

CURRICULUM VITAE

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Research Activity's Web Page: [Applied Photonics - Materials & Devices](#)

EDUCATION

- Ph.D. in Materials Science and Technology, University of Crete, Greece
- M.Sc. in Microelectronics and Optoelectronics, , University of Crete, Greece
- B.Sc. Honors Degree in Physics, , University of Patras, Greece

PROFESSIONAL EXPERIENCE AND APPOINTMENTS

- 01/07/2020- : Postdoctoral Research fellow, TPCI/NHRF, Athens, Greece
- 01/07/2018-31/06/2020: R&D Engineer at Eulambia Advanced Technologies
- 01/07/2018-01/10/2019: Research Associate, Microelectronics Research Group IESL/FORTH
- 10/01/2011 – 30/06/2018: Postdoctoral Research Fellow, Microelectronics Research Group IESL/FORTH
- 01/10/2015 – 30/11/2016: Postdoctoral Research Fellow, Crete Center for Quantum Complexity and Nanotechnology, Univ. Crete, Dpt. Physics.
- 25/05/2012 – 10/10/2014: External Scientific Researcher, Ioffe Physical Technical Institute, Saint Petersburg, Russia
- 01/12/2012 – 31/12/2013: Postdoctoral Research Fellow, Univ. Crete, Dpt. Materials Science and Technology.

- 12/06/2011 – 20/12/2011, External Scientific Research Visitor, Nanophotonics Group, Cavendish Laboratory, Cambridge

MAIN RESEARCH INTERESTS

- Integrated Photonic Quantum Computers
- Novel polaritonic devices (LEDs, Lasers, Transistors, Switches, single photon emitters, polariton optical circuits, random number generator)
- Analog and Quantum polariton simulators
- Quantum technologies
- Hybrid semiconductor-organic polariton LEDs
- Semiconductor optoelectronic devices (Edge emitting lasers, Vertical cavity surface emitting lasers, self-assembled InAs quantum dots single photon emitters)
- Optical Physical Unclonable Functions (PUFs)
- Free space communications using Gaussian and Airy beams
- Laser propagation in turbulent media
- Photonic based methods for biomass estimation

PROFESSIONAL AFFILIATIONS & ACTIVITIES

Reviewer: Nature Communications, Phys. Rev. B, Phys. Rev. Let. Appl. Phys. Let.

HONORS – AWARDS

- Manasaki Scholarship for postgraduate students (2008), Department of Materials Science and Technology, Univ. of Crete
- Stavros Niarchos Foundation Scholarship within the framework of the project ARCHERS (“Advancing Young Researchers’ Human Capital in Cutting Edge Technologies in the Preservation of Cultural Heritage and the Tackling of Societal Challenges”, 2017)

TEACHING ACTIVITIES

- University of Crete, Undergraduate Thermodynamics Laboratory
- University of Crete, Undergraduate Electromagnetism Laboratory
- University of Crete, Undergraduate Quantum Mechanics

EXTERNAL FUNDING

- Greek GSRT EABM 34, Young Investigator Support Grant “Analog Polariton Simulator”.

SELECTED PUBLICATIONS

- **Polariton condensate trapping by parametric pair scattering**, G.G. Paschos, A.Tzimis, S. I. Tsintzos, P.G. Savvidis, Journal of Physics: CM 32, 36LT02 (2020).
- **Electrical tuning of nonlinearities in exciton-polariton condensates**, S.I. Tsintzos, A. Tzimis, G. Stavriniadis, A. Trifonov, Z. Hatzopoulos, J.J. Baumberg, H. Ohadi, and P.G. Savvidis, Phys. Rev. Let. 121, 037401 (2018)

- **Hybrid organic-inorganic polariton laser**, G. G. Paschos, N. Somaschi, S. I. Tsintzos, D. Coles, J. L. Bricks, Z. Hatzopoulos, D. G. Lidzey, P. G. Lagoudakis & P. G. Savvidis, *Scientific Reports* 7, 11377 (2017)
- **Spin Order and Phase Transitions in Chains of Polariton Condensates**, H. Ohadi, A. J. Ramsay, H. Sigurdsson, Y. del Valle-Inclan Redondo, S. I. Tsintzos, Z. Hatzopoulos, T. C. H. Liew, I. A. Shelykh, Y. G. Rubo, P. G. Savvidis and J. J. Baumberg. *PRL* 119, 067401 (2017)
- **Enhanced Stark Tuning of Single InAs (211)B Quantum Dots due to Nonlinear Piezoelectric Effect in Zincblende Nanostructures**, S. Germanis, C. Katsidis, S. I. Tsintzos, A. Stavriniadis, G. Konstantinidis, N. Florini, J. Kioseoglou, G. P. Dimitrakopoulos, Th. Kehagias, Z. Hatzopoulos, and N. T. Pelekanos, *Phys. Rev. Applied* 6, 014004 (2016)
- **An attojoule electrical spin-switch based on optically trapped polariton condensates**, A Dreismann, H Ohadi, Y.V.I. Redondo, R. Balili, Y Rubo, S.I. Tsintzos, G. Deligeorgis, Z. Hatzopoulos, P.G. Savvidis, J.J. Baumberg, *Nature Materials* 15, 1074 (2016)
- **Coupling Quantum Tunneling with Cavity Photons**, P. Cristofolini, G. Christmann, S. I. Tsintzos, G. Deligeorgis, G. Konstantinidis, Z. Hatzopoulos, P.G. Savvidis and J.J. Baumberg, *Science* 336, 704 (2012)
- **A GaAs polariton light-emitting diode operating near room temperature**, S. Tsintzos, N. T. Pelekanos, G. Konstantinidis, Z. Hatzopoulos, P. G. Savvidis, *Nature* 453, 372 (2008).