

# Prof. Elefterios Lidorikis

## CURRICULUM VITAE

### I. Personal Information

**Name:** Elefterios Lidorikis  
**Date of Birth:** August 31<sup>th</sup>, 1969  
**Address:** Department of Materials Science and Engineering  
University of Ioannina, GR-45110 Ioannina, Greece  
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**Current Professional Position:** Professor of Computational Materials Science  
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### II. Education

9/1994 – 9/1999 Ph.D. in Condensed Matter Physics (honours), Iowa State University, USA  
10/1987 – 9/1993 B.Sc. in Physics, Aristotle University of Thessaloniki, Greece

### III. Research Interests and Activities

- Computational nanophotonics & plasmonics, optoelectronics, heat and charge transport.
- Enhanced light harvesting, photodetection, spectroscopy and biodetection based on plasmonic nanostructures, carbon nanotube arrays, graphene.

### IV. Awards

5/2000 Iowa State University, Dept. of Physics and Astronomy, Research Excellence award.  
12/1999 Iowa State University, Graduate College, Research Excellence award.

### V. Employment History

11/2017- Professor (tenured), University of Ioannina  
9/2012-11/2017 Associate Professor (tenured), University of Ioannina  
9/2009-9/2012 Assistant Professor (tenured), University of Ioannina  
3/2006-9/2009 Assistant Professor (tenure track), University of Ioannina  
1/2004-2/2006 Computational and Design Engineer, Luminus Devices Inc., Woburn, MA, USA  
11/2001-12/2004 Postdoctoral Research Fellow, RLE and Department of Physics, Massachusetts Institute of Technology, MA, USA  
9/1999-10/2001 Postdoctoral Research Associate, Department of Physics & Astronomy, Louisiana State University, LA, USA  
1/1996-8/1999 Research Assistant, Ames Laboratory-U.S. DOE and Department of Physics and Astronomy, Iowa State University, IA, USA  
10/1997-1/1998 Intern, Schlumberger Oil-Field Services, Houston, TX, USA  
9/1994-12/1995 Teaching Assistant, Department of Physics and Astronomy, Iowa State University, IA, USA

### VI. Funding (coordinator and/or partner coordinator)

- KAUST project – **LASEMAL** (CRG2020), 2021-2023, Uoi budget: 210k€  
*Large-Scale Electronics Manufactured with Light*
- EU project 953187 – **MUSICODE** (H2020), **2021-2024**, Uoi budget: 750k€  
*An experimentally-validated multi-scale materials, process and device modelling & design platform enabling non-expert access to open innovation in the Organic and Large Area Electronics Industry*
- EU project 881603 – **GrapheneCore3** (H2020), **2020-2023**, Uoi budget: 197k€  
*Graphene--Driven Revolutions in ICT and Beyond.*
- EU project 785219 – **GrapheneCore2** (H2020), **2018-2021**, Uoi budget: 197k€

### *Graphene--Driven Revolutions in ICT and Beyond.*

- EU project 760949 – **CORNET** (H2020), **2018-2021**, UoI budget: 294k€  
*Multiscale modelling and characterization to optimize the manufacturing processes of Organic Electronics materials and devices.*
- EU project 696656 – **GrapheneCore1** (H2020), **2016-2018**, UoI budget: 248k€  
*Graphene--Driven Revolutions in ICT and Beyond.*
- EU project 604391 – **GrapheneFlagship** (FP7), **2013-2016**, UoI budget: 330k€  
*Graphene--Driven Revolutions in ICT and Beyond.*
- EU project 310229 – **SMARTONICS** (FP7), **2013-2016**, UoI budget: 440k€  
*Development of smart machines, tools and processes for the precision synthesis of nanomaterials with tailored properties for Organic Electronics.*
- GSRT-Greece project - **NANO-HYBRID** (Synergasia 11), **2013-2015**, UoI budget: 212k€  
*Multifunctional nanocoatings with hybrid organic-inorganic interfaces.*
- GSRT-Greece project - **STSSoC** (Synergasia 11)  
Surface treatment of multicrystalline silicon solar cells for improved efficiency. **2013-2015**, UoI budget: 62k€
- GSRT-Greece project - **Nanocomposite Photonics** (Heracleitus II), **2011-2014**, UoI budget: 45k€  
Computational study, design and applications of nanocomposite metalodielectric photonic materials,

## VII. Publications, Patents and Conferences Summary

Publications in peer-reviewed journals:	78
Publications in peer-reviewed proceedings volumes:	22
Book chapters:	2
Issued Patents:	18 US + 1 UK
Pending Patent Applications:	1 UK
Citations (source: Scopus, 1/2/2019):	>5800 (h-index=34)
Conference Organizer:	10
International conference participations/presentations:	>60
Invited Talks:	>35

## VIII. Journal publications

1. S. Castilla, I. Vangelidis, V.-V. Pusapati, J. Goldstein, M. Autore, T. Slipchenko, K. Rajendran, S. Kim, K. Watanabe, T. Taniguchi, L. Martín-Moreno, D. Englund, K.J. Tielrooij, R. Hillenbrand, E. Lidorikis, F.H.L. Koppens, "Plasmonic antenna coupling to hyperbolic phonon-polaritons for sensitive and fast mid-infrared photodetection with graphene", **Nature Communications** 11, 4872 (2020).
2. C. Trapalis, E. Lidorikis, D.G. Papageorgiou, "Structural and energetic properties of P3HT and PCBM layers on the Ag(1 1 1) surface", **Computational and Theoretical Chemistry** 1190, 112997 (2020).
3. E. Yarali, Y. Firdaus, Y. Lin, A. El-Labban, M. Gedda, E. Lidorikis, E. Yengel, H. Faber and T.D. Anthopoulos, "Rapid Photonic Processing of High-Electron-Mobility PbS Colloidal Quantum Dot Transistors", **ACS Appl. Mater. Interfaces** 12, 31591 0 (2020).
4. A. Jamnig, N. Pliatsikas, M. Konpan, J. Lu, T. Kehagias, A.N. Kotanidis, N. Kalfagiannis, D.V. Bellas, E. Lidorikis, J. Kovac, G. Abadias, I. Petrov, J.E. Greene and K. Sarakinos, "3D-to-2D morphology manipulation of sputter-deposited nanoscale silver films on weakly-interacting substrates via selective nitrogen deployment for multifunctional metal contacts", **ACS Applied Nano Materials** 3, 4728 (2020).
5. D.T.L. Alexander, D. Forrer, E. Rossi, E. Lidorikis, S. Agnoli, G.D. Bernasconi, J. Butet, O.J.F. Martin, V. Amendola, "Electronic Structure-Dependent Surface Plasmon Resonance in Single Au-Fe Nanoalloys", **Nano Letters** 19, 5754 (2019).
6. G. Soavi, G. Wang, H. Rostami, A. Tomadin, O. Balci, I. Paradeisanos, E.A.A. Pogna, G. Cerullo, E. Lidorikis, M. Polini, A.C. Ferrari, "Hot electrons modulation of third harmonic generation in graphene", **ACS Photonics**, 6, 2841 (2019).
7. N. Kalfagiannis, J. Stoner, J. Hillier, I. Vangelidis and E. Lidorikis, "Mid- to Far- Infrared Sensing: SrTiO<sub>3</sub>, a Novel Optical Material", **J. Mater. Chem. C** 7, 7851 (2019).
8. S. Castilla, B. Terres, M. Autore, L. Viti, J. Li, I. Vangelidis, K. Watanabe, T. Taniguchi, E. Lidorikis, M.S. Vitiello, R. Hillenbrand, K.-J. Tielrooij, F.H.L. Koppens, "Fast and sensitive terahertz detection using an antenna-integrated graphene pn-junction", **Nano Lett.** 19, 2765 (2019).
9. N. Myoung, H. C. Park, A. Ramachandran, E. Lidorikis, J.-W. Ryu, "Flat-band localization and self-collimation of light in photonic crystals", **Nature Reports** 9, 2862 (2019).
10. M. Kanidi, A. Dagkli, N. Kelaidis, D. Palles, S. Aminalragia-Giamini, J. Marquez-Velasco, A. Colli, A. Dimoulas, E. Lidorikis, M. Kandyla, E.I. Kamitsos, "Surface-Enhanced Raman Spectroscopy of Graphene Integrated in Plasmonic Silicon Platforms with Three-Dimensional Nanotopography", **J. Phys. Chem. C** 123, 3076 (2019).
11. S. Doukas, A. Chatzilari, A. Dagkli, A. Papagiannopoulos, E. Lidorikis, "Deep and fast free-space electro-absorption modulation in a mobility-independent graphene-loaded Bragg resonator", **Appl. Phys. Lett.** 113, 011102 (2018).
12. C.-H. Kim, M. Seitanidou, J.W. Jin, Y. Bonnassieux, G. Horowitz, I. Vangelidis, E. Lidorikis, A. Laskarakis, S. Logothetidis, "Lumped-element model of plasmonic solar cells", **Solid-State Electronics** 147, 39 (2018).
13. G. Memos, E. Lidorikis, G. Kokkoris, "Roughness evolution and charging in plasma-based surface engineering of polymeric substrates: The effects of ion reflection and secondary electron emission", **Micromachines** 9, 415 (2018).

14. I. Vangelidis, A. Theodosi, M.J. Beliatis, K.K. Gandhi, A. Laskarakis, P. Patsalas, S. Logothetidis, S.R.P. Silva, E. Lidorikis, "Plasmonic Organic Photovoltaics: Unraveling Plasmonic Enhancement for Realistic Cell Geometries", **ACS Photonics** 5, 1440 (2018).
15. G. Memos, E. Lidorikis, G. Kokkoris, "The interplay between surface charging and microscale roughness during plasma etching of polymeric substrates", **J. Appl. Phys.** 123, 073303 (2018).
16. P. Patsalas, N. Kalfagiannis, S. Kassavetis, G. Abadias, D.V. Bellas, C. Lekka, E. Lidorikis, "Conductive nitrides: Growth principles, optical and electronic properties, and their perspectives in photonics and plasmonics", **Materials Science and Engineering R** 123, 1 (2018).
17. M. Casalino, U. Sassi, I. Goykhman, A. Eiden, E. Lidorikis, S. Milana, D. De Fazio, F. Tomarchio, M. Iodice, G. Coppola, A.C. Ferrari, "Vertically Illuminated, Resonant Cavity Enhanced, Graphene-Silicon Schottky Photodetectors", **ACS Nano** 11, 10955 (2017).
18. D.V. Bellas and E. Lidorikis, "Design of high-temperature solar-selective coatings for application in solar collectors", **Solar Ener. Mater. & Solar Cells** 170, 102 (2017).
19. D. Popa, Z. Jiang, G.E. Bonacchini, Z. Zhao, L. Lombardi, F. Torrisi, A.K. Ott, E. Lidorikis and A.C. Ferrari, "A stable, power scaling, graphene-mode-locked all-fiber oscillator", under review in **Appl. Phys. Lett.** 110, 243102 (2017).
20. U. Sassi, R. Parret, S. Nanot, M. Bruna, S. Borini, D. De Fazio, Z. Zhao, E. Lidorikis, F.H.L. Koppens, A.C. Ferrari and A. Colli "Graphene-based mid-infrared room-temperature pyroelectric bolometers with ultrahigh temperature coefficient of resistance" **Nature Commun.** 8 14311 (2017).
21. D.V. Bellas, D. Toliopoulos, N. Kalfagiannis, A. Siozios, P. Nikolaou, P.C. Kelires, D. C. Koutsogeorgis, P. Patsalas and E. Lidorikis, "Simulating the opto-thermal processes involved in laser induced self-assembly of surface and sub-surface plasmonic nano-structuring" **Thin Solid Films** 630, 7 (2017)
22. F. Torrisi, D. Popa, S. Milana, Z. Jiang, T. Hasan, E. Lidorikis, A.C. Ferrari, "Stable, Surfactant-Free Graphene-Styrene Methylmethacrylate Composite for Ultrafast Lasers", **Adv. Opt. Mater.** 4, 1088–1097 (2016).
23. S. Kassavetis, D. V. Bellas, G. Abadias, E. Lidorikis and P. Patsalas, "Plasmonic spectral tunability of conductive ternary nitrides", **Appl. Phys. Lett.** 108, 263110 (2016).
24. D. Spasopoulos, S. Kaziannis, A.E. Karantzalis, E. Lidorikis, A. Ikiades and C. Kosmidis, "Tailored Aggregate-Free Au Nanoparticle Decorations with Sharp Plasmonic Peaks on a U-Type Optical Fiber Sensor by Nanosecond Laser Irradiation", **Plasmonics** 12, 535 (2016).
25. N. Kalfagiannis, A. Siozios, D.V. Bellas, D. Toliopoulos, L. Bowen, N. Pliatsikas, W.M. Cranton, C. Kosmidis, D.C. Koutsogeorgis, E. Lidorikis, P. Patsalas, " Selective modification of nanoparticle arrays by laser-induced self assembly (MONA-LISA): Putting control into bottom-up plasmonic nanostructuring", **Nanoscale** 8, 8236 (2016).
26. T.J. Echtermeyer, S. Milana, U. Sassi, A. Eiden, M. Wu, E. Lidorikis, A.C. Ferrari, "Surface Plasmon Polariton Graphene Photodetectors", **Nano Lett.** 16, 8-20 (2016).
27. G. Kakavelakis, I. Vangelidis, A.G. Kanaras, E. Lidorikis, E. Stratakis, E. Kymakis, "Plasmonic Backscattering Effect for High Efficient Organic Photovoltaic Devices", **Adv. Energy Mater.** 6, 1501640 (2016).
28. D. Chavelas, P. Oikonomou, A. Botsialas, P. Argitis, N. Papanikolaou, D. Goustouridis, K. Beltsios, E. Lidorikis, I. Raptis, M. Chatzichristidi, "Lithographically tuned one dimensional polymeric photonic crystal arrays", **Opt. & Laser Technol.** 68, 105-112 (2015).
29. N. Myoung, E. Lidorikis, "Finite-temperature effects on conductance modulation by local doping in graphene with multiple magnetic barriers", **2D Materials** 2, 045007 (2015).
30. A. Siozios, D.C. Koutsogeorgis, E. Lidorikis, G.P. Dimitrakopoulos, N. Pliatsikas, G. Vourlias, T. Kehagias, P. Komninou, W. Cranton, C. Kosmidis, P. Patsalas, "Laser-matter interactions, phase changes and diffusion phenomena during laser annealing of plasmonic AlN:Ag templates and their applications in optical encoding", **J. of Phys. D** 48, 285306 (2015).
31. D.G. Purdie, D. Popa, V.J. Wittwer, Z. Jiang, G. Bonacchini, F. Torrisi, S. Milana, E. Lidorikis, A.C. Ferrari, "Few-cycle pulses from a graphene mode-locked all-fiber laser", **Appl. Phys. Lett.** 106, 253101 (2015).
32. P. Nikolaou, C. Mina, M. Constantinou, L.E. Koutsokeras, G. Constantinides, E. Lidorikis, A. Avgeropoulos, P.C. Kelires, P. Patsalas, "Functionally graded poly(dimethylsiloxane)/silver nanocomposites with tailored broadband optical absorption", **Thin Solid Films** 581, 14 (2015).
33. A. Siozios, N. Kalfagiannis, D.V. Bellas, C. Bazioti, G.P. Dimitrakopoulos, G. Vourlias, W.M. Cranton, E. Lidorikis, D.C. Koutsogeorgis, P. Patsalas, "Sub-surface laser nanostructuring in stratified metal/dielectric media: a versatile platform towards flexible, durable and large-scale plasmonic writing", **Nanotechnology** 26, 155301 (2015).
34. S. Kassavetis, S. Kaziannis, N. Pliatsikas, A. Avgeropoulos, A.E. Karantzalis, C. Kosmidis, E. Lidorikis, P. Patsalas, "Formation of plasmonic colloidal silver for flexible and printed electronics using laser ablation", **Applied Surface Science** 336, 262 (2015)
35. A.C. Ferrari, et al., "Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems", **Nanoscale** 7, 4598-4810 (2015).
36. T.J. Echtermeyer, P.S. Nene, M. Trushin, R.V. Gorbachev, A.L. Eiden, S. Milana, Z. Sun, J. Schliemann, E. Lidorikis, K.S. Novoselov, A.C. Ferrari, "Photothermoelectric and photoelectric contributions to light detection in metal-graphene-metal photodetectors", **Nano Letters** 14, 3733 (2014).
37. C. Bazioti, G.P. Dimitrakopoulos, T. Kehagias, P. Komninou, A. Siozios, E. Lidorikis, D.C. Koutsogeorgis, P. Patsalas, "Influence of laser annealing on the structural properties of sputtered AlN:Ag plasmonic nanocomposites", **Journal of Materials Science** 49, 3996 (2014).
38. H. Zoubos, L.E. Koutsokeras, D.F. Anagnostopoulos, E. Lidorikis, S.A. Kalogirou, A.R. Wildes, P.C. Kelires, P. Patsalas, "Broadband optical absorption of amorphous carbon/Ag nanocomposite films and its potential for solar harvesting applications", **Solar Energy Mater. Sol. Cells** 117, 350-356 (2013).
39. P. Klar, E. Lidorikis, A. Eckmann, I.A. Verzhbitskiy, A.C. Ferrari, C. Casiraghi, "Raman scattering efficiency of graphene", **Phys. Rev. B** 87, 205435 (2013).
40. R. Mary, G. Brown, S.J. Beecher, F. Torrisi, S. Milana, D. Popa, T. Hasan, Z.P. Sun, E. Lidorikis, S. Ohara, A.C. Ferrari, A.K. Kar, "1.5 GHz picosecond pulse generation from a monolithic waveguide laser with a graphene-film saturable output coupler", **Opt. Express** 21, 7943-7950 (2013).
41. C.L. Chochos, A. Avgeropoulos and E. Lidorikis, "Theoretical study of phenyl-substituted indacenodithiophene copolymers for high performance organic photovoltaics", **J. Chem. Phys.** 138, 064901 (2013).

42. E. Lidorikis, "Modeling of Enhanced Absorption and Raman Scattering Caused by Plasmonic Nanoparticle Near Fields", *J. Quant. Spectr. Rad. Transf.* 113, 303-314 (2012).
43. A.Siozios, D.C. Koutsogeorgis, E. Lidorikis, A. Lotsari, G.P. Dimitrakopoulos, H. Zoubos, Ph. Komninou, W. Cranton, C. Kosmidis, P. Patsalas, "Optical Encoding by Plasmon-based Patterning: Inorganic Materials Become Photosensitive", *Nano Letters* 12, 259 (2012).
44. N. Lagos, M.M. Sigalas and E. Lidorikis, "Theory of Plasmonic Near-Field Enhanced Absorption in Solar Cells", *Appl. Phys. Lett.* 99, 063304 (2011).
45. N.T. Panagiotopoulos, G. Karras, E. Lidorikis, D.C. Koutsogeorgis, C. Kosmidis, and P. Patsalas, "Photosensitivity and Optical Performance of Hydrogenated Amorphous Carbon Films Processed by PS Laser Beams", *Surf. Coat. Technol.* 206, 734 (2011).
46. N.T. Panagiotopoulos, P. Patsalas, C. Prouskas, G. Dimitrakopoulos, P. Komninou, T. Karakostas, A.P. Tighe, and E. Lidorikis, "Bare-Eye View at the Nanoscale: a New Visual Interferometric Multi-Indicator (VIMI)", *ACS Appl. Mater. Interfaces* 2, 3052 (2010).
47. M. Agrawal, D. Fischer, S. Gupta, N.E. Zafeiropoulos, A. Pich, E. Lidorikis, and M. Stamm, "Three-Dimensional Colloidal Crystal Arrays Exhibiting Stop Band in Near-Infrared Region", *J. Phys. Chem. C*, 114, 16389 (2010).
48. F. Schedin, E. Lidorikis, A. Lombardo, V.G. Kravets, A.K. Geim, A. N. Grigorenko, K.S. Novoselov, and A.C. Ferrari, "Surface Enhanced Raman Spectroscopy of Graphene", *ACS Nano* 4, 5617 (2010).
49. E. Lidorikis and A.C. Ferrari, "Photonics with Multi-Wall Carbon Nanotube Arrays", *ACS Nano* 3, 1238 (2009).
50. C. Casiraghi, A. Hartschuh, E. Lidorikis, H. Qian, H. Harutyunyan, T. Gokus, K. S. Novoselov, and A. C. Ferrari, "Rayleigh Imaging of Graphene and Graphene Layers", *Nano Letters* 7, 2711 (2007).
51. E. Lidorikis, S. Egusa, and J.D. Joannopoulos, "Effective Medium Properties and Photonic Crystal Superstructures of Metallic Nanoparticle Arrays", *J. Appl. Phys.* 101, 054304 (2007).
52. P. Bermel, E. Lidorikis, Y. Fink, and J.D. Joannopoulos, "Active Materials Embedded in Photonic Crystals and Coupled to Electromagnetic Radiation", *Phys. Rev. B* 73, 165125 (2006).
53. E. Lidorikis, M.E. Bachlechner, R.K. Kalia, A. Nakano, and P. Vashishta, "Coupling Atomistic and Continuum Length Scales in Heteroepitaxial Systems: Multiscale Molecular Dynamics/Finite/Element Simulations of Strain Relaxation in Si/Si<sub>3</sub>N<sub>4</sub> Nanopixels", *Phys. Rev. B* 72, 115338 (2005).
54. A. Karalis, E. Lidorikis, M. Ibanescu, J.D. Joannopoulos, and M. Soljacic, "Surface-Plasmon-Assisted Guiding of Broadband Slow and Subwavelength Light in Air", *Phys. Rev. Lett.* 95, 063901 (2005).
55. D.L.C. Chan, E. Lidorikis, and J.D. Joannopoulos, "Point Defect Geometries in Inverted Opal Photonic Crystals", *Phys. Rev. E* 71, 056602 (2005).
56. M. Soljacic, E. Lidorikis, J.D. Joannopoulos, and L.V. Hau, "Ultralow-power All-Optical Switching", *Appl. Phys. Lett.* 86, 171101 (2005).
57. M. Soljacic, E. Lidorikis, L.V. Hau, and J.D. Joannopoulos, "Enhancement of Microcavity Lifetimes Using Highly Dispersive Materials", *Phys. Rev. E* 71, 026602 (2005).
58. D. Roundy, E. Lidorikis, and J.D. Joannopoulos, "Polarization-Selective Waveguide Bends in a Photonic Crystal Structure with Layered Square Symmetry", *J. of Appl. Phys.* 96, 7750 (2004).
59. M.H. Qi, E. Lidorikis, P.T. Rakich, S.G. Johnson, J.D. Joannopoulos, E.P. Ippen, and H.I. Smith, "A Three-Dimensional Optical Photonic Crystal with Designed Point Defects", *Nature* 429, 538 (2004).
60. M.L. Povinelli, S.G. Johnson, E. Lidorikis, J.D. Joannopoulos, and M. Soljacic, "Effect of a Photonic Band Gap on Scattering from Waveguide Disorder", *Appl. Phys. Lett.* 84, 3639 (2004).
61. K.C. Huang, E. Lidorikis, X.Y. Jiang, J.D. Joannopoulos, K.A. Nelson, P. Bienstman, and S.H. Fan, "Nature of Lossy Bloch States in Polaritonic Photonic Crystals", *Phys. Rev. B* 69, 195111 (2004).
62. M. Soljacic, E. Lidorikis, M. Ibanescu, S.G. Johnson, J.D. Joannopoulos, and Y. Fink, "Optical Bistability and Cutoff Solitons in Photonic Band Gap Fibers", *Opt. Express* 12, 1518 (2004).
63. E. Lidorikis, M. Soljacic, M. Ibanescu, Y. Fink, and J. D. Joannopoulos, "Cutoff Solitons in Axially Uniform Systems", *Opt. Lett.* 29, 1 (2004).
64. M.L. Povinelli, R.E. Bryant, S.G. Johnson, S. Fan, A.A. Erchak, G.S. Petrich, E. Lidorikis, J.D. Joannopoulos, L.A. Kolodziejski, and E.P. Ippen, "Design of a Nano-Electromechanical, High-Index-Contrast Guided-Wave Optical Switch for Single-Mode Operation at 1.55 μm", *IEEE Photonic Tech. Lett.* 15, 1207 (2003).
65. E. Lidorikis, M. L. Povinelli, S. G. Johnson, and J. D. Joannopoulos, "Polarization-Independent Linear Waveguides in 3D Photonic Crystals", *Phys. Rev. Lett.* 91 023902 (2003).
66. S.G. Johnson, P. Bienstman, M.A. Skorobogatyj, M. Ibanescu, E. Lidorikis, and J.D. Joannopoulos, "Adiabatic theorem and continuous coupled-mode theory for efficient taper transitions in photonic crystals", *Phys. Rev. E* 66, 066608 (2002)
67. C.L. Rountree, R.K. Kalia, E. Lidorikis, A. Nakano, L. Van Brutzel, and P. Vashishta, "Atomistic aspects of crack propagation in brittle materials: multimillion atom molecular dynamics simulations", *Annu. Rev. Mater. Res.* 32, 377 (2002).
68. E. Lidorikis, M. E. Bachlechner, R. K. Kalia, A. Nakano, P. Vashishta, and G. Z. Voyiadjis, "Coupling Length Scales for Multiscale Atomistics-Continuum Simulations: Atomistically-Induced Stress Distributions in Si/Si<sub>3</sub>N<sub>4</sub> Nanopixels", *Phys. Phys. Lett.* 87, 086104 (2001).
69. S. Ogata, E. Lidorikis, F. Shimojo, A. Nakano, P. Vashishta, and R. K. Kalia, "Hybrid finite-element/molecular-dynamics/electronic-density-functional simulation scheme for materials simulations on parallel computers", *Computer Phys. Commun.* 138, 143 (2001).
70. A. Nakano, M. E. Bachlechner, R. K. Kalia, E. Lidorikis, P. Vashishta, G. Z. Voyiadjis, T. J. Campbell, S. Ogata, F. Shimojo, "Multiscale simulations of nanosystems", *Computing in Science & Engineering* 3, 56 (2001).
71. M. Agio, E. Lidorikis, and C. M. Soukoulis, "Impurity modes in a two-dimensional photonic crystal: coupling efficiency and Q factor", *J. Opt. Soc. Am. B* 17, 2037 (2000).
72. E. Lidorikis, M. M. Sigalas, E. N. Economou, and C. M. Soukoulis, "Gap Deformation and Classical Wave Localization in Disordered two-dimensional Photonic Band Gap Materials", *Phys. Rev. B* 61, 13458 (2000).
73. E. Lidorikis and C. M. Soukoulis, "Pulse driven switching in one-dimensional nonlinear photonic band gap materials: a numerical study", *Phys. Rev. E* 61, 5825 (2000).
74. E. Lidorikis, M. M. Sigalas, E. N. Economou, and C. M. Soukoulis, "Tight-Binding Parameterization for Photonic Band Gap Materials", *Phys. Rev. Lett.* 81, 1405 (1998).

75. E. Lidorikis, K. Busch, Qiming Li, C. T. Chan, and C. M. Soukoulis, "Wave Propagation in Linear and Nonlinear Structures", in the Conference Proceedings: "Fluctuations, Nonlinearity and Disorder", **Physica D** 113, 346 (1998).
76. E. Lidorikis, K. Busch, Qiming Li, C. T. Chan, and C. M. Soukoulis, "Optical Nonlinear Response of a Single Nonlinear Dielectric Layer Sandwiched Between Two Linear Dielectric Structures", **Phys. Rev. B** 56, 15090 (1997).
77. E. Lidorikis, Qiming Li, and C. M. Soukoulis, "Optical Bistability in Colloidal Crystals", **Phys. Rev. E** 55, 3613 (1997).
78. E. Lidorikis, Qiming Li, and C. M. Soukoulis, "Wave Propagation in Nonlinear Multilayer Structures", **Phys. Rev. B** 54, 10249 (1996).

## IX. Book Chapters

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2. N. Kalfagiannis, D. Koutsogeorgis, E. Lidorikis and P. Patsalas "Laser Annealing as a platform for plasmonic nanostructuring" στο "Nanoplasmonics-Fundamentals and Applications", Grégory Barbillon (editor) InTech 2017, ISBN 978-953-51-5231-6.

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