



Born in Yazd, Iran, on December 31, 1952. Received the B.Sc. and the M.A. degrees in physics from Sharif University of Technology (SUT), Tehran, Iran, in 1976, and the University of Southern California (USC), Los Angeles, California, in 1978, respectively, the M.Sc. and the Ph.D. degrees in electronics from the University of California at Santa Barbara (UCSB), in 1980, and the University of New South Wales (UNSW), Sydney, Australia, in 1987;

From 1980 to 1984, He was a member of the research staff with the Division of Microwave, Iran Telecommunication Research Center (ITRC);

He joined Tarbiat Modares University (TMU) in 1987, where he is currently a Professor of Electronics;

Translated from English to Farsi four books in the field of semiconductor devices and one in Laser Electronics;

The last translation in 2004 was selected as the best translation of the year in the field of engineering and applied sciences (nationwide);

One of the two most prominent professors of 2002 in the field of Electrical Engineering (nationwide);

One of the founding members of the Optics and Photonics Society of Iran (OPSI);

Associate Member of the Academy of Science (IRI);

Editor in Chief of the Electronic Industries (in Farsi);

Member of the Editorial Boards of four peer-reviewed Scientific Journals published in Iran;

Served as a Member of Steering Committees for the Iranian Conference on Electrical Engineering for about 30 Years;

Served as a Member of Member of Steering Committees for the Iranian Conference on Optics and Photonics for over 20 years (three times Chair);

Acting as a “Referee” for some of the prestigious journals published by IEEE, Optical Society of America, Springer, and Elsevier.

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Education

B.Sc. in Physics, Sharif University of Technology, Tehran, Iran (1976)

M.A. in Physics, University of Southern California, USA (1978)

M.S. in Electrical Engineering, University of California at Santa Barbara, USA (1980)

Ph.D. in Electronics, University of New South Wales, Sydney, Australia (1987)

Professional Experiences

1980-1983 Research Associate: Iran Telecommunication Research Center (ITRC), Tehran, IR.

1987-Now Assistant/ Associate/ Full Professor, Tarbiat Modares University (TMU), Tehran, IR.

1987-1993 Adjunct Professor: Department of Physics, Amirkabir University of Technology, Tehran, IR.

1993-1994 Visiting Scholar: School of Electrical Engineering, University of Nottingham, UK.

2009-2010 Visiting Scholar: Dept. of Electrical Engineering, University of Arkansas, Fayetteville, AR, USA.

National Awards

Prominent Professor of Electrical Engineering for the year 2001-2002, in Iran.

National prize for "the best translation" of the year 2004 in the field of Physical Sciences; for translation of a book titled "Laser Electronics," from English to Farsi.

Five times Selected as one of the outstanding Professors at TMU in the past 20 years.

Professional Societies Membership

Institute of Electrical and Electronics Engineers (IEEE-USA), Senior Member;

Optical Society of America (Recently changed to Optica), Senior Member;

Optics and Photonics Society of Iran (OPSI), Founding Member, Life Member & President (2016-2019);

Volunteer Activities

Associate Member of the Academy of Science (IRI)

Editor in Chief of the Electronic Industries (in Farsi);

Member of the Editorial Boards of four peer-reviewed Scientific Journals published in Iran;

Member of Steering Committees for Iranian Conference on Electrical Engineering for over 30 years;

Member of Steering Committees for the Iranian Conference on Optics and Photonics for over 20 years (three times Chair);

Acting as a "Referee" for some of the prestigious journals published by, IEEE, Optical Society of America, Springer, and Elsevier.

Current Research Interests:

Acoustofluidic and Optofluidic based biosensors

All-optical devices based on Photonic Crystals for Optical Communications;

All-optical devices based on Photonic Crystal fibers;

Nanophotonics;

Optical Metamaterials;

Quantum Optics-based Devices;

Plasmonics Systems and Devices;

Semiconductors Optoelectronics;

Terahertz Photonics;

Nanoelectronics.

Courses Taught:

Applied Quantum Mechanics

Carrier Transport

III-V Compound Semiconductor Devices

Laser Electronics

Microelectronic Device Physics

Microelectronic Fabrication Technology

Optoelectronics

Quantum Transport

Publications in Peer-Reviewed Journals

2023

1. Effect of noise-induced quantum coherence in the intermediate band solar cells, M. Daryani, A. Rostami, G. Darvish, and **MK Moravvej-Farshi**, **Optics Continuum** **2** (9), 1950-1966, **2023**.
2. Numerical Study of a Vertical Tunneling Transistor Based on Gr/BC₂N/BC₆N and BC₂N'/hBN/BC₂N' Heterostructures, R Abbasi, R Faez, A Horri, **MK Moravvej-Farshi**, **ACS Appl. Electron. Mater.** **5** (7), 3612–3624, **2023**.
3. Bidirectional terahertz plasmonic switch based on periodically structured graphene, M. Dehghan, **MK Moravvej-Farshi**, M. Jabbari, G. Darvish, M. Ghaffari-Miab, **J. Opt. Soc. Am. B** **40** (7), 1773-1778, **2023**.
4. Graphene/MoS₂-Nanoribbons/Graphene Field-Effect Photodetectors: A Numerical Study, N. Fathollahbeigi, F. Ostovari, **MK Moravvej-Farshi**, **J. Electron. Mater.** **52**, 3046–3057, **2023**.
5. Tight-Binding Model of χ_3 and β_{12} Structures of Borophene, R Abbasi, R Faez, A Horri, **MK Moravvej-Farshi**, **J. Electron. Mater.** **52**, 2544–2552, **2023**.

2022

6. All-optical AZO-based modulator topped with Si metasurfaces, Sareh Vatani, Behdad Barahimi, **MK Moravvej-Farshi**, **Sci Rep** **12**, 21490, **2022**.
7. Binary THz modulator based on silicon Schottky-metasurface, S Ahadi, M Neshat, **MK Moravvej-Farshi**, **Sci Rep** **12**, 18871, **2022**.
8. Modeling of a vertical tunneling transistor based on Gr-hBN- χ_3 borophene heterostructure, R Abbasi, R Faez, A Horri, **MK Moravvej-Farshi**, **J App. Phys.** **132**, 3 034302, **2022**.
9. Plasmonic tweezers: Towards nanoscale manipulation, M Samadi, P Alibeigloo, A Aqhili, MA Khosravi, F Saeidi, Sh Vasini, Mo. Ghorbanzadeh, S Darbari, **MK Moravvej-Farshi**, **Optics and Lasers in Engineering** **151**, 107001, **2022**.
10. Semiempirical modeling of the effects of the intrinsic and extrinsic optical phonons on the performance of the graphene-based devices, S Jalalvandi, S Darbari, **MK Moravvej-Farshi**, **Sci Rep** **12**, 10417:1-9, **2022**.
11. Simulating a graphene-based acousto-plasmonic biosensor to eliminate the interference of surrounding medium, MM Mehrnegar, S Darbari, **MK Moravvej-Farshi**, **Optics Express** **30** (9), 15721-15734, **2022**.
12. Glucose sensing based on the interaction of gold nanoparticles@linoleic acid with the glucose, M Nasehi, M Saeeidi, J Ghanavi, **MK Moravvej-Farshi**, **IEEE Sensors J**, **22** (7), 7169-7176, **2022**.
13. Fully integrated 3-bit all-optical analog to digital converter based on photonic crystal semiconductor optical amplifier, S Moshfe, K Abedi, **MK Moravvej-Farshi**, **Optics & Laser Technology** **148**, 107773, **2022**.
14. Dual-Purpose Optical Fiber Sensor: Relative Humidity and Ammonia Detection, M Ansari, **MK Moravvej-Farshi**, **Optics Continuum** **1** (2), 335-344
15. Oblique propagation of the squeezed states of s(p)-polarized light through non-Hermitian multilayered structures, E Pilehvar, E Amooghorban, **MK Moravvej-Farshi**, **Optics Express** **30** (3), 3553-3565, **2022**.
16. Photoelectrical properties of integrated photodetectors based on bilayer graphene quantum dot with asymmetric metal contacts: a NEGF–DFT Study, M Ghandchi, G Darvish, M Moravvej-Farshi, **Physical Chemistry Chemical Physics** **24** (3), 1590-1597, **2022**.
17. Quantum optical analysis of squeezed state of light through dispersive non-Hermitian optical bilayers, E Pilevar, E Amooghorban, **MK Moravvej-Farshi**, **J Optics** **24** (2), 025201, **2022**.

2021

18. Bidirectional switchable beam splitter/filter based graphene loaded Si ring resonators, A Bagheri, F Nazari, **MK Moravvej-Farshi**, **Physica Scripta** **96** (12), 125536, **2021**.
19. Tunable optical isolator using Graphene-photonic crystal based hybrid system, M Zarei, F Nazari, **MK Moravvej-Farshi**, **Physica Scripta** **96** (9), 095502:1-8, **2021**.
20. Thermophoresis suppression by graphene layer in tunable plasmonic tweezers based on hexagonal arrays of gold triangles: numerical study, M Samadi, S Darbari, **MK Moravvej-Farshi**, **Optics Express** **29** (18), 29056-29067, **2021**.

21. Exact dispersion relations for the hybrid plasmon-phonon modes in graphene on dielectric substrates with polar optical phonons, S Jalalvandi, S Darbari, **MK Moravvej-Farshi**, *Optics Express* **29** (17), 26925-26943, **2021**.
22. GNRFET with Superlattice Source, Channel, and Drain: SLSCD-GNRFET, B Behtoe, R Faez, A Shahhoseini, **MK Moravvej-Farshi**, *Physica E: Low-dimensional Systems and Nanostructures* **131**, 114728, **2021**.
23. An Integrated 2-bit all Optical Analog to Digital Converter based on Photonic Crystal Semiconductor Optical Amplifier, S Moshfe, **MK Moravvej-Farshi**, *Optical and Quantum Electronics* **53** (5), 212, **2021**.
24. Optical Modulation via Guided-Mode Resonance in an ITO-Loaded Distributed Bragg Reflector Topped with a Two-Dimensional Grating, S Vatani, H Taleb, **MK Moravvej-Farshi**, *IEEE J Selected Topics in Quantum Electronics* **27** (3), 3300307, **2021**.
25. Cation engineering for wide bandgap CH₃NH₃Pb(I - x Br x)₃ perovskite solar cells, A Fathzadeh, BA Nejand, **MK Moravvej-Farshi**, *OSA Continuum* **4** (1), 1-14, **2021**.
26. Studying the effect of exchange and correlation effects on high-order harmonics, M Monfared, E Irani, R Sadighi, **MK Moravvej-Farshi**, *J Nuclear Science and Technology* **94** (4), 1-10, **2021**.
27. Bistable Terahertz Switch designed by Integration of a Graphene Plasmonic Crystal into Fabry-Perot Resonator, M Dehghan, **MK Moravvej-Farshi**, M Jabbari, G Darvish, M Ghaffari-Miab, *IEEE J Selected Topics in Quantum Electronics* **27** (1), 4600606:1-6, **2021**.

2020 and before

28. Electronic Properties of Various Graphene Quantum Dot Structures: an Ab Initio Study, M Ghandchi, G Darvish, **MK Moravvej-Farshi**, *Tabriz J Electrical Engineering* **51** (2), 213-220, **2020**.
29. Tunable Optical Demultiplexer for Dense Wavelength Division Multiplexing Systems Using Graphene-Silicon Microring Resonators, A Bagheri, F Nazari, **MK Moravvej-Farshi**, *J Electronic Materials* **49** (12), 7410-7419, **2020**.
30. Repositioning of plasmonic hotspots along the sidewalls of conical nanoholes: a numerical investigation, P Alibeigloo, M Ghorbanzadeh, **MK Moravvej-Farshi**, *OSA Continuum* **3** (10), 2817-2829, **2020**.
31. Properties of Bilayer Graphene Quantum Dots for Integrated Optics: An Ab Initio Study, M Ghandchi, G Darvish, **MK Moravvej-Farshi**, *Photonics* **7** (3), 78:1-16, **2020**.
32. Electronic transport properties of hydrogenated and fluorinated graphene: a computational study, MM Khatami, G Gaddemane, ML Van de Put, **MK Moravvej-Farshi**, *J Physics: Condensed Matter* **32** (49), 4600606:1-6, **2020**.
33. Next-generation on-chip plasmonic tweezer with a built-in light source, AA Khorami, **MK Moravvej-Farshi**, S Darbari, *OSA Continuum* **3** (8), 2044-2052, **2020**.
34. Integrated graphene/ferroelectric based plasmonic random access memory (P-RAM), M Ghezelsefloo, **MK Moravvej-Farshi**, S Darbari, *J Physics: Photonics* **2** (3), 035004:1-9, **2020**.
35. Tuning the Optical Response of Cross-linked Fe@Au Nanoparticles, N Ahmadi, R Poursalehi, A Kirilyuk, **MK Moravvej-Farshi**, *Applied Surface Science* **514**, 165921:1-7, **2020**.
36. Using Superlattice Structure in the Source of GNRFET to Improve Its Switching Performance, B Behtoe, R Faez, A Shahhoseini, **MK Moravvej-Farshi**, *IEEE Transactions on Electron Devices* **67** (3), 1334-1339, **2020**.
37. Ultralow-Power Electrically Activated Lab-on-a-Chip Plasmonic Tweezers, AA Khorami, **MK Moravvej-Farshi**, S Darbari, *Physical Review Applied* **13** (2), 024072:1-024072:10, **2020**.
38. Designing an integrated all-optical analog to digital converter, S Moshfe, **MK Moravvej-Farshi**, K Abedi, *International J Optics and Photonics* **14** (1), 3-14, **2020**.
39. Quantum Squeezed Light Propagation in an Optical Parity-Time (PT)-Symmetric Structure, E Pilehvar, E Amooghorban, **MK Moravvej-Farshi**, *International J Optics and Photonics (IJOP)* **13** (2), 181-188, **2019**.
40. Ultra-compact Spatial Terahertz Switch Based on Graphene Plasmonic-Coupled Waveguide, M Dehghan, **MK Moravvej-Farshi**, M Ghaffari-Miab, M Jabbari, G Darvish, *Plasmonics* **14** (6), 1335-1345, **2019**.
41. Small Signal Equivalent Circuit Model of Photonic Crystal Fano Laser, AR Zali, **MK Moravvej-Farshi**, MH Yavari, *IEEE J Selected Topics in Quantum Electronics* **25** (6), 4900108:1-8, **2019**.
42. Circuit model and transfer matrix model of mixed multiwall carbon nanotube interconnects, S Hajinasiri, **MK Moravvej Farshi**, R Faez, *J Modeling in Engineering* **17** (58), 113-126, **2019**.
43. Tunable plasmonic force switch based on graphene nano-ring resonator for nanomanipulation, MM Abbasi, S. Darbari, **MK Moravvej-Farshi**, *Optics Express* **27** (19), 26648-26660, **2019**.

44. Electronic Transport Properties of Silicane Determined from First Principles, MM Khatami, GGaddemane, ML Van de Put, MV Fischetti, **MK Moravvej-Farshi**, M Pourfath, WG Vandenberghe, **Materials** **12** (18), 2935, **2019**.
45. Room temperature methane sensor based on single-wall CNTs/SnO₂ nanoparticles, S Dehghani, M Mohammadzadeh, MH Sheikhi, **MK Moravvej-Farshi**, **Micro & Nano Letters** **14** (7), 815 – 818, **2019**.
46. Effect of gold plasmonic shell on nonlinear optical characteristics and structure of iron based nanoparticles, N Ahmadi, R Poursalehi, A Kirilyuk, **MK Moravvej-Farshi**, **Applied Surface Science** **479**, 114-118, **2019**.
47. Effect of Stone-Wales defect on armchair graphene nanoribbon-based photodetector, SG Rudi, R Faez, **MK Moravvej-Farshi**, K Saghafi, **Superlattices and Microstructures** **130**, 127-138, **2019**.
48. Hexagonal arrays of gold triangles as plasmonic tweezers, M Samadi, S Vasini, S Darbari, AA Khorshad, SNS Reihani, **MK Moravvej-Farshi**, **Optics Express** **27** (10), 14754-14766, **2019**.
49. Designing Graphene-based Multi-Mode Acousto-Plasmonic Devices, MM Mehrnegar, S Darbari, H Ramezani, **MK Moravvej-Farshi**, **J Lightwave Technology** **37** (9), 2126 – 2132, **2019**
50. Designing phononic crystal based tunable four-channel acoustic demultiplexer, B Rostami-Dogolsara, **MK Moravvej-Farshi**, F Nazari, **J Molecular Liquids** **281**, 100-107, **2019**.
51. Designing a tunable acoustic resonator based on defect modes, stimulated by selectively biased PZT rods in a 2D phononic crystal, A Shakeri, S Darbari, **MK Moravvej-Farshi**, **Ultrasonics** **92**, 8-12, **2019**.
52. A proposal for ultra-sensitive intensity-based biosensing via photonic crystal optofluidic biolaser, MH Mozaffari, M Ebnali-Heidari, **MK Moravvej-Farshi**, **Laser Physics** **29** (3), 035803, **2019**.
53. Small and Large Signal Analysis of Photonic Crystal Fano Laser, AR Zali, **MK Moravvej-Farshi**, Y Yu, J Moerk, **J Lightwave Technology** **36**, 5611-5616, **2018**.
54. Multiple Exciton Generation in SiGe Nanoclusters: A Numerical Study, M. Gordi, **MK Moravvej-Farshi**, **Physica Status Solidi- Rapid Research Letters (PSS-RRL)** **12**, 1800407:1-4, **2018**.
55. Effects of Electric Fields on Multiple Exciton Generation, M Gordi, **MK Moravvej-Farshi**, H Ramezani, **ChemPhysChem** **19**, 2782-2787, **2018**.
56. Designing a miniaturized photonic crystal based optofluidic biolaser for lab-on-a-chip biosensing applications, MH Mozaffari, M Ebnali-Heidari, G Abaeiani, **MK Moravvej-Farshi**, **Organic Electronics** **54**, 184-191, **2018**.
57. Numerical Investigation of Tunable Plasmonic Tweezers based on Graphene Stripes, M Samadi, S Darbari, **MK Moravvej-Farshi**, **Sci Rep** **7**, 14533:1-9, **2017**
58. Designing a Low-Threshold Quantum-Dot Laser based on Slow Light Photonic Crystal Waveguide, H Taleb, **MK Moravvej-Farshi**, **Applied Optics**, **56** (35) 9629-9637, **2017**.
59. All-Si photodetector for telecommunication wavelength based on subwavelength grating structure and critical coupling, A Taghizadeh, AR Zali, IS Chung, **MK Moravvej-Farshi**, **AIP Advances** **7** (9), 095019, **2017**.
60. Photonic crystal optofluidic biolaser, MH Mozaffari, M Ebnali-Heidarib, G Abaeiania, **MK Moravvej-Farshi**, **Photonics and Nanostructures-Fundamentals and Applications** **26**, 56-61, **2017**.
61. Array of Unbiased Antennaless THz Emitters Composed of Buried Nanoscale Asymmetric MSM Gratings with Dis-Similar Schottky Barriers, MJ Mohammad-Zamani, **MK Moravvej-Farshi**, M Neshat, **IEEE J Selected Topics in Quantum Electronics** **23** (4), 8500808: 1-8, **2017**.
62. High efficiency solar cells using quantum interferences, M Daryani, A Rostami, G Darvish, **MK Moravvej-Farshi**, **Optical and Quantum Electronics** **49** (7), 255:1-11, **2017**.
63. All-optical tunable delay line based on nonlinearities in a chalcogenide microfiber coil resonator, A Kowsari, V Ahmadi, G Darvish, **MK Moravvej-Farshi**, **J Optical Society of America B** **34** (6), 1199-120, **2017**.
64. Improvement of Sensing and Trapping Efficiency of Double Nanohole Apertures via Enhancing the Wedge Plasmon Polariton Modes with Tapered Cusps, M Ghorbanzadeh, S Jones, **MK Moravvej-Farshi**, R Gordon, **ACS Photonics** **4** (5), 1108-1113, **2017**.
65. Multiple Exciton Generation in Si and Ge Nanocrystals: An Ab Initio Comparative Study, M Gordi, H Ramezani, **MK Moravvej-Farshi**, **The J Physical Chemistry C** **121** (11), 6374–6379, **2017**.
66. A Plasmonic Optophoresis for Manipulating, In-situ Position Monitoring, Sensing, and 3D trapping of Micro/Nanoparticles, M. Ghorbanzadeh, S. Darbari, **MK Moravvej-Farshi**, **IEEE J Selected Topics in Quantum Electronics** **23** (2), 5500208:1-8, **2017**.
67. Slow light photonic crystal waveguides with large delay-bandwidth product, **Optical Engineering** **55** (12), 123108:1-6, **2016**.
68. Effects of Stone-Wales defect on the electronic and transport properties of bilayer armchair graphene nanoribbons, S. G. Rudi, R. Faez, **M. K. Moravvej-Farshi**, **Superlattices and Microstructures**, In Press **2016**.

69. A Strategy to Achieve High-Efficiency Organolead Trihalide Perovskite Solar Cells, S. Andalibi, A. Rostami, G. Darvish, **M. K. Moravvej-Farshi**, *J Electronic Materials* 45(11), **2016**.
70. Photodetectors with Zigzag and Armchair Graphene Nanoribbon Channels and Asymmetric Source and Drain Contacts: Detectors for Visible and Solar Blind Applications, F. Ostovari and **MK Moravvej-Farshi**, *J Applied Physics* 120(14), 144505:1-6, **2016**.
71. Designing Switchable Phononic Crystal-Based Acoustic Demultiplexer, B. Rostami-Dogolsara, **M.K. Moravvej-Farshi**, F. Nazari, *IEEE Transactions on Ultrasonic, Ferroelectrics, and Frequency Control*, **63** (9), 163-1468, **2016**.
72. Dynamic analysis of optical microfiber coil resonators, A. KOWSARI, V. AHMADI, G. DARVISH, **MK Moravvej-Farshi**, *Applied Optics* **54**(24), 6680-6687, **2016**.
73. Multi-Channel Optical Isolator based on Nonlinear Triangular Parity Time Symmetric Lattice, F. Nazari, **MK Moravvej-Farshi**, *IEEE J Quantum Electronics*, **52**(8), 6100207:1-7, **2016**.
74. A Novel Tunneling Graphene Nano Ribbon Field Effect Transistor with Dual Material Gate: Numerical Studies, SS Ghoreishi, K Saghafi; R Yousefi, **MK Moravvej-Farshi**, *Superlattices and Microstructures* **97**, 277-86 **2016**.
75. Band gap engineering of organo metal lead halide perovskite photovoltaic absorber, S Andalibi, A Rostami, G Darvish, **MK Moravvej-Farshi**, *Optical and Quantum Electronics* 48 (4), 258:1-12, **2016**
76. Ultra-Wide Mid-Infrared Supercontinuum Generation in As₄₀Se₆₀ Chalcogenide Fibers: Solid Core PCF versus SIF, H. Saghaei, **MK Moravvej-Farshi**, M. N. Moghadasi, and M. Ebnali-Heidari, *IEEE J Selected Topics on Quantum electronics* **22** (2), **2016**.
77. Graphene-Based Plasmonic Force Switch, M. Ghorbanzadeh, S. Darbari, **MK Moravvej-Farshi**, *Applied Physics Letters* **108** (12), 111105:1-5, **2016**.
78. Acoustic add-drop filters based on phononic crystal ring resonators, B Rostami-Dogolsara, **MK Moravvej-Farshi**, F Nazari, *Physical Review B* **93** (1), 014304:1-6, **2016**.
79. Nanoslit cavity plasmonic modes and built-in fields enhance the CW THz radiation in an unbiased antennaless photomixers array, MJ Mohammad-Zamani, M Neshat, **MK Moravvej-Farshi**, *Optics Letters* **41** (2), 420-423, **2016**
80. Kinetics of crystallization in FeB based nanocrystalline soft magnetic alloys Kinetics of crystallization in FeB based nanocrystalline soft magnetic alloys, F Hosseini-Nasab, MM Tavakoli, A Beitollahi, **MK Moravvej-Farshi**, *J Magnetism and Magnetic Materials* **407**, 13-16, **2016**.
81. All-optical switching of nonlinear hyperbolic metamaterials in visible and near-infrared regions, M Shoaee, **MK Moravvej-Farshi**, L Yousefi, *J Optical Society America B* **32** (11), 2355-2363, **2015**.
82. A Seamless-Pitched Graphene Nanoribbon Field Effect Transistor, S Haji-Nasiri, **M K Moravvej Farshi**, and R Faez, *Physica E: Low-dimensional Systems and Nanostructures* **74**, 414-420, 2015.
83. Subwavelength Graphene-Based Plasmonic THz Switches and Logic Gates, M Yarahmadi, **MK Moravvej-Farshi**, and L. Yousefi, *IEEE Transactions on Terahertz Science and Technology* **5** (5), 725-731, **2015**.
84. Tunable THz perfect absorber using graphene-based metamaterials, M. Faraji, **MK Moravvej-Farshi**, L. Yousefi, *Optics Communications* **355**, 352-355, **2015**
85. Designing a Plasmonic Optophoresis System for Trapping and Simultaneous Sorting/Counting of Micro- and Nano-particles, M. Ghorbanzadeh, **MK Moravvej-Farshi**, S. Darbari, *IEEE/OSA J Lightwave Technology* **33** (16) 3453-3460, **2015**.
86. Unbiased continuous wave terahertz photomixer emitters with dis-similar Schottky barriers, M. J. Mohammad-Zamani, **MK Moravvej-Farshi**, and M. Neshat, *Optics Express* **23** (15), 19129-1941, **2015**.
87. Compact Formulas for the Electrical Resistance of Semiconducting and Metallic Single Wall Carbon Nanotubes, S Dehghani, **MK Moravvej-Farshi**, MH Sheikhi, Fullerenes, *Nanotubes and Carbon Nanostructures* **23** (10), 899-905, **2015**.
88. Non-Idealities and Dark Current in IR Photo-detector based on Silicide-Nanolayer Schottky Barrier integrated into a Si Microring Resonator, A Rasoulzadeh Zali, **MK Moravvej-Farshi**, *IEEE J Quantum Electronics* **51** (3), 4000108-1, **2015**.
89. Mid-infrared supercontinuum generation via As₂Se₃ chalcogenide photonic crystal fibers, H Saghaei, **MK Moravvej-Farshi**, M Ebnali-Heidari, *Applied Optics* **54**. (8) 2072-207979, **2015**.
90. Nanostructured graphene-based hyperbolic metamaterial performing as a wide-angle near IR electro-optical switch, M Shoaee, **MK Moravvej-Farshi**, L Yousefi, *Applied Optics* **54** (5), 1206-12011, **2015**.
91. Effect of Crystallization on Soft Magnetic Properties of Nanocrystalline Fe₈₀B₁₀Si₈Nb₁Cu₁ Alloy, F. Hosseini-Nasab, A. Beitollahi, **MK Moravvej-Farshi**, *J Magnetism and Magnetic Materials* **373**, 255-258, **2015**.

92. Improving I_{on}/I_{off} in dual-gate graphene nanoribbon field-effect transistors using local uniaxial tensile strain, M R Moslemi, **M K Moravvej-Farshi**, Mohammad Hossein Sheikhi, **Physica E: Low-dimensional Systems and Nanostructures** **68**, 143-148, **2015**.
93. Designing Tunable Microstructure Spectroscopic Gas Sensor Using Optofluidic Hollow-Core Photonic Crystal Fiber, M. Ebnali-Heidari, F. Koochi-Kamali, A. Ebnali-Heidari, **M.K. Moravvej-Farshi**, B.T. Kuhlmeiy, **IEEE J Quantum Electronics** **50** (12), 943-950, **2014**.
94. Photodetectors with Armchair Graphene Nanoribbons and Asymmetric Source and Drain Contacts, F. Ostovari, **MK Moravvej-Farshi**, **Applied Surface Science** **318** (1), 108-112, **2014**.
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