CURRICULUM VITAE

June 2016

Name:	Emmanuel Paspalakis
Date of Birth:	21 February 1973
Place of Birth:	Thessaloniki, Greece
Citizenship:	Hellenic
Marital Status:	Married, two children
Work Address:	Materials Science Department School of Natural Sciences University of Patras Patras 265 04 Greece Tel: +30 2610 969346 E-mail: paspalak@upatras.gr Google scholar: http://scholar.google.com/citations?user=PtoIBy4AAAAJ&hl=en
Home Address:	Meilihou 74 Ekso Agia Patras 264 42 Greece Tel: +30 2610 423674, +30 6944 447194 (mobile)

UNIVERSITY EDUCATION

10/1996 - 05/1999: PhD in Physics, Imperial College of Science, Technology and Medicine, University of London, London, England. Title of Thesis: "Quantum Interference and Coherent Control in Dissipative Atomic Systems". Supervisor: Sir Peter L. Knight FRS.

10/1994 - 09/1996: MSc. in Atomic and Molecular Physics, Physics Department, University of Crete, Greece

09/1990 - 09/1994: 4-year BSc. (Ptyhion) in Physics, Physics Department, University of Crete, Greece (Ranked first in my year)

EMPLOYMENT

07/2013 - present: Associate Professor, Materials Science Department, University of Patras, Greece.

05/2008 – 06/2013: Assistant Professor, Materials Science Department, University of Patras, Greece. Tenured 08/2011.

09/2003 – 04/2008: Lecturer, Materials Science Department, University of Patras, Greece.

11/2002 - 10/2003: Postdoctoral Researcher at the Materials Science Department, University of Patras, Greece, with a scholarship by the Greek State Scholarships Foundation (IKY).

11/2001 – 08/2003: Fixed Term Lecturer, Materials Science Department, University of Patras, Greece.

04/1999 - 09/1999 and 04/2001 - 10/2001: Full-time Research Associate in the group of Professor Sir P.L. Knight FRS, Department of Physics, Imperial College of Science, Technology and Medicine.

11/1999 - 07/2001: Compulsory Military Service. Specialization: Meteorologist.

09/1997 - 03/1999: Part-time Research Assistant in the group of Professor Sir P.L. Knight FRS, Department of Physics, Imperial College of Science, Technology and Medicine.

09/1997 – 09/1999: Computer Administrator of the Quantum Optics and Laser Science Group, Imperial College of Science, Technology and Medicine.

TEACHING EXPERIENCE & SUPERVISION

11/2001 - present: I have fully taught 7 undergraduare courses and parts of 4 undergraduate and 3 postgraduate courses at the Materials Science Department of the University of Patras. I have supervised/co-supervised or currently supervise/co-supervise the PhD Thesis of six PhD students at the Materials Science and Physics Departments of the University of Patras. I have also supervised the Postgraduate Diploma Thesis of three postgraduate students of the Materials Science Department, University of Patras and co-supervised the Postgraduate Diploma Thesis of six postgraduate students of the Physics Department, University of Patras. In addition, I have supervised/co-supervised the Diploma Thesis of thirteen undergraduate students of the Materials Science Department, University of Patras and two undergraduate students of the Physics Department, University of Patras. Finally, I have supervised the work of two postdoctoral researchers and an academic visitor.

MEMBER OF DEPARTMENTAL COMMITTEES

Vice-chair of the Materials Science Department, University of Patras (09/2014 - present). Coordinator or Member of the Committees: for Studies Curriculum, for Academic Development, for Studies Regulations, for Postgraduate Studies, and of the Committee organizing the Entry Exams for graduates of other disciplines at the Materials Science Department, University of Patras. Library Academic Supervisor, Materials Science Department, University of Patras (2005 – 2007).

RESEARCH INTERESTS

My research interests cover a wide range of theoretical and computational topics in the areas of Light-Matter Interactions, Nanophotonics, Quantum Optics, Nonlinear Optics, Quantum Control, Optoelectronics, Dynamics of Nanostructures and Quantum Computation. In my work I use quantum theory of the optical and electronic properties of materials, with emphasis to materials with applications in optoelectronics and quantum computing. Specific topics of research interest include:

- Coherent control in dissipative quantum systems.
- Quantum coherence and interference in atomic-molecular systems, semiconductor quantum wells and quantum dots with optoelectronic applications.
- Electromagnetically induced transaparency, slow light and enhanced nonlinear optics in atomic-molecular systems and semiconductor nanostructures.
- Coherent effects in photonic band gap materials.
- Electromagnetic field propagation in waveguide directional couplers, plasmonic nanostructures and metamaterials.
- Laser control of tunneling in molecules and semiconductor nanostrutures with emphasis to applications in quantum computation.
- Practical systems for quantum computation. Controlled creation of superposition states, entangled states and quantum gates in semiconductor nanostructures, supeconducting nanoelectronics and magnetic systems.
- Electron transfer in coupled quantum dots, molecular wires and molecular switches.
- Quantum plasmonics, interaction of surface plasmons of metallic nanosystems with atoms, molecules and semiconductor quantum dots.

CONFERENCES / SYMPOSIA ORGANIZATION

07/2004: Member of the Organizing Committee of the *Symposium in Materials Science*, University of Patras, Patras, July 12-13, 2004.

03/2007 – 09/2007: Co-organizer (with Dr. I. Thanopulos) of the *International Symposium 'Quantum Control and Light-Matter Interactions: Recent Computational and Theoretical Results'* of the *International Conference of Computational Methods in Sciences and Engineering 2007 (ICCMSE 2007)*, Hotel Marbella, Corfu, Greece, September 25-28, 2007.

6/2008 – 10/2009: Scientific Secretariat of the *International Commission of Optics (ICO) Topical Meeting on Emerging Trends and Novel Materials in Photonics*, Delphi, Greece, October 7-9, 2009.

12/2010: Member of the Organizing Committee of the one-day Meeting of the Research Network 'Nanophotonics: Advanced Materials and Devices' with title *50 Years Laser*, University of Patras, Patras, December 6, 2010.

2014 - present: Member of Scientific, Program or Advisory/Organising Committees of MATERIALS '14, PHOTOPTICS 2015, MATERIALS '15, PHOTOPTICS 2016, International Semiconductor Science and Technology Conference-2016, PHOTOPTICS 2017 and Asian Advanced Materials Congress 2017.

REFEREEING SERVICES

Scientific Journals: Physical Review A (from 1998), Journal of Physics B (from 1998), Optics Communications (from 1998), Journal of Modern Optics (from 1998), Physical Review Letters (from 1999), Contemporary Physics (from 1999), Physics Letters A (from 2001), European Physical Journal D (from 2003), Journal of Optics B: Quantum and Semiclassical Optics (2004-2005), Europhysics Letters (from 2005), Physical Review B (from 2005), Physica B (from 2006), Journal of Physics: Condensed Matter (from 2006), Journal of Applied Physics (from 2006), Physica Status Solidi (b) (from 2006), New Journal of Physics (from 2006), Modern Physics Letters B (from 2007), Journal of the Optical Society of America B (from 2007), Physica E (from 2007), Optics Letters (from 2009), Nanoscale Research Letters (from 2009), Journal of Computational and Theoretical Nanoscience (from 2009), Photonics and Nanostructures: Fundamental and Applications (from 2010), Physica Scripta (from 2010), Journal of Luminescence (from 2010), Optics Express (from 2010), Superlattices and Microstructures (from 2011), Entropy (from 2011), Nano Letters (from 2011), Applied Physics Letters (from 2011), Nanotechnology (from 2012), Optical Engineering (from 2012)**,** Laser Physics (from 2014), Journal of Physical Chemistry C (from 2016)

I have reviewed research proposals for the Canadian National Research Council and for internal funding of Greek and Italian Universities.

I have been the external adjudicator of the PhD thesis of Mr. Bibhas Kumar Dutta in the Department of Physics and Technophysics, Vidyasagar University, India, in May 2010.

PUBLICATIONS – PRESENTATIONS

I have published **122** articles in international refereed journals (**114** in journals with non-zero impact factor), **4** articles in books and **16** in extended conference proceedings. I have participated in more than **150** presentations in international and Greek conferences and have delivered several invited and plenary presentations in international and Greek conferences and universities.

Publications in International Refereed Journals with Non-zero Impact Factor:

Number of Papers	Journal Title	Impact Factor (2015)
4	Physical Review Letters	7.645
1	Contemporary Physics	5.000
2	Journal of Physical Chemistry C	4.509

13	Physical Review B	3.718
1	Nanotechnology	3.573
1	Optics Letters	3.040
18	Physical Review A	2.765
1	Journal of Luminescence	2.693
1	Nanoscale Research Letters	2.584
3	Annals of Physics	2.375
2	Journal of Physics: Condensed Matter	2.209
15	Journal of Applied Physics	2.101
5	Physica E: Low-Dimensional Systems and Nanostructures	1.904
1	Chemical Physics Letters	1.860
3	Journal of Optics	1.847
2	Quantum Information Processing	1.840
5	Journal of Physics B: Atomic, Molecular and Physics	1.833
1	Applied Physics B: Lasers and Optics	1.785
5	Physics Letters A	1.677
3	Journal of Computational and Theoretical Nanoscience	1.666
1	Laser and Particle Beams	1.649
1	Philosophical Magazine	1.632
1	Photonics and Nanostructures: Fundamentals and Applications	1.505
7	Optics Communications	1.480
16	Journal of Modern Optics	1.267
1	Laser Physics	1.102

CITATIONS

My work has been cited more than **4378** times (Google Scholar) and my *h*-index is **34** (Google Scholar). In the last five years my work has been cited more than **2101** times (Google Scholar). Specifically:

2011: **372** citations
2012: **348** citations
2013: **450** citations
2014: **372** citations
2015: **353** citations
2016: **206** citations

I note that my self-citations are less than 10 %.

Google Scholar: http://scholar.google.com/citations?user=PtoIBy4AAAAJ&hl=en

SCHOLARSHIPS

11/2002 – 10/2003: Scholarship for Postdoctoral Research by the Greek State Scholarships Foundation (IKY). Title of Research Project: *'A study of electromagnetically induced transparency in optically dense media'*. Host Institute: Materials Science Department, University of Patras.

MEMBER OF EDITORIAL BOARD

04/2009 – present: Member of the Editorial Board of the *Journal of Modern Optics* (Taylor & Francis).

01/2012 – present: Member of the Editorial Board of the *Journal of Photonics and Optoelectronics* (World Academic Publishing).

01/2012 – present: European Editor of the *Journal of Advanced Physics* (American Scientific Publishers).

07/2012 – present: Member of the Editorial Board of the *Journal of Materials* (Hindawi Publishing Corporation).

02/2014 – present: Member of the Editorial Board of the *Annals of Materials Science and Engineering* (Austin Publishing Group).

05/2015 – present: Member of the Editorial Board of *Heliyon* (Elsevier).

EDITOR OF BOOKS AND SPECIAL ISSUES IN SCIENTIFIC JOURNALS

1. Active involvement in the editing of part of the Proceedings of ICCMSE 2007. Responsible for the collection and refereeing of short papers of the Symposium *"Quantum Control and Light-Matter Interactions: Recent Computational and Theoretical Results"*. The short papers of the Symposium were published in AIP Conference Proceedings **963 (Vol. 2B)**, p. 733 – 846 (2007).

2. Co-Editor, with Ass. Prof. A.F. Terzis, of the scientific book *"Recent Research Topics and Developments in Chemical Physics: From Quantum Scale to Macroscale"*, (Transworld Research Network, 2009) (ISBN: 978-81-7895-316-8), pages 215.

3. Guest Editor, with Dr. I. Thanopulos, of the Special Issue with topic *Quantum Control of Matter and Light* of the Journal of Modern Optics, issue 6, **Vol. 56**, p. 685-850 (2009).

4. Associate Editor with Prof. Nikos Vainos, Prof. Stelios Couris, Assist. Prof. John Koutselas (University of Patras, Greece) and Dr. Stavros Pissadakis (IESL, FORTH, Greece) of the Proceediings of the *International Commission of Optics (ICO) Topical Meeting on Emerging Trends and Novel Materials in Photonics*, AIP Conference Proceedings **1288**, p. 1 – 223 (2010).

5. Guest Editor with Prof. Robert W. Boyd (University of Rochester, USA), Prof. Cornelia Denz (University of Münster, Germany) and Prof. Ortwin Hess (University of Surrey, UK) of the Special Issue with topic *Slow Light* of the Journal of Optics (Institute of Physics), issue 10, Vol. **12**, October 2010.

6. Guest Editor with Prof. Nikos Vainos, Prof. Stelios Couris, Assoc. Prof. Michael Sigalas (University of Patras, Greece) and Dr. Stavros Pissadakis (IESL, FORTH, Greece) of the Special Issue with topic *Emerging Trends and Novel Materials in Photonics* of the Photonics and Nanostructures: Fundamentals and Applications (Elsevier), issue 2, Vol. **9**, p. 109-206 (2011).

INVITED AND PLENARY TALKS

1. "Observation of electromagnetically induced transparency in a three-subband semiconductor quantum well", *5th International Conference on Intersubband Transitions in Quantum Wells*, Bad Ischl, Austria, September 7-11, 1999 (Invited)

2. "New effects caused by strong resonant optical fields interacting with a three-level quantum well intersubband electron system", *Photonics West 2001: Integrated Optoelectronics Devices*, San Jose, California, USA, January 20-26, 2001 (Invited)

3. "Propagation dynamics in a coherently prepared multi-level medium", Atomic Physics Group, Physics Department, University of Durham, Durham, England, May 24, 2001 (Invited)

4. "Propagation dynamics in multi-level media", Quantum Optics and Laser Science Group, Physics Department, Imperial College of Science Technology and Medicine, London, England, October 4, 2001 (Invited)

5. "Coherence and control in laser pulse propagation", Physics Department, University of Crete, Heraklion, Greece, September 26, 2002 (Invited)

6. "Coherent control of matter and light", *10th Central-European Workshop on Quantum Optics*, Rostock-Warnemünde, Germany, April 4-7, 2003 (Invited)

7. "Control of quantum media: coherence and interference", Quantum and Nonlinear Optics Department, Research Institute for Solid State Physics and Optics, Hungarian Academy of Sciences, Budapest, Hungary, July 21, 2003 (Invited)

8. "Spontaneous emission and transparency in photonic band gap materials", Quantum and Nonlinear Optics Department, Research Institute for Solid State Physics and Optics, Hungarian Academy of Sciences, Budapest, Hungary, October 27, 2003 (Invited)

9. "Coherent manipulation, quantum information transfer and entanglement in three-level SQUID qubits", *Workshop on Quantum Probability and Information*, Patras, Greece, May 20-21, 2005 (Invited)

10. "Nonlinear effects in externally driven quantum dot qubits", *18th Panhellenic Conference in Nonlinear Science and Complexity*, Volos, Greece, July 18-30, 2005 (Invited)

11. "Coherent manipulation of semiconductor nanostructures and superconducting qubits", *Tenth International Conference on Squeezed States and Uncertainty Relations (ICSSUR 2007)*, Bradford, England, March 31-April 4, 2007 (Invited)

12. "Quantum Monte Carlo study in anisotropic Heisenberg chains: thermodynamic and quantum properties", *Fourth North America – Greece – Cyprus Workshop on Paramagnetic Materials*, Patras, Greece, June 14-18, 2011 (Invited)

13. "Optical properties of a quantum system near a plasmonic nanostructure", Quantum Dynamics Theory Group, Max Planck Institute for Nuclear Physics, Heidelberg, Germany, June 19, 2012 (Invited)

14. "Coherent optical effects of quantum - plasmonic nanocomposites", *3rd International Conference on Circuits, Systems, Communications, Computers and Applications*, Florence, Italy, November 22-24, 2014 (Plenary)

15. "Optical properties of symmetric coupled quantum dot nanostructures", *2015 International Conference on Materials*, Zakynthos, Greece, July 16-20, 2015 (Invited)

I also note that I have been asked to deliver invited or plenary talks in several other international conferences but was unable to accept the invitation. Examples of such recent conferences include the International Conference on Transport and Optical Properties of Nanomaterials, Allahabad, India, January 5-8, 2009; the Control of Quantum Dynamics of Atoms, Molecules and Ensembles by Light Workshop (CAMEL5) Nesebar, Bulgaria, June 23-28, 2009; the Dasan Conference on Slow Light**,** Jeju Island, South Korea, November 4-6**,** 2009; the CAMEL6 Workshop, Varna, Bulgaria, June 28 - July 3, 2010; the 2nd International Workshop on Entanglement and Quantum Control, Qufu, Shandong, China, June 7-10, 2010; the International Conference on Frontier Topics in Nanostructures and Condensed Matter Theory, London, Ontario, Canada, March 9-11, 2011; the International Conference on Nanomaterials, London, Ontario, Canada, August 12-16, 2013; and the Stimulated Raman Adiabatic Passage in Physics, Chemistry and Technology International Symposium, Kaiserslautern, Germany, September 22-25, 2015.

OTHER ACHIEVEMENTS

1. From 2007 my published papers receive more than 250 citations by other researchers per year.

2. 15 of my papers have been selected in the Virtual Journal of Nanoscale Science and Technology, 7 in the Virtual Journal of Ultrafast Science, 5 in Virtual Journal of Quantum Information and 2 in Virtual Journal of Applications of Superconductivity.

RESEARCH PROJECTS

03/2016 – present Research Project of Excellence IKY-Siemens 'Optically controlled coupled quantum-plasmonic nanostructures and applications in nanotechnology'. Greek State Scholarships Foundation (IKY). Project leader. Budject 50.000 €.

08/2015 – present Member of EC COST project MP1403 "Nanoscale Quantum Optics".

01/2014 – 09/2015 Teaching Project 'Materials Science for Advanced Technologies' in collaboration with the Materials Science Departments of the University of Crete and Universty of Ioannina. Member of the group of professors that wrote and run the project. Budget 145.636,92 €.

04/2013 – 06/2015 Research Project Support of Postdoctoral Researchers (Postdoc) 'Applications of optical metamaterial nanocomposites', General Secretariat for Research and Technology. Project leader. Budject 150.000 €.

01/2013 – 09/2015 Research Project Thales 'Feasibility studies on novel nanostructures of ZnO and their applications in nanophotonics and energy conversion: experimental and theoretical approach', Ministry of Education and Religion. Research team member. Project leader: Dr. S. Yannopoulos. Budject 600.000 €.

01/2012 – 09/2015 Research Project Arhimedes III 'Quantum coherence and interference in nonlinear optical processes in semiconductor nanostructures', Ministry of Education and Religion. Research team member. Project leader: Prof. J. Boviatsis. Budject 100.000 €.

09/2010 – 09/2013 Research Project Heraclitus II 'Nonlinear optics in structured photonic enviroment', Ministry of Education and Religion. Project leader. This research project was graded with 10/10 (excellent). Budject 45.000 €.

08/2009 – present Member of the Research Network 'Nanophotonics: Advanced Materials and Devices', Research Committee, University of Patras. Budject 6.000 € per year.

06/2009 – 05/2012 Research Project K. Karatheodoris 'Theoretical and computational studies of nanosystems with applications in quantum computing', Research Committee, University of Patras. Research team member. Project leader: Assoc. Prof. A.F. Terzis. Budject 24.000 €.

01/2006 – 06/2009 Research Project K. Karatheodoris 'Optical Transparency in Semiconductor Nanostructures', Research Committee, University of Patras. Project leader. Budject 23.475 €.

01/2005 – 12/2007 Research Project Pythagoras II 'Controlled Dynamics of Nanostructures and Applications in Quantum Computation', Ministry of Education and Religion. Project leader. Budject 84.900 €.

01/2005 – 12/2007 Research Project Arhimedes II 'Optical Transparency and Applications in Systems of Semiconductor Quantum Wells and Quantum Dots', Ministry of Education and Religion. Research team member. Project leader: Prof. J. Boviatsis. Budject 60.000 €.

03/2005 – 02/2007 Greek-Hungarian bilateral Research Project 'Nonlinear and Quantun Optics in Photonic Band Gap Materials: Phenomena and Methods', General Secretariat for Research and Technology. Greek project leader. Budject of the Greek side 10.395 €.

06/2003 – 01/2005 EC COST project P11 "Physics of linear, nonlinear and active photonic band gap materials". National representative.

03/2000 – 11/2001 European Commission "Coherence and Control of Atomic and Molecular Systems and Processes" Network (HPRN-CT-1999-00129), Imperial College of Science, Technology and Medicine Node. Research team member.

09/1997 – 09/1999 British EPSRC Research Grant on "Control of Dissipation in Quantum Optical Systems" (GR/K93532/01), Quantum Optics and Laser Science Group, Imperial College of Science, Technology and Medicine. Research team member. Project leader: Professor Sir P.L. Knight, FRS.

09/1997 – 09/2000 European Commission "Cavity QED and Microlasers" TMR Network (ERBFMRXCT96066), Imperial College of Science, Technology and Medicine Node. Research team member.

09/1996 – 09/1998 British EPSRC Research Grant on "Quantum Control of Atomic and Molecular Systems" (GR/L14060/01), Quantum Optics and Laser Science Group, Imperial College of Science, Technology and Medicine. Research team member. Project leader: Professor Sir P.L. Knight, FRS.

09/1996 – 10/2001 British EPSRC Rolling Grant on "Intense Laser-Matter Interactions", Laser Consortium, Imperial College of Science, Technology and Medicine. Research team member.

PUBLICATIONS IN INTERNATIONAL REFEREED SCIENTIFIC JOURNALS

1. **E. Paspalakis**, M. Protopapas and P.L. Knight, *`Population transfer through the continuum with temporally delayed chirped laser pulses'*, Optics Communications **142**, 34-40 (1997).
2. **E. Paspalakis**, A. Patel, M. Protopapas and P.L. Knight, *`Phase control of a two-channel ionization system'*, Journal of Physics B **31**, 761-774 (1998).
3. **E. Paspalakis**, M. Protopapas and P.L. Knight, *`Time-dependent pulse and frequency effects in population trapping via the continuum'*, Journal of Physics B **31**, 775-794 (1998).
4. **E. Paspalakis** and P.L. Knight, *`Population transfer via an autoionizing state with temporally delayed chirped laser pulses'*, Journal of Physics B **31**, 2753-2767 (1998).
5. **E. Paspalakis**, S.-Q. Gong and P.L. Knight, *`Spontaneous emission-induced coherent effects in absorption and dispersion of a V-type three-level system'*, Optics Communications **152**, 293-298 (1998).

- 19th most cited paper in the period 1998 – 2007 among 7795 papers (Source: Scopus).

6. **E. Paspalakis** and P.L. Knight, *`Phase control of spontaneous emission'*, Physical Review Letters **81**, 293-296 (1998).
7. N.J. Kylstra, **E. Paspalakis** and P.L. Knight, *`Laser-induced continuum structure in helium: ab initio non-perturbative calculations'*, Journal of Physics B (Letter to the Editor) **31**, L719-L728 (1998).
8. **E. Paspalakis**, C.H. Keitel and P.L. Knight, *`Fluorescence control through multiple interference mechanisms'*, Physical Review A **58**, 4868-4877 (1998).
9. S.-Q. Gong, **E. Paspalakis** and P.L. Knight, *`Effects of spontaneous emission interference on population inversions of a V-type system'*, Journal of Modern Optics (Letter to the Editor) **45**, 2433-2442 (1998).

- 13th most cited paper in the period 1998 – 2007 among 2136 papers (Source: Scopus).

10. **E. Paspalakis**, N.J. Kylstra and P.L. Knight, *`Transparency induced via decay interference'*, Physical Review Letters **82**, 2079-2082 (1999).
11. **E. Paspalakis** and P.L. Knight, *`Restoring dark lines in spontaneous emission via Fano interference'*, Journal of Modern Optics **46**, 623-631 (1999).
12. **E. Paspalakis**, N.J. Kylstra and P.L. Knight, *`Transparency near a photonic band edge'*, Physical Review A (Rapid Communication) **60**, R33-R36 (1999).
13. **E. Paspalakis**, N.J. Kylstra and P.L. Knight, *`Propagation dynamics in an autoionization medium'*, Physical Review A **60**, 642-647 (1999).
14. **E. Paspalakis**, N.J. Kylstra and P.L. Knight, *`Propagation dynamics in media with interfering dissipation mechanisms'*, Laser Physics **9**, 819-825 (1999).

15. **E. Paspalakis**, *`Physical interpretation of laser-induced suppression of quantum tunneling'*, Physics Letters A **261**, 247-251 (1999).
16. **E. Paspalakis**, D.G. Angelakis and P.L. Knight, *`The influence of density of modes on dark lines in spontaneous emission'*, Optics Communications **172**, 229-240 (1999).
17. G.B. Serapiglia, **E. Paspalakis**, C. Sirtori, K.L. Vodopyanov and C.C. Phillips, *`Laser-induced quantum coherence in a semiconductor quantum well'*, Physical Review Letters **84**, 1019-1022 (2000).
18. **E. Paspalakis**, N.J. Kylstra and P.L. Knight, *`Transparency of a short laser pulse via decay interference in a closed V-type system'*, Physical Review A **61**, 045802 (2000).
19. C.C. Phillips, **E. Paspalakis**, G.B. Serapiglia, C. Sirtori and K.L. Vodopyanov, *`Observation of electromagnetically induced transparency and measurements of subband dynamics in a semiconductor quantum well'*, Physica E **7**, 166-173 (2000).
20. D.G. Angelakis, **E. Paspalakis** and P.L. Knight, *`Transient properties of modified reservoir-induced transparency'*, Physical Review A **61**, 055802 (2000).
21. **E. Paspalakis** and P.L. Knight, *`Spontaneous emission properties of a quasi-continuum'*, Optics Communications **179**, 257-265 (2000).
22. **E. Paspalakis** and P.L. Knight, *`Coherent control of spontaneous emission in a four-level system'*, Journal of Modern Optics **47**, 1025-1041 (2000).
23. **E. Paspalakis**, *`Wavepacket localization via repeated measurements'*, Journal of Modern Optics **47**, 1375-1384 (2000).
24. **E. Paspalakis**, N.J. Kylstra and P.L. Knight, *`Ab initio, non-perturbative calculations of laser-induced continuum structure in helium'*, Laser and Particle Beams **18**, 461-466 (2000).
25. **E. Paspalakis** and P.L. Knight, *`Localizing an atom via quantum interference'*, Physical Review A **63**, 065802 (2001).
26. D.G. Angelakis, **E. Paspalakis** and P.L. Knight, *`Coherent phenomena in photonic crystals'*, Physical Review A **64**, 013801 (2001). Selected at:
- Virtual Journal of Nanoscale Science and Technology **3** (24), 50 (2001).

27. **E. Paspalakis** and P.L. Knight, *`Transparency and parametric generation in a four-level system'*, Journal of Modern Optics **49**, 87-95 (2002).
28. **E. Paspalakis** and P.L. Knight, *`On pulse propagation in a coherently prepared multi-level medium'*, Journal of Modern Optics **49**, 201-206 (2002).
29. **E. Paspalakis**, N.J. Kylstra, and P.L. Knight, *`Propagation and nonlinear generation dynamics in a coherently prepared four-level system'*, Physical Review A **65**, 053808 (2002).
30. **E. Paspalakis** and P.L. Knight, *`Transparency, slow light and enhanced nonlinear optics in a four-level scheme'*, Journal of Optics B **4**, S372-S375 (2002).
31. **E. Paspalakis** and P.L. Knight, *`Electromagnetically induced transparency and controlled group velocity in a multi-level system'*, Physical Review A **66**, 015802 (2002).
32. **E. Paspalakis** and Z. Kis, *`Pulse propagation in a coherently prepared multi-level medium'*, Physical Review A **66**, 025802 (2002).
33. **E. Paspalakis** and Z. Kis, *`Enhanced nonlinear generation in a three-level medium with spatially dependent coherence'*, Optics Letters **27**, 1836-1838 (2002).
34. **E. Paspalakis**, *`Localizing two interacting electrons in a driven quantum dot molecule'*, Physical Review B **67**, 233306 (2003). Selected at:
- Virtual Journal of Quantum Information **3** (7), 77 (2003).
- Virtual Journal of Nanoscale Science and Technology **8** (1), 83 (2003).
- Virtual Journal of Ultrafast Science **2** (7), 69 (2003).

35. Z. Kis and **E. Paspalakis**, *`Enhancing nonlinear frequency conversion using spatially dependent coherence'*, Physical Review A **67**, 043817 (2003).
36. E. Voutsinas, A.F. Terzis and **E. Paspalakis**, *`Control of electron localization in a coupled quantum dot structure',* Journal of Modern Optics **51**, 479-489 (2004).
37. Z. Kis and **E. Paspalakis**, *`Arbitrary rotation and entanglement of flux SQUID qubits'*, Physical Review B **69**, 024510 (2004). Selected at:
- Virtual Journal of Quantum Information **4** (2), 44 (2004).

- Virtual Journal of Nanoscale Science and Technology **9** (3), 54 (2004).
- Virtual Journal of Applications of Superconductivity **6** (3), 1 (2004).

38. **E. Paspalakis** and A.F. Terzis, *`Localization effects in a two-electron quantum dot molecule: the case of AC-DC driving fields'*, Journal of Applied Physics (Communication) **95**, 1603-1605 (2004). Selected at:

- Virtual Journal of Nanoscale Science and Technology **9** (4), 10 (2004).

39. **E. Paspalakis**, Z. Kis, E. Voutsinas and A.F. Terzis, *`Controlled rotation in α double quantum dot structure'*, Physical Review B **69**, 155316 (2004). Selected at:

- Virtual Journal of Quantum Information **4** (5), 79 (2004).
- Virtual Journal of Nanoscale Science and Technology **9** (17), 69 (2004).
- Virtual Journal of Ultrafast Science **3** (5), 123 (2004).

40. I. Thanopulos, **E. Paspalakis** and Z. Kis, *`Laser driven coherent manipulation of molecular chirality'*, Chemical Physics Letters **390**, 228-235 (2004).

41. Z. Kis, **E. Paspalakis**, F. Renzoni and S. Stenholm, *`Controlling material by light and light by material via adiabatic processes'*, Quantum Electronics-Part B of Acta Physica Hungarica **20**, 161-164 (2004) (Invited Paper).

42. **E. Paspalakis** and N.J. Kylstra, *`Coherent manipulation of superconducting quantum interference devices with adiabatic passage'*, Journal of Modern Optics **51**, 1679-1689 (2004).

43. D.G. Angelakis, P.L. Knight and **E. Paspalakis**, *`Photonic crystals and inhibition of spontaneous emission: an introduction'*, Contemporary Physics **45**, 303-318 (2004).

44. Z. Kis and **E. Paspalakis**, *`Controlled entanglement of excitons in coupled quantum dots'*, Journal of Applied Physics **96**, 3435-3439 (2004). Selected at:

- Virtual Journal of Nanoscale Science and Technology **10** (11), 56 (2004).

45. A.F. Terzis and **E. Paspalakis**, *`Thermal entanglement in a two-qubit Ising model under a site-dependent external magnetic field'*, Physics Letters A **333**, 438-445 (2004).

46. A.F. Terzis and **E. Paspalakis**, *`High-order harmonic generation in a two-electron quantum dot molecule'*, Journal of Applied Physics **97**, 023523 (2005). Selected at:

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