scientist | Foundation for Research and Technology - Hellas**2006 – 2016**

Institute of Electronic Structure and Laser

Research focus: Optical fiber sensor design and development

Post-doctoral Researcher | Foundation for Research and Technology - Hellas**2000 – 2005**

Institute of Electronic Structure and Laser

Research focus: Optical fiber sensors design and development

Post-doctoral Researcher | Foundation for Research and Technology - Hellas**1998 – 1999**

Institute of Electronic Structure and Laser

Research focus: Study of the nonlinear optical properties of novel materials

Research assistant | University of Strathclyde**1994 – 1996**

Department of Electronic and Electrical Engineering

Research focus: Optical fiber sensors design and development

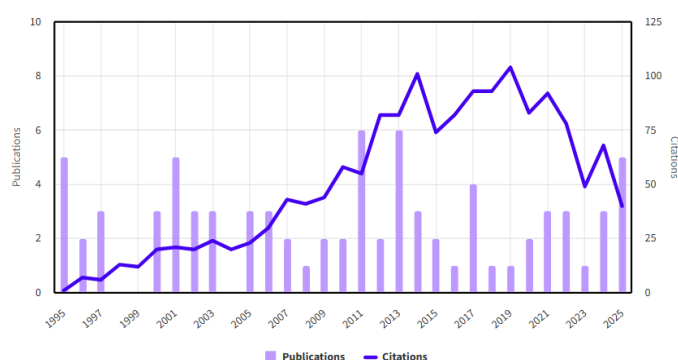
Marie Skłodowska-Curie PhD fellow

ACADEMIC RECORD AND CITATIONS METRICS

- 44 SCI publications in peer-reviewed international journals including 1 invited review
- 92 presentations (oral and poster) at international conferences, including 62 published in proceedings and 20 invited talks.

 <https://orcid.org/0000-0003-4967-7197>
 <https://www.webofscience.com/wos/author/record/A-2412-2014>
Citation metrics | as of 13 October 2025

	Publications	Citations	h index
<u>Web of Science</u>	80 (core collection)	1559 (1,485 non self)	23
<u>Scopus</u>	112	1687	22
<u>Google scholar</u>	112	2140	22 (i10-index: 36)

Yearly Publication and Citation Record (Web of Science)

ACADEMIC ACTIVITIES/ACHIEVEMENTS

- Expert reviewer for Science Foundation Ireland (2022)
 - Reviewing activities:
 - Nature Portfolio: Communications Physics, Communications Engineering, Scientific Reports
 - Elsevier B.V.: Materials Chemistry and Physics, Sensors and Actuators: A. Physical, Sensors & Actuators: B. Chemical, Sensors and Actuators Reports, Optical Fiber Technology, Optics and Laser Technology, Measurement, Materials Science and Engineering Book Series
 - IEEE: Sensors Journal, Photonics Technology Letters, Journal of Selected Topics in Quantum Electronics, Journal of Lightwave Technology, Photonics Journal.
 - Optica: Applied Optics, Optics Express
 - SPIE: Optical Engineering
 - MDPI: Sensors, Micromachines, Applied Sciences, Fibers, Photonics
 - Editorial Board member: Sensors (MDPI), 2019-present
 - Editor of Special Issue: "Novel Optical Fibers, Devices and Applications" in Materials, Multidisciplinary Digital Publishing Institute (MDPI), Switzerland, 2019
 - Member of Technical Program Committee of scientific international conferences:
 - BGPP, OPTICA, Long Beach, 2026
 - SPIE Photonics Europe, Strasbourg, 2026
 - SPIE Photonics Europe, Strasbourg, 2024
 - Organisation of Workshops:
 - Laser Spectroscopy and Photonic Technologies for Circular Economy, Heraklion, 2025
 - Advanced Laser Processing in Photonics: State-of-the-art and Prospects, Athens, 2006
 - Conference Session Chairing:
 - Photonics Europe, Strasbourg, 2024
 - 17th COLA, Heraklion, 2024
 - CLEO Europe, Munich, 2023
 - 7th EWOFs, Limassol, 2019
 - 26th OFS, Lausanne, 2018
 - OPTICA news release on our work on: [Bioresorbable optical fiber Bragg gratings](#), (2018)
 - Shortlisted in the 2nd round of the Applied Research & Innovation Competition, Greece Innovates!, organized by SEV (Hellenic Federation of Enterprises) and Eurobank for our work on: A photonic sensor for monitoring shear stress between human skin and artificial surfaces of limbs and wheelchairs, (2013)
 - Featured in the yearly highlights of Optics and Photonics News, OPTICA:
 - Optics in 2012, Optics in 2011
 - Marie Skłodowska-Curie PhD research fellow, 1994-1996
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EDUCATIONAL ACTIVITIES

Thesis supervision: 7 undergraduate and 1 graduate

2019 –pres.

- *Stavroula Spyropoulou*, MSc, Department of Physics, University of Crete
Development of an optical fiber pH sensor (July 2025- present)
- *Nikos Klonos*, BSc, Department of Physics, University of Crete
Optical fiber sensor for asphaltene assessment in crude oils (February 2025 – present)
- *Thanos Ioannidis*, BSc, Department of Physics, University of Crete
Development of pH optical fiber sensor with a TiO₂ overlayer, (February 2024 - April 2025)
- *Panagiotis Kleitsiotis*, BSc, Department of Physics, University of Crete
Copper oxide coated fiber optic sensor for detection of volatile compound vapors, (September 2024 - February 2024)
- *Eleni Grantzioti*, BSc, Department of Physics, University of Crete
Optical fiber sensors for the detection of vapors of volatile organic compounds and ammonia, (June 2022-February 2023)
- *Emmanouil Anthoulakis*, BSc, Department of Physics, University of Crete
Development of an optical fiber sensor for agricultural drone spraying monitoring, (February 2021-January 2022)
- *Nikolaos Poumpouridis*, BSc, Department of Physics, University of Crete
Development and assessment of optical fiber humidity sensors, (July 2020- September 2021)
- *Dimitra Skiani*, BSc, Department of Physics, University of Crete
Optical fiber sensor with silk fibroin overlayer for volatile organic compound vapors, (February 2019 – June 2020)

Course contributor | Department of Physics, University of Crete

2008 - pres.

Course: Laboratory on Lasers and Modern Optics,
Contribution with a lecture and a lab experiment on optical fiber sensors

Adjunct Lecturer | Department of Electrical Engineering, Technological Educational Institute of Crete – TEI of Crete, (currently Hellenic Mediterranean University)

2011 - 2017

Course: Optical fibers and networks: *4 hours /week lecture & tutorial*

Adjunct Lecturer | Department of Informatics Engineering, Technological Educational Institute of Crete – TEI of Crete, (currently Hellenic Mediterranean University)

2001 - 2012

Course: Optical communications, (2001- 2012): *6 hours /week lecture, tutorial & laboratory*
Introduced a new university course, organized the associated laboratory infrastructure, and authored detailed laboratory student guidelines.

Course: Guiding structures, (2003-2006): *4 hours /week lecture & tutorial*

STEM outreach

2022-pres.

Responsible, on behalf of IESL-FORTH, for organizing tours and interactive demonstrations for school pupils to promote physics and STEM subjects.

PATENTS

- S. Pissadakis, V. Sarakatsianos, I. Chapalo, M. Konstantaki, T. Manouras, M. Vamvakaki, A. Charonis, *Suture, method for fabricating suture, and system for assisting with suture placement*, EP25193243, (31/07/2025)
 - A. Ikiades, D. Armstrong, G. Hare, M. Konstantaki, *Ice detection apparatus and method*, WO2004110865A1 (23/12/2004), Granted: ATE378255T1, US7586419B2, EP1633626B1, ES2302932T3, DE60317573T2
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FUNDED PROJECT TEAM MEMBER

- [PhotonHub Factory](#) for Next-Generation Photonics Innovation Support: Boosting European Industrial Competitiveness and securing Technological Sovereignty, Horizon Europe, GA 101189537, 1/2025-12/2028, *Deputy PI*
 - [REMADE@ARI](#), Recyclable Materials Development @ Analytical Research Infrastructures-, Horizon Europe, GA 101058414, 9/2022-8/2026, *Deputy PI*
 - [PhotonHub Europe](#): One-Stop-Shop Open Access to Photonics Innovation Support for a Digital Europe, Horizon 2020, GA 101016665, 1/2021-4/2026, *Deputy PI, Coordinator of bilateral research projects for the benefit of SEMs*
 - PHAETHON, Photonic sensors in ophthalmological sutures, GSRT, ΕΠΕΥΝΩ-ΚΑΙΝΟΤΟΜΩ-ΔΗΜΙΟΥΡΓΩ, 5/2022- 7/2025, *Team member*
 - [ACTPHAST 4.0](#), ACceleraTing PHotonics innovATion for SME's: a one STop-shop-incubator, Horizon 2020, GA 779472, 11/2017-1/2023, *Deputy PI*
 - [ACTPHAST 4R](#) Accelerating Photonics Deployment via one Stop Shop Advanced Technology Access for Researchers, Horizon 2020, GA 825051, 1/2019-12/2023, *Deputy PI*
 - [RespiceSME](#), Regional, National and European Support for Photonics Innovation Clusters enhancing SMEs Innovative Potential, Horizon 2020, GA 687961, 1/2016-12/2017, *Deputy PI*
 - ACTPHAST, Access Center to Photonics Innovation Solutions and Technology Support, FP7-GA 619205, 11/2013- 04/2018, *Deputy PI*
 - Optical Fiber Sensors for Improving Quality of Life, ΑΝΑΠΤΥΞΙΑΚΕΣ ΠΡΟΤΑΣΕΙΣ ΕΠΕΥΝΗΤΙΚΩΝ ΦΟΡΕΩΝ- ΚΡΗΠΙΣ» (Proposals for the Development of Research Institutions-GSRT, 7/2023-10/2014, *Team member*
 - IASIS, Intelligent Adaptable Surface with Optical Fiber Sensing for Pressure-Tension Relief, FP7, GA 232479, 11/2009 – 1/2012, *Team member*
 - ROM, Réseau Optique Méditerranée, INTERREG, 6/2005-6/2007, *Team member*
 - ACIDS, Air Conformal fiber optic Ice Detection System, GROWTH, G4RD-CT-2001-00612, 2000-2003, *Team member*
 - OSMOS, Optical fiber Sensing system for Monitoring of Structures, BRITE-EURAM/CRAFT, BRE2 CT92 0335 , 1994-1997, *Team member*
-

PUBLICATIONS IN PEER REVIEWED INTERNATIONAL JOURNALS

1. L. Smeesters, et al., *2025 photonics for agrifood roadmap: towards a sustainable and healthier planet*, J. Phys. Photonics 7 (2025) 032501.
<https://doi.org/10.1088/2515-7647/adbea9>.
2. M. Konstantaki, E. Anthoulakis, S. Christodoulou, S. Pissadakis, *Assessment of Drone Agricultural Spraying Operations Using Optical Fiber Sensors*, IEEE Journal of Selected Topics in Quantum Electronics 31 (2025) 1–8. <https://doi.org/10.1109/JSTQE.2025.3592264>.
3. E. Grantzioti, S. Pissadakis, M. Konstantaki, *Optical Fiber Volatile Organic Compound Vapor Sensor with ppb Detectivity for Breath Biomonitoring*, IEEE Sensors Journal (2025) 1–1.
<https://doi.org/10.1109/JSEN.2025.3527765>.
4. I. Chapalo, V. Sarakatsianos, E. Grantzioti, M. Konstantaki, G.D. Tsibidis, T. Manouras, M. Vamvakaki, S. Pissadakis, *Inscription of Bragg reflectors in polypropylene no-core optical fibers using 248 nm laser radiation*, Opt. Express, OE 32 (2024) 45554–45565.
<https://doi.org/10.1364/OE.539137>.
5. D. Lopez-Torres, C.E. Aguado, G.A. Pappas, M. Konstantaki, A. Klini, A. Lappas, F.J. Arregui, S. Pissadakis, *Piezotronic, ZnO Overlaid Bragg Grating Organic Vapor Sensors*, IEEE Sensors J. 23 (2023) 12536–12543. <https://doi.org/10.1109/JSEN.2023.3270966>.
6. T. Chalyan, I. Magnus, M. Konstantaki, S. Pissadakis, Z. Diamantakis, H. Thienpont, H. Ottevaere, *Benchmarking Spectroscopic Techniques Combined with Machine Learning to Study Oak Barrels for Wine Ageing*, Biosensors 12 (2022) 227.
<https://doi.org/10.3390/bios12040227>.
7. M. Konstantaki, G. Violakis, G.A. Pappas, T. Geernaert, N. Korakas, N. Tiriakidis, T. Tiriakidi, K. Tiriakidis, H. Thienpont, F. Berghmans, J. Botsis, S. Pissadakis, *Monitoring of Torque Induced Strain in Composite Shafts with Embedded and Surface-Mounted Optical Fiber Bragg Gratings*, Sensors 21 (2021) 2403. <https://doi.org/10.3390/s21072403>.
8. M. Konstantaki, D. Skiani, D. Vurro, A. Cucinotta, S. Selleri, A. Secchi, S. Iannotta, S. Pissadakis, *Silk Fibroin Enabled Optical Fiber Methanol Vapor Sensor*, IEEE Photon. Technol. Lett. 32 (2020) 514–517. <https://doi.org/10.1109/LPT.2020.2982451>.
9. D. Pugliese, M. Konstantaki, I. Konidakis, E. Ceci-Ginistrelli, N.G. Boetti, D. Milanese, S. Pissadakis, *Bioresorbable optical fiber Bragg gratings*, Opt. Lett. 43 (2018) 671.
<https://doi.org/10.1364/OL.43.000671>.
10. R. Gassino, Y. Liu, M. Konstantaki, A. Vallan, S. Pissadakis, G. Perrone, *A Fiber Optic Probe for Tumor Laser Ablation With Integrated Temperature Measurement Capability*, J. Lightwave Technol. 35 (2017) 3447–3454. <https://doi.org/10.1109/JLT.2016.2618618>.
11. A. Candiani, M. Konstantaki, A. Pamvouxoglou, S. Pissadakis, *A Shear Sensing Pad, Based on Ferrofluidic Actuation in a Microstructured Optical Fiber*, IEEE J. Select. Topics Quantum Electron. 23 (2017) 210–216. <https://doi.org/10.1109/JSTQE.2016.2607460>.

12. M. Barozzi, A. Manicardi, A. Vannucci, A. Candiani, M. Sozzi, M. Konstantaki, S. Pissadakis, R. Corradini, S. Selleri, A. Cucinotta, *Optical Fiber Sensors for Label-Free DNA Detection*, J. Lightwave Technol. 35 (2017) 3461–3472. <https://doi.org/10.1109/JLT.2016.2607024>.
13. I. Konidakis, M. Konstantaki, G.D. Tsibidis, S. Pissadakis, *Light driven optofluidic switch developed in a ZnO-overlaid microstructured optical fiber*, Opt. Express 23 (2015) 31496. <https://doi.org/10.1364/OE.23.031496>.
14. A. Bertucci, A. Manicardi, A. Candiani, S. Giannetti, A. Cucinotta, G. Spoto, M. Konstantaki, S. Pissadakis, S. Selleri, R. Corradini, *Detection of unamplified genomic DNA by a PNA-based microstructured optical fiber (MOF) Bragg-grating optofluidic system*, Biosensors and Bioelectronics 63 (2015) 248–254. <https://doi.org/10.1016/j.bios.2014.07.047>.
15. A. Duduś, R. Blue, M. Konstantaki, S. Pissadakis, D. Uttamchandani, *Optical characterisation of long-period grating using liquid droplets on an electrowetting-on-dielectric platform*, Micro & Nano Letters 9 (2014) 399–402. <https://doi.org/10.1049/mnl.2014.0188>.
16. M. Konstantaki, P. Childs, M. Sozzi, S. Pissadakis, *Relief Bragg reflectors inscribed on the capillary walls of solid-core photonic crystal fibers*, Laser & Photonics Reviews 7 (2013) 439–443. <https://doi.org/10.1002/lpor.201200115>.
17. A. Candiani, A. Bertucci, S. Giannetti, M. Konstantaki, A. Manicardi, S. Pissadakis, A. Cucinotta, R. Corradini, S. Selleri, *Label-free DNA biosensor based on a peptide nucleic acid-functionalized microstructured optical fiber-Bragg grating*, J. Biomed. Opt. 18 (2013) 057004. <https://doi.org/10.1117/1.JBO.18.5.057004>.
18. M. Konstantaki, A. Klini, D. Anglos, S. Pissadakis, *An ethanol vapor detection probe based on a ZnO nanorod coated optical fiber long period grating*, Opt. Express 20 (2012) 8472. <https://doi.org/10.1364/OE.20.008472>.
19. A. Candiani, M. Konstantaki, W. Margulis, S. Pissadakis, *Optofluidic magnetometer developed in a microstructured optical fiber*, Opt. Lett. 37 (2012) 4467. <https://doi.org/10.1364/OL.37.004467>.
20. M. Konstantaki, S. Pissadakis, *Optically tunable long period fiber gratings utilizing a photochromic out-cladding overlayer*, Optical Fiber Technology 17 (2011) 168–170. <https://doi.org/10.1016/j.yofte.2011.01.012>.
21. M. Konstantaki, A. Candiani, S. Pissadakis, *Optical fibre long period grating spectral actuators utilizing ferrofluids as outcladding overlayers*, JEOS:RP 6 (2011) 11007. <https://doi.org/10.2971/jeos.2011.11007>.
22. A. Candiani, W. Margulis, C. Sterner, M. Konstantaki, S. Pissadakis, *Phase-shifted Bragg microstructured optical fiber gratings utilizing infiltrated ferrofluids*, Opt. Lett. 36 (2011) 2548. <https://doi.org/10.1364/OL.36.002548>.
23. A. Candiani, M. Konstantaki, W. Margulis, S. Pissadakis, *A spectrally tunable microstructured optical fibre Bragg grating utilizing an infiltrated ferrofluid*, Opt. Express 18 (2010) 24654. <https://doi.org/10.1364/OE.18.024654>.
24. E. Koudoumas, O. Kokkinaki, M. Konstantaki, N. Kornilios, S. Couris, S. Korovin, V. Pustovoi, V.E. Ogluzdin, *Nonlinear optical response of silicon nanocrystals*, Optical Materials 30 (2007) 260–263. <https://doi.org/10.1016/j.optmat.2006.11.065>.

25. A. Ikiades, G. Howard, D.J. Armstrong, M. Konstantaki, S. Crossley, *Measurement of optical diffusion properties of ice for direct detection ice accretion sensors*, *Sensors and Actuators A: Physical* 140 (2007) 24–31. <https://doi.org/10.1016/j.sna.2007.05.036>.
26. G. Violakis, M. Konstantaki, S. Pissadakis, *Accelerated recording of negative index gratings in Ge-doped optical fibers using 248-nm 500-fs laser radiation*, *IEEE Photon. Technol. Lett.* 18 (2006) 1182–1184. <https://doi.org/10.1109/LPT.2006.874731>.
27. M. Konstantaki, S. Pissadakis, S. Pispas, N. Madamopoulos, N.A. Vainos, *Optical fiber long-period grating humidity sensor with poly(ethylene oxide)/cobalt chloride coating*, *Appl. Opt.* 45 (2006) 4567. <https://doi.org/10.1364/AO.45.004567>.
28. S. Pissadakis, M. Konstantaki, *Photosensitivity of germanosilicate fibers using 213nm, picosecond Nd:YAG radiation*, *Opt. Express* 13 (2005) 2605. <https://doi.org/10.1364/OPEX.13.002605>.
29. M. Konstantaki, G. Tamiolakis, A. Argyris, A. Othonos, A. Ikiades, *Effects of Ge concentration, boron co-doping, and hydrogenation on fiber Bragg grating characteristics*, *Microw. Opt. Technol. Lett.* 44 (2005) 148–152. <https://doi.org/10.1002/mop.20572>.
30. E. Koudoumas, M. Konstantaki, A. Mavromanolakis, S. Couris, M. Fanti, F. Zerbetto, K. Kordatos, M. Prato, *Large Enhancement of the Nonlinear Optical Response of Reduced Fullerene Derivatives*, *Chemistry A European J* 9 (2003) 1529–1534. <https://doi.org/10.1002/chem.200390175>.
31. E. Koudoumas, O. Kokkinaki, M. Konstantaki, S. Couris, S. Korovin, P. Detkov, V. Kuznetsov, S. Pimenov, V. Pustovoi, *Onion-like carbon and diamond nanoparticles for optical limiting*, *Chemical Physics Letters* 357 (2002) 336–340. [https://doi.org/10.1016/S0009-2614\(02\)00557-2](https://doi.org/10.1016/S0009-2614(02)00557-2).
32. A. Arigiris, M. Konstantaki, A. Ikiades, D. Chronis, P. Florias, K. Kallimani, G. Pagiatakis, *Fabrication of high-reflectivity superimposed multiple-fiber Bragg gratings with unequal wavelength spacing*, *Opt. Lett.* 27 (2002) 1306. <https://doi.org/10.1364/OL.27.001306>.
33. E. Koudoumas, M. Konstantaki, A. Mavromanolakis, S. Couris, Y. Ederle, C. Mathis, P. Seta, S. Leach, *Ultrafast nonlinear optical response of C₆₀-polystyrene star polymers*, *Chemical Physics Letters* 335 (2001) 533–538. [https://doi.org/10.1016/S0009-2614\(01\)00088-4](https://doi.org/10.1016/S0009-2614(01)00088-4).
34. E. Koudoumas, M. Konstantaki, A. Mavromanolakis, X. Michaut, S. Couris, S. Leach, *Transient and instantaneous third-order nonlinear optical response of C₆₀ and the higher fullerenes C₇₀, C₇₆ and C₈₄*, *J. Phys. B: At. Mol. Opt. Phys.* 34 (2001) 4983–4996. <https://doi.org/10.1088/0953-4075/34/24/302>.
35. S.B. Korovin, A.N. Orlov, A.M. Prokhorov, V.I. Pustovoi, M. Konstantaki, S. Couris, E. Koudoumas, *Nonlinear absorption in silicon nanocrystals*, *Quantum Electron.* 31 (2001) 817–820. <https://doi.org/10.1070/QE2001v031n09ABEH002052>.
36. M. Konstantaki, E. Koudoumas, S. Couris, P. Lainé, E. Amouyal, S. Leach, *Substantial Non-linear Optical Response of New Polyads Based on Ru and Os Complexes of Modified Terpyridines*, *J. Phys. Chem. B* 105 (2001) 10797–10804. <https://doi.org/10.1021/jp010497e>.

37. M. Konstantaki, E. Koudoumas, S. Couris, J.M. Janot, H. Eddaoudi, A. Deratani, P. Seta, S. Leach, *Optical limiting behaviour of the water-soluble C₆₀/γ-cyclodextrin complex*, Chemical Physics Letters 318 (2000) 488–495. [https://doi.org/10.1016/S0009-2614\(00\)00037-3](https://doi.org/10.1016/S0009-2614(00)00037-3).
 38. W.C. Michie, B. Culshaw, A. McLean, M. Konstantaki, S. Hadjiloucas, *Distributed water ingress and water potential measurements using fibre optics*, Cement and Concrete Composites 19 (1997) 35–44. [https://doi.org/10.1016/S0958-9465\(96\)00039-X](https://doi.org/10.1016/S0958-9465(96)00039-X).
 39. W. Jin, W.C. Michie, G. Thursby, M. Konstantaki, B. Culshaw, *Simultaneous measurement of strain and temperature: error analysis*, OE 36 (1997) 598–609. <https://doi.org/10.1117/1.601233>.
 40. W. Jin, W.C. Michie, G. Thursby, M. Konstantaki, B. Culshaw, *Geometric representation of errors in measurements of strain and temperature*, OE 36 (1997) 2272–2278. <https://doi.org/10.1117/1.601453>.
 41. G. Thursby, D. Walsh, M. Konstantaki, B. Culshaw, W.C. Michie, *Simultaneous recovery of strain and temperature fields by the use of two-moded polarimetry with an in-line mode splitter/analyzer*, Opt. Lett. 20 (1995) 1919. <https://doi.org/10.1364/OL.20.001919>.
 42. W.C. Michie, B. Culshaw, M. Konstantaki, I. McKenzie, S. Kelly, N.B. Graham, C. Moran, *Distributed pH and water detection using fiber-optic sensors and hydrogels*, J. Lightwave Technol. 13 (1995) 1415–1420. <https://doi.org/10.1109/50.400706>.
 43. W.C. Michie, N.B. Graham, F. Santos, E. Bergqvist, B. Carlstrom, C. Moran, B. Culshaw, I. McKenzie, M. Konstantakis, *Distributed sensor for water and pH measurements using fiber optics and swellable polymeric systems*, Opt. Lett. 20 (1995) 103. <https://doi.org/10.1364/OL.20.000103>.
 44. J. Baker, M. Konstantaki, S. Couris, *A resonance enhanced multiphoton ionization study of the CS₂ molecule: The 4 p Rydberg states*, The Journal of Chemical Physics 103 (1995) 2436–2444. <https://doi.org/10.1063/1.469666>
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SCIENTIFIC BOOK CHAPTER

S. Couris, M. Konstantaki, E. Koudoumas, *Characterization of Nonlinear Optical Materials for Photonic Applications*, in: E. Marom, N.A. Vainos, A.A. Friesem, J.W. Goodman, E. Rosenfeld (Eds.), *Unconventional Optical Elements for Information Storage, Processing and Communications*, Springer Netherlands, Dordrecht, 2000: pp. 143–154. https://doi.org/10.1007/978-94-011-4096-6_16.

PUBLICATIONS IN CONFERENCE PROCEEDINGS

1. V. Sarakatsianos, M. Konstantaki, E. Antoniou, E. Chamilaki, N. Pasadakis, S. Pissadakis, *Optical fiber sensor for assessing asphaltene content in crude oil*, in: 29th International Conference on Optical Fiber Sensors, SPIE, 2025: pp. 1409–1412. <https://doi.org/10.1117/12.3062252>.

2. I. Chapalo, V. Sarakatsianos, C. Kouklinou, M. Konstantaki, T. Manouras, M. Vamvakaki, S. Pissadakis, *Organic solvents in-diffusion probe based on Bragg reflectors inscribed in polypropylene no-core optical fibers*, in: 29th International Conference on Optical Fiber Sensors, SPIE, 2025: pp. 969–972. <https://doi.org/10.1117/12.3062311>.
3. I. Chapalo, V. Sarakatsianos, M. Konstantaki, P. Giouni, E. Grantzioti, G.D. Tsibidis, T. Manouras, M. Vamvakaki, S. Pissadakis, *Photosensitivity of Polypropylene No-Core Optical Fibers Using 248nm Laser Radiation*, in: 2025 Conference on Lasers and Electro-Optics Europe & European Quantum Electronics Conference (CLEO/Europe-EQEC), 2025: pp. 1–1. <https://doi.org/10.1109/CLEO/Europe-EQEC65582.2025.11109373>.
4. V. Sarakatsianos, I. Chapalo, E. Grantzioti, T. Manouras, M. Vamvakaki, M. Konstantaki, S. Pissadakis, *Bragg grating reflectors inscribed in polypropylene lightpipes*, in: Advanced Photonics Congress 2024 (2024), Paper BW3A.4, Optica Publishing Group, 2024: p. BW3A.4. <https://doi.org/10.1364/BGPP.2024.BW3A.4>.
5. E. Grantzioti, S. Pissadakis, M. Konstantaki, *Optical fiber probe for VOC vapour monitoring with sub-ppb detectivity*, in: Optical Sensing and Detection VIII, SPIE, 2024: pp. 62–64. <https://doi.org/10.1117/12.3021981>.
6. E. Grantzioti, P. Kleitsiotis, E. Gagaoudakis, V. Binas, S. Pissadakis, M. Konstantaki, *Optical Fiber Sensors for Volatile Organic Compound Vapors*, in: Advanced Photonics Congress 2024 (2024), Paper BTh2A.1, Optica Publishing Group, 2024: p. BTh2A.1. <https://doi.org/10.1364/BGPP.2024.BTh2A.1>. *invited*
7. I. Chapalo, V. Sarakatsianos, M. Konstantaki, T. Manouras, M. Vamvakaki, S. Pissadakis, *FBG inscription and interrogation in polypropylene coreless waveguides*, in: Specialty Optical Fibres VIII, SPIE, 2024: pp. 75–79. <https://doi.org/10.1117/12.3023486>.
8. D. Lopez-Torres, C.E. Aguado, G.A. Pappas, M. Konstantaki, A. Klini, A. Lappas, F.J. Arregui, S. Pissadakis, *ZnO Based, Piezotronic Optical Fiber Sensors for Tracing Volatile Organic Compounds*, in: 2023 Conference on Lasers and Electro-Optics Europe & European Quantum Electronics Conference (CLEO/Europe-EQEC), 2023: pp. 1–1. <https://doi.org/10.1109/CLEO/Europe-EQEC57999.2023.10232798>.
9. E. Grantzioti, N. Samartzis, K. Bhorkar, S. Pissadakis, S.N. Yannopoulos, M. Konstantaki, *Tilted optical fiber Bragg grating with fluorinated graphene-like overlayer for ammonia detection*, in: European Workshop on Optical Fibre Sensors (EWOFS 2023), SPIE, 2023: pp. 161–164. <https://doi.org/10.1117/12.2678525>.
10. A. Padhye, E. Anthoulakis, S. Christodoulou, M.N. Zervas, M. Konstantaki, S. Pissadakis, *Optical fiber sensors for detecting spraying drift in drone agricultural applications*, in: Optical Fibers and Sensors for Medical Diagnostics, Treatment and Environmental Applications XXII, SPIE, 2022: pp. 94–97. <https://doi.org/10.1117/12.2609294>.
11. M. Konstantaki, A. Padhye, E. Anthoulakis, N. Poupouridis, Z. Diamantakis, N. Gavalas, V. Laderos, S. Christodoulou, S. Pissadakis, *Optical fiber sensors in agricultural applications*, in: Optical Sensing and Detection VII, SPIE, 2022: pp. 310–314. <https://doi.org/10.1117/12.2624000>. *invited*
12. N. Poupouridis, Z. Diamantakis, N. Gavalas, V. Laderos, S. Pissadakis, M. Konstantaki, *Optical Fibre Humidity Sensor for Accessing the Wetting Condition of Oak Barrels*, in: 2021 Conference on Lasers and Electro-Optics Europe & European Quantum Electronics

- Conference (CLEO/Europe-EQEC), 2021: pp. 1–1. <https://doi.org/10.1109/CLEO/Europe-EQEC52157.2021.9542155>.
13. D. Skiani, M. Konstantaki, D. Vurro, A. Cucinotta, S. Selleri, S. Iannotta, S. Pissadakis, *Organic vapor optical fiber sensors based on silk fibroin transduction*, in: Optical Sensing and Detection VI, SPIE, 2020: pp. 420–425. <https://doi.org/10.1117/12.2560661>.
 14. O. Rusyakina, M. Konstantaki, S. Pissadakis, P. Mergo, M. Makara, T. Baghdasaryan, H. Thienpont, F. Berghmans, T. Geernaert, *Phase-shifted Bragg grating inscription in photonic crystal fibers by UV phase mask beam stop technique*, in: Micro-Structured and Specialty Optical Fibres VI, SPIE, 2020: pp. 160–166. <https://doi.org/10.1117/12.2556069>.
 15. D. Milanese, D. Pugliese, N.G. Boetti, S. Pissadakis, M. Konstantaki, P. Peterka, L.D. Sieno, D. Gallichi-Nottiani, J. Lousteau, D. Janner, *Multimaterial bioresorbable optical fibers for theranostics*, in: Novel Biophotonics Techniques and Applications V, SPIE, 2019: pp. 99–101. <https://doi.org/10.1117/12.2527679>.
 16. C. Elosúa, M. Konstantaki, A. Klini, F.J. Arregui, S. Pissadakis, *Tilted FBGs coated with ZnO nano coatings for the development of VOC sensor*, in: Seventh European Workshop on Optical Fibre Sensors, SPIE, 2019: pp. 271–274. <https://doi.org/10.1117/12.2542430>.
 17. M. Konstantaki, S. Pissadakis, D. Pugliese, E. Ceci-Ginistrelli, N.G. Boetti, D. Milanese, I. Konidakis, D. Janner, *Toward Bioresorbable Photosensitive Fibers for Theranostics*, in: Advanced Photonics 2018 (BGPP, IPR, NP, NOMA, Sensors, Networks, SPPCom, SOF) (2018), Paper BTu4A.4, Optica Publishing Group, 2018: p. BTu4A.4. <https://doi.org/10.1364/BGPPM.2018.BTu4A.4>.
 18. M. Konstantaki, G. Violakis, T. Geernaert, N. Korakas, N. Tiriakidis, T. Tiriakidi, K. Tiriakidis, H. Thienpont, F. Berghmans, S. Pissadakis, *Optical Fiber Bragg Grating Sensors for Torque Induced Strain Monitoring in Filament Wound Composite Shafts*, in: 26th International Conference on Optical Fiber Sensors (2018), Paper ThE98, Optica Publishing Group, 2018: p. ThE98. <https://doi.org/10.1364/OFS.2018.ThE98>.
 19. R. Gassino, A. Vallan, G. Perrone, M. Konstantaki, S. Pissadakis, *Characterization of fiber optic distributed temperature sensors for tissue laser ablation*, in: 2017 IEEE International Instrumentation and Measurement Technology Conference (I2MTC), 2017: pp. 1–5. <https://doi.org/10.1109/I2MTC.2017.7969862>.
 20. M. Konstantaki, S. Pissadakis, D. Pugliese, E. Ceci-Ginistrelli, N.G. Boetti, D. Milanese, *Bragg Gratings in a Bioresorbable Phosphate Glass Optical Fiber*, in: Photonics and Fiber Technology 2016 (ACOFT, BGPP, NP) (2016), Paper BT2B.3, Optica Publishing Group, 2016: p. BT2B.3. <https://doi.org/10.1364/BGPP.2016.BT2B.3>.
 21. M. Konstantaki, S. Pissadakis, D. Pugliese, E. Ceci-Ginistrelli, N.G. Boetti, D. Milanese, *Bragg grating UV inscription in a bioresorbable phosphate glass optical fiber*, in: 2016 18th International Conference on Transparent Optical Networks (ICTON), 2016: pp. 1–4. <https://doi.org/10.1109/ICTON.2016.7550588>. *invited*
 22. I. Konidakis, M. Konstantaki, S. Pissadakis, *Materials growth and processing in the capillaries of photonic crystal fibres: towards the lab-in-a-fibre protocol*, in: Optical Components and Materials XI, SPIE, 2014: pp. 55–62. <https://doi.org/10.1117/12.2039935>. *invited*

23. I. Konidakis, M. Konstantaki, K. Kosma, S. Pissadakis, *All-optical Optofluidic Switching in a ZnO-overlaid Microstructured Optical Fiber*, in: Advanced Photonics (2014), Paper JTU6A.2, Optica Publishing Group, 2014: p. JTU6A.2. <https://doi.org/10.1364/BGPP.2014.JTu6A.2>.
24. R. Blue, A. Duduś, M. Konstantaki, S. Pissadakis, D. Uttamchandani, *Characterisation of a double tilted fiber Bragg grating using an electrowetting platform*, in: 2014 International Conference on Optical MEMS and Nanophotonics, 2014: pp. 173–174. <https://doi.org/10.1109/OMN.2014.6924578>.
25. M. Konstantaki, G. Tsibidis, P. Childs, M. Sozzi, S. Pissadakis, *Laser etched gratings inside microstructured optical fibres*, MATEC Web of Conferences 8 (2013) 05001. <https://doi.org/10.1051/mateconf/20130805001>. invited
26. M. Konstantaki, M. Sozzi, P. Childs, S. Pissadakis, *Relief Bragg and Long period gratings in solid and hollow core photonic crystal fibers*, in: Workshop on Specialty Optical Fibers and Their Applications (2013), Paper F2.26, Optica Publishing Group, 2013: p. F2.26. <https://doi.org/10.1364/WSOF.2013.F2.26>.
27. A. Candiani, S. Giannetti, M. Sozzi, E. Coscelli, F. Poli, A. Cucinotta, A. Bertucci, R. Corradini, M. Konstantaki, W. Margulis, S. Pissadakis, S. Selleri, *Microstructured optical fiber Bragg grating sensor for DNA detection*, in: Optical Fibers and Sensors for Medical Diagnostics and Treatment Applications XIII, SPIE, 2013: pp. 70–78. <https://doi.org/10.1117/12.2003997>.
28. A. Candiani, S. Giannetti, A. Cucinotta, A. Bertucci, A. Manicardi, M. Konstantaki, W. Margulis, S. Pissadakis, R. Corradini, S. Selleri, *DNA biosensors implemented on PNA-functionalized microstructured optical fibers Bragg gratings*, in: Micro-Structured and Specialty Optical Fibres II, SPIE, 2013: p. 877502. <https://doi.org/10.1117/12.2016684>. invited
29. A. Candiani, S. Giannetti, A. Bertucci, R.M. Naife, H. Al-Janabi, M. Konstantaki, A. Cucinotta, S. Pissadakis, R. Corradini, S. Selleri, *PNA-modified photonic crystal fibers for DNA detection*, in: 2013 Conference on Lasers & Electro-Optics Europe & International Quantum Electronics Conference CLEO EUROPE/IQEC, 2013: pp. 1–1. <https://doi.org/10.1109/CLEOE-IQEC.2013.6801518>.
30. M. Konstantaki, P. Childs, M. Sozzi, S. Pissadakis, *Relief Bragg grating reflectors inscribed into solid core photonic crystal fibres*, in: Advanced Photonics Congress (2012), Paper BM3D.2, Optica Publishing Group, 2012: p. BM3D.2. <https://doi.org/10.1364/BGPP.2012.BM3D.2>.
31. A. Candiani, M. Konstantaki, W. Margulis, S. Pissadakis, *A shear-displacement sensor based on a ferrofluidic defected microstructured optical fibre Bragg grating*, in: Advanced Photonics Congress (2012), Paper BTu2E.2, Optica Publishing Group, 2012: p. BTu2E.2. <https://doi.org/10.1364/BGPP.2012.BTu2E.2>.
32. M. Sozzi, A. Cucinotta, R. Corradini, R. Marchelli, M. Konstantaki, S. Pissadakis, S. Selleri, *Modification of a long period grating-based fiber optic for DNA biosensing*, in: Optical Fibers, Sensors, and Devices for Biomedical Diagnostics and Treatment XI, SPIE, 2011: pp. 115–120. <https://doi.org/10.1117/12.874458>.
33. M. Sozzi, A. Cucinotta, R. Corradini, R. Marchelli, M. Konstantaki, S. Pissadakis, S. Selleri, *Label-free DNA detection with PNA modified long period fiber grating-based sensor*, in: 2011 Conference on Lasers and Electro-Optics Europe and 12th European Quantum Electronics

- Conference (CLEO EUROPE/EQEC), 2011: pp. 1–1.
<https://doi.org/10.1109/CLEOE.2011.5943693>.
34. S. Pissadakis, D. Anglos, A. Klini, M. Konstantaki, *Long period optical fiber grating outcladding overlaid sensors: A versatile photonic platform for health and bio applications*, in: 2011 International Workshop on Biophotonics, 2011: pp. 1–3.
<https://doi.org/10.1109/IWBP.2011.5954850>.
 35. A. Klini, M. Konstantaki, D. Anglos, S. Pissadakis, *An optical fiber long-period grating sensor for organic vapors utilizing a ZnO nanorod out-cladding*, in: 2011 Conference on Lasers and Electro-Optics Europe and 12th European Quantum Electronics Conference (CLEO EUROPE/EQEC), 2011: pp. 1–1. <https://doi.org/10.1109/CLEOE.2011.5943255>.
 36. A. Candiani, M. Konstantaki, S. Pissadakis, C. Sterner, W. Margulis, *Microstructured optical fibre Bragg grating modulator employing an infiltrated ferrofluid*, in: 2011 International Workshop on Biophotonics, 2011: pp. 1–3. <https://doi.org/10.1109/IWBP.2011.5954838>.
 37. A. Candiani, W. Margulis, C. Sterner, M. Konstantaki, P. Childs, S. Pissadakis, *Sensing and actuating photonic devices in magnetofluidic microstructured optical fiber Bragg gratings*, in: Optical Sensors 2011; and Photonic Crystal Fibers V, SPIE, 2011: pp. 538–545.
<https://doi.org/10.1117/12.891891>. *invited*
 38. A. Candiani, W. Margulis, C. Sterner, M. Konstantaki, P. Childs, S. Pissadakis, *A vectorial magnetometer utilising a microstructured optical fibre Bragg grating infiltrated by a ferrofluid*, in: 2011 Conference on Lasers and Electro-Optics Europe and 12th European Quantum Electronics Conference (CLEO EUROPE/EQEC), 2011: pp. 1–1.
<https://doi.org/10.1109/CLEOE.2011.5943079>.
 39. M. Konstantaki, S. Pissadakis, *Optical fibre long period gratings with a photochromic overlayer*, AIP Conf. Proc. 1288 (2010) 55–58. <https://doi.org/10.1063/1.3521370>.
 40. A. Candiani, M. Konstantaki, W. Margulis, S. Pissadakis, *Spectral tuning of Microstructured Optical Fibre Bragg gratings utilizing ferrofluids*, in: 2010 12th International Conference on Transparent Optical Networks, 2010: pp. 1–4.
<https://doi.org/10.1109/ICTON.2010.5549188>.
 41. A. Candiani, M. Konstantaki, W. Margulis, S. Pissadakis, *Spectral tuning of a microstructured fibre Bragg grating utilizing an infiltrated ferrofluidic defect*, in: Advanced Photonics & Renewable Energy (2010), Paper BTuC2, Optica Publishing Group, 2010: p. BTuC2.
<https://doi.org/10.1364/BGPP.2010.BTuC2>.
 42. S. Pissadakis, N.A. Vainos, M. Konstantaki, *Thin film overlaid long period fibre grating sensors: Examples and prospects for advanced health monitoring applications*, in: 2009 9th International Conference on Information Technology and Applications in Biomedicine, 2009: pp. 1–4. <https://doi.org/10.1109/ITAB.2009.5394384>. *invited*
 43. M. Konstantaki, A. Candiani, S. Pissadakis, *Magnetic tuning of optical fibre long period gratings utilizing ferrofluids*, in: 2009 11th International Conference on Transparent Optical Networks, 2009: pp. 1–4. <https://doi.org/10.1109/ICTON.2009.5185091>. *invited*
 44. A. Candiani, M. Konstantaki, S. Pissadakis, *Magnetic tuning of optical fibre long period gratings*, in: CLEO/Europe - EQEC 2009 - European Conference on Lasers and Electro-Optics

- and the European Quantum Electronics Conference, 2009: pp. 1–1.
<https://doi.org/10.1109/CLEOE-EQEC.2009.5196309>.
45. S. Pissadakis, M. Livitziis, G. Violakis, M. Konstantaki, *Inscription of Bragg reflectors in all-silica microstructured optical fibres using 248nm, picosecond, and femtosecond laser radiation*, in: Photonic Crystal Fibers II, SPIE, 2008: pp. 88–98.
<https://doi.org/10.1117/12.781159>. *invited*
 46. G. Violakis, S. Georgiou, M. Konstantaki, S. Pissadakis, *A Comparative Study on the Type IIA Photosensitivity of a B/Ge Optical Fiber Using Ultraviolet, Femtosecond Radiation*, in: Bragg Gratings, Photosensitivity, and Poling in Glass Waveguides (2007), Paper JWA59, Optica Publishing Group, 2007: p. JWA59. <https://doi.org/10.1364/BGPP.2007.JWA59>.
 47. S. Pissadakis, M. Konstantaki, G. Violakis, *Recording of Type IIA Gratings in B-Ge codoped Optical Fibres Using 248nm Femtosecond and Picosecond Laser Radiation*, in: 2006 International Conference on Transparent Optical Networks, 2006: pp. 183–186.
<https://doi.org/10.1109/ICTON.2006.248270>. *invited*
 48. S. Pissadakis, M. Konstantaki, *Type IIA gratings recorded in B-Ge codoped optical fibre using 213 nm Nd:YAG radiation*, in: 2005 31st European Conference on Optical Communication, ECOC 2005, 2005: pp. 563–564 vol.3. <https://doi.org/10.1049/cp:20050610>.
 49. S. Pissadakis, M. Konstantaki, *Grating inscription in optical fibres using 213 nm picosecond radiation: a new route in silicate glass photosensitivity*, in: Proceedings of 2005 7th International Conference Transparent Optical Networks, 2005, 2005: pp. 337–342 Vol. 1.
<https://doi.org/10.1109/ICTON.2005.1505818>. *Invited*
 50. M. Konstantaki, G. Papaioannou, S. Pissadakis, S. Pispas, N. Madamopoulos, N. Vainos, *Optical fiber long-period grating humidity sensor utilizing PEO/CoCl₂ outcladding overlayers*, in: Optical Fibers: Applications, SPIE, 2005: pp. 126–132.
<https://doi.org/10.1117/12.622193>.
 51. A.A. Ikiades, D.J. Armstrong, G.G. Hare, M. Konstantaki, S.D. Crossley, *Fiber optic sensor technology for air conformal ice detection*, in: Industrial and Highway Sensors Technology, SPIE, 2004: pp. 357–368. <https://doi.org/10.1117/12.516910>.
 52. S.D. Crossley, Z. Marioli-Riga, G. Tsamasphyros, G. Kanderakis, N. Furnarakis, A. Ikiades, M. Konstantaki, *Smart patches: self-monitoring composite patches for the repair of aircraft*, in: Industrial and Highway Sensors Technology, SPIE, 2004: pp. 304–315.
<https://doi.org/10.1117/12.516911>.
 53. D.J. Armstrong, G.G. Hare, V. Kloeppel, M. Lawrence, T. Dalton, M. Konstantaki, A. Ikiades, *Air Conformal Ice Detection System (A.C.I.D.S) for the Power Optimised, Ice Protected Aircraft / Rotorcraft*, in: SAE International, 2003. <https://doi.org/10.4271/2003-01-2103>.
 54. E. Koudoumas, O. Kokkinaki, M. Konstantaki, S. Couris, S. Korovin, V.I. Pustovoy, V.E. Ogluzdin, *Nonlinear optical response of silicon nanocomposites*, in: ALT'01 International Conference on Advanced Laser Technologies, SPIE, 2002: pp. 297–301.
<https://doi.org/10.1117/12.478649>.
 55. S.B. Korovin, B.B. Krinetskii, V.I. Pustovoy, S. Fadeeva, M. Konstantaki, E. Koudoumas, S. Couris, *Optical properties of metal-coated silicon nanocrystals*, in: ALT '99 International

Conference on Advanced Laser Technologies, SPIE, 2000: pp. 465–471.

<https://doi.org/10.1117/12.378195>.

56. B. Culshaw, W.R. Philp, S.G. Pierce, W.C. Michie, M. Konstantaki, *Structural integrity monitoring using ultrasonics and fiber optics*, in: International Conference on Fiber Optics and Photonics: Selected Papers from Photonics India '96, SPIE, 1998: pp. 444–453.
<https://doi.org/10.1117/12.345561>.
57. W.C. Michie, G. Thursby, D. Walsh, B. Culshaw, M. Konstantaki, *Distributed sensing of physical and chemical parameters for structural monitoring*, in: IEE Colloquium on Optical Techniques for Smart Structures and Structural Monitoring (Digest No. 1997/033), 1997: p. 3/1-3/9. <https://doi.org/10.1049/ic:19970201>.
58. W.C. Michie, B. Culshaw, G. Thursby, W. Jin, M. Konstantaki, *Optical sensors for temperature and strain measurement*, in: Smart Structures and Materials 1996: Smart Sensing, Processing, and Instrumentation, SPIE, 1996: pp. 134–146.
<https://doi.org/10.1117/12.240855>.
59. W.C. Michie, B. Culshaw, G. Thursby, M. Konstantaki, M.J. Turpin, C. Lecot, B. Noharet, M. Lequime, P. VaNotti, A. Vanucci, D. Lang, P. Kalb, R. Davidson, S.S.J. Roberts, P. Papadopoulos, A. Ikiades, J. Chazelas, P. Bonniau, T. Herbst, A. Windisch, *Optical fiber sensors for monitoring of structures (OSMOS)*, in: Smart Structures and Materials 1996: Smart Sensing, Processing, and Instrumentation, SPIE, 1996: pp. 385–397.
<https://doi.org/10.1117/12.240878>.
60. W. Jin, W.C. Michie, G. Thursby, M. Konstantaki, B. Culshaw, *Simultaneous strain and temperature recovery: error analysis*, in: Optical Fiber Sensors (1996), Paper Tu53, Optica Publishing Group, 1996: p. Tu53. <https://doi.org/10.1364/OFS.1996.Tu53>.
61. W.C. Michie, B. Culshaw, M. Konstantaki, G. Thursby, *Combined strain and temperature measurements using optical fibers*, in: Fiber Optic and Laser Sensors XIII, SPIE, 1995: pp. 274–282. <https://doi.org/10.1117/12.221709>.
62. S. Hadjiloucas, D.A. Keating, M.J. Usher, W.C. Michie, B. Culshaw, M. Konstantaki, N.B. Graham, C.R. Moran, *Hydrogel based distributed fibre optic sensor for measuring soil salinity and soil water potentials*, in: IEE Colloquium on Progress in Fibre Optic Sensors and Their Applications, 1995: p. 9/1-9/6. <https://doi.org/10.1049/ic:19951217>.

OTHER PUBLICATIONS

1. S. Michaux, T. Link, P. Binding, L. Eriksonas, P. Y. Fonjallaz, L. Jones, M. Konstantaki, I. McCabe, G. O'Connor, J. Pazolis, S. Pissadakis, S. Saez, P. Stefanut, E. Stelzmann, L. Svensson, J. Verst, *10 Tools to Enable the Innovation Potential of High-Tech Photonics SMEs*, Steinbeis-Edition, Stuttgart, 2018, ISBN 978-3-95663-168-9 & 978-3-95663-160-3
https://www.steinbeis-edition.de/media/c6/4c/14/1725883331/200290_blick.pdf
2. M. Konstantaki, P. Childs, M. Sozzi, S. Pissadakis, *Relief Photonic Crystal Fiber Bragg Grating Reflectors*, Optics & Photonics News, OPN 23 (2012) 28–28.
<https://doi.org/10.1364/OPN.23.12.000028>

3. S. Pissadakis, A. Candiani, M. Konstantaki, C. Sterner, W. Margulis, *Magnetofluidically Tunable Microstructured Optical Fiber Grating Devices*, Optics & Photonics News, OPN 22 (2011) 26–26. <https://doi.org/10.1364/OPN.22.12.000026>
-

CONFERENCE PRESENTATIONS/ POSTERS

1. S. Spyropoulou, E. Gagaoudakis, P.-T. Tsihchlis, V. Binas, T. Manouras, M. Konstantaki, *Optical Fiber Sensor for pH Monitoring of Aqueous Solutions*, 1st International Conference of the Panhellenic Optical Society (PHOS 2025), Heraklion, Greece,(2025)
2. N. Klonos, V. Sarakatsianos, E. Antoniou, E. Chamilaki, N. Pasadakis, S. Pissadakis, M. Konstantaki, *Asphaltene Precipitation Monitoring in Crude Oil Using Optical Fiber Sensors*, 1st International Conference of the Panhellenic Optical Society (PHOS 2025), Heraklion, Greece,(2025)
3. M. Konstantaki, V. Piñón, A. Philippidis, S. Pissadakis, P. Loukakos, G. Adams, D. Anglos, *Circular materials characterisation at research infrastructures through the European project ReMade@ARI; Laser photo chemistry and spectroscopy techniques at IESL-FORTH*, 2nd International Conference of the Hellenic Society for Circular Economy (HSCE), Chania, Greece (2025)
4. E. Grantzioti, K. Bhorkar, N. Samartzis, S. Pissadakis, SN. Yannopoulos, M. Konstantaki, *Fluorinated Graphene Flakes as Overlayer on a Tilted Optical Fiber Bragg Grating for Ammonia Vapor Detection*, The European Conference on Lasers and Electro-Optics, Munich, Germany (2023)
5. V. Sarakatsianos, E. Antoniou, E. Chamilaki, M. Konstantaki, N. Pasadakis, S. Pissadakis, *Optical Fiber Sensing Probe for Asphaltene Monitoring in Crude Oil*, Photonics & Electromagnetics Research Symposium PIERS 2023, Prague, Czech Republic (2023)
6. S. Pissadakis, S. Christodoulou, E. Anthoulakis, M.N. Zervas, M. Konstantaki, *Optical fiber sensors for monitoring agricultural drone spraying operations*, Online Smart farming Conference, Photonics Applications Week, (2021), *invited*
7. M. Konstantaki, T. Chalyan, *Optical fiber sensors for the assessment of oak barrels used in wine aging*, Online Smart farming Conference, Photonics Applications Week, (2021), *invited*
8. M. Konstantaki, D. Pugliese, D. Milanese, Candiani, S. Pissadakis, *Optical Fiber Bragg Grating Sensors for Medical Application*, Photonics & Electromagnetics Research Symposium PIERS 2019, Rome, Italy (2019), *invited*
9. I. Konidakis, M. Konstantaki and S. Pissadakis, *A light-controlled optofluidic switch using ZnO as actuating material*, 3rd EOS Conference on Optofluidics, EOSOF-2015, Munich, Germany (2015)
10. S. Pissadakis, M. Konstantaki, I. Konidakis, *All-optical optofluidic actuators in microstructured Optical fibers utilizing ZnO Overlayers*, EU-Korea workshop on Advanced Materials, EMRS, Lille, France, (2015), *invited*
11. S. Pissadakis, M. Konstantaki, A. Candiani, *Optical fibre magnetofluidic sensors and actuators*, IMEKO 2014 September 2014, Benevento, Italy, (2014) *invited*

12. A. Candiani, M. Konstantaki, W. Margulis, S. Pissadakis, *A smart-skin shear sensor based on ferrofluid infiltrated Bragg grating in a microstructured optical fibre*, SPIE Photonics Europe, Brussels, Belgium, (2012) *invited*
13. M. Sozzi, A. Cucinotta, S. Selleri, R. Corradini, M. Konstantaki, S. Pissadakis, *Label-free detection of DNA biomolecules with a long period grating-based fiber optic sensor*, Photonics West 2011, San Francisco, USA, (2011)
14. M. Konstantaki, A. Klini, D. Anglos, S. Pissadakis, *An ethanol vapor detection probe based on a ZnO nanorod overlaid optical fibre long-period grating*, OFS-2011, Ottawa, Canada, (2011)
15. A. Candiani, W. Margulis, C. Sterner, M. Konstantaki, S. Pissadakis, *Magnetofluidic microstructured optical fibre Bragg gratings*, EOSOF 2011, Munich, Germany, (2011)
16. A. Candiani, M. Konstantaki, S. Pissadakis, W. Margulis, *Spectral tuning of a microstructured optical fibre Bragg grating by employing an infiltrated ferrofluidic actuator*, Photonics Europe 2010, Brussels, Belgium, (2010)
17. A. Candiani, M. Konstantaki, W. Margulis, S. Pissadakis, *Spectral tuning of microstructured optical fibre Bragg gratings utilizing ferrofluids*, SWP 2010, Munich, Germany, (2010), *invited*
18. S. Pissadakis, A. Candiani, M. Konstantaki, M. Livitziis, G. Tsibidis, J. Kobelke and K. Schuster, *Bragg reflectors inscribed in micro structured optical fibres: inscription considerations and device development*, MEDINANO 2, Athens, Greece, (2009), *invited*
19. G. Violakis, M. Konstantaki, S. Pissadakis, *Comparative results on the recording of Type IIA gratings in B-Ge optical fibres using femtosecond and picosecond 248nm laser radiation*, CLEO-Europe 2007, Munich, Germany, (2007)
20. M. Konstantaki, Y. Franghiadakis, F. Mavromatakis, V. Zacharopoulos, E. Koudoumas and D. Kalymnios, *The effect of concentrated sunlight transfer on the transmission characteristics of plastic optical fibers*, 16th International on optical fibers, POF 2007, Turin, Italy (2007)
21. S. Pissadakis, M. Konstantaki, G. Violakis, *Deep UV radiation induced photodissociative processes in transparent optical materials: index engineering and structural modification effects*, 4th LAMP, Kyoto, Japan, (2006)
22. G. Violakis, M. Konstantaki, and S. Pissadakis, *Inscription of Thermally Durable Type IIA Gratings in B/Ge-codoped Optical Fibres Using 248nm, 500fs Radiation*, CLEO/QELS 2006, Long Beach, California, (2006)
23. M. Konstantaki, M. Raptis, I. Franghiadakis, E. Koudoumas and D. Kalymnios, *Plastic optical fibre for solar power transfer*, Annual conference on Telecommunications and multimedia, TEMU 2005, Heraklion, Greece, (2005)
24. P. Detkof, S. Korovin, S. Pimenov, V. Pustovoi, E. Koudoumas, O. Kokkinaki, M. Konstantaki, S. Couris, *Onion-like carbon for nonlinear optics*, International Conference on Advanced Laser Technologies ALT'01, Constanta, Romania, (2001)
25. S. Korovin, V. Pustovoi, V. E. Ogluzdin, E. Koudoumas, O. Kokkinaki, M. Konstantaki, S. Couris, *Modification of the optical properties of silicon nanoclusters covered by silver*, International Conference on Advanced Laser Technologies ALT'01, Constanta, Romania, (2001)

26. A. Ikiades, M. Konstantaki, *Fibre optic ice detection for rotor blades of Helicopters*, 4th Community Aeronautical Days, Hamburg, Germany, (2001)
 27. S. Couris, M. Konstantaki, E. Koudoumas, Y. Ederle, C. Mathis, S. Leach and P. Seta, *Nonlinear optical properties of C₆₀-polystyrene star polymers*, 2nd International Symposium on Optical Power Limiting, Venice, Italy, (2000)
 28. E. Koudoumas, M. Konstantaki, S. Couris, S. Korovin, K. Pustovoi, *Nonlinear optical response of silicon nanoclusters*, European Research Conference on Chemistry and physics of multifunctional materials, San Feliu de Guixols, Spain, (1999)
 29. M. Konstantaki, E. Koudoumas, S. Couris, *Investigation of the third order nonlinear optical properties of higher fullerenes C₇₀, C₇₆ and C₈₄*, European Research Conference on Chemistry and physics of multifunctional materials, San Feliu de Guixols, Spain, (1999)
 30. S. Couris, M. Konstantaki, E. Koudoumas, *Characterization of the nonlinear optical properties of photonic materials*, European Research Conference on Chemistry and physics of multifunctional materials, San Feliu de Guixols, Spain, (1999)
-