Curriculum Vitae

Mahmoud Nikoufard

Address (job):

Mahmoud Nikoufard
(Associate Professor)
Departments of Electronics
Faculty of Electrical and Computer Engineering
University of Kashan
Ravand Boulevard
Kashan
Iran
P.O.Box: 87317-53153
E-mail: mnik@kashanu.ac.ir
E-mail: m_nikoufard@yahoo.com
homepage: https://faculty.kashanu.ac.ir/mnikoufard/en

Scholar google:
https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=nikoufard+mahmoud&btnG=

Personal Information:

First name: Mahmoud
Surname: Nikoufard
Place of Birth: Kashan, Iran
Birth Date: September 11, 1967
Sex: Male
Marital Status: Married (three children)

Education:

Ph.D., Opto-Electronic Devices Group, Eindhoven University of Technology, the Netherlands, 2008.
Thesis Topic: Integrated Wavelength Division Multiplexing Receivers.
(*alexandria.tue.nl/extra2/200810330.pdf)*

M.Sc., Electrical Eng. (telecommunication Eng.), Tarbiat Modarres University, Tehran, Iran, 1994.
Thesis Topic: Propagation of the electromagnetic waves in the plasma media.

B.Sc., Electrical Eng. (Communication Eng.), Sharif University of Technology, Tehran, Iran, 1990.
Project Topic: Design of the E-H plane horn antenna.

Journal Publications:

1. Vaghef-Koodehi, Arash, and Mahmoud Nikoufard. "Atomically Engineered 2D/Oxide Heterostructure Varistors: Dual-Barrier Tunneling Architecture for Deterministic Nonlinear Switching." *ACS Applied Electronic Materials* (2026).
2. Vaghef-Koodehi, Arash, et al. "Strain-dependent electronic and optical response of graphene–$Ti_3C_2O_2$ MXene heterostructures: A sequential DFT-to-FDTD computational study." *Results in Optics* (2026): 101197.
3. Rahdar, Sara, and Mahmoud Nikoufard. "Broadband angularly stable polarization conversion in terahertz band via vertically stacked frequency selective surface metasurface." *Optical and Quantum Electronics* 58.5 (2026): 204.
4. Vaghef-Koodehi, Arash, Mahmoud Nikoufard, and Yaser Bahari. "Hybrid magneto-excitonic polariton metastructures: room-temperature strong coupling in all-oxide platforms." *Journal of Materials Chemistry C* 14.3 (2026): 1110-1118.
5. Koodehi, Arash Vaghef, Mahmoud Nikoufard, and Zeynab Gholizadeh. "Design and Multi-Physics Analysis of an Integrated MXene–InP Waveguide Photodetector Array for All-Optical Current Sensing: A Simulation Study." *Array* (2026): 101196.
6. Vaghef-Koodehi, Arash, Amirmohammad Ostovari, and Mahmoud Nikoufard. "Multi-Modal Plasmonic Biosensor Architecture Based on Voltage-Tunable InGaAsP/InP High-Performance Ring Resonators for Real-Time Biomedical Applications at 1.55 μm Telecommunications Window." *IEEE Photonics Journal* (2026).
7. Vaghef-Koodehi, Arash, Mahmoud Nikoufard, and Zeynab Gholizadeh. "Voltage-tunable plasmonic metamaterial networks for neuromorphic optical computing at telecommunication wavelengths." *Optical and Quantum Electronics* 58.9 (2026): 365.
8. Hatami, Mohsen, et al. "Nonlinear Graphene Hybrid Plasmonic Waveguide for Enhanced Kerr Effect and Compact Optical Devices." *Journal of Nanostructures* 16.3 (2026): 4158-4172.
9. Vaghef-Koodehi, Arash, et al. "First principles study of a ZnO borophene Ti3C2TX MXene ternary heterostructure anode for lithium ion batteries." *Discover Materials* (2026).
10. Vaghef-Koodehi, Arash, et al. "Hybrid graphene-MXene heterostructure for ultra-sensitive optomechanical sensors with multi-modal robotic sensing capabilities." *Optics & Laser Technology* 204 (2026): 116534.
11. Vaghef-Koodehi, Arash, et al. "First principles study of a ZnO borophene Ti." (2026).
12. Vaghef-Koodehi, Arash, Mahmoud Nikoufard, and Yaser Bahari. "Twist-tunable moiré magneto-Excitonic Polaritons at 2D ferromagnetic interfaces." *Journal of Magnetism and Magnetic Materials* 641 (2026): 173812.
13. Pirbodaghi, Aref, and Mahmood Nikoufard. "Ultra-Broadband Light Trapping in Thin-Film Silicon Solar Cells Using Optimized Slanted Tooth-Shaped Gratings." *Energy Engineering and Management* 15.3 (2026).
14. Mohammad, Alireza Malek, Mahmoud Nikoufard, and Hamid Nezamdoost. "Design and analysis of InP-based plasmonic optical logic gates using GST phase-change material." *Journal of Optics* 27.8 (2025): 085802.
15. Malek Mohammad, Alireza, Mahmoud Nikoufard, and Senour Abdolghaderi. "Multiphysics simulations of a cylindrical waveguide optical switch using phase change materials on silicon." *Scientific Reports* 14.1 (2024): 10730.
16. Nezamdoost, Hamid, Mahmoud Nikoufard, and Hamed Saghaei. "Graphene-based hybrid plasmonic optical electro-absorption modulator on InP platform." *Optical and Quantum Electronics* 56.3 (2024): 482.
17. Rahimi, Hossein, Mahmoud Nikoufard, and Mojtaba Dehghani Firouzabadi. "Kerr nonlinear effect in the graphene-based wedged hybrid plasmonic waveguide." *Optical and Quantum Electronics* 56.5 (2024): 811.
18. Abbaspour, Mobina, Mahmoud Nikoufard, and Alireza Malek Mohammad. "Electro-Thermo-Optical Simulations of Phase-Change GST-SiC Plasmonic Optical Modulator for Telecom Applications." *Advanced Theory and Simulations* (2024): 2400546.

19. Vaghef-Koodehi, Arash, Mahmoud Nikoufard, and Ali Rostami-Khomami. "Voltage-tunable graphene-InP schottky photodetector with enhanced responsivity using plasmonic waveguide integration." *Physica Scripta* 99.5 (2024): 055012.
20. Hatami, Mohsen, Mahmoud Nikoufard, and Mojtaba Dehghani Firouzabadi. "Graphene-integrated hybrid plasmonic waveguide for Kerr nonlinear application." *Journal of Nonlinear Optical Physics & Materials* (2023): 2350092.
21. Mahdian, Mohammad Amin, and Mahmoud Nikoufard. "THz Multimode Interference Power Divider Based on Groove Gap Waveguide Configuration." *IEEE Transactions on Nanotechnology* (2022).
22. Rostami-Khomami, Ali, and Mahmoud Nikoufard. "Hybrid plasmonic uni-traveling carrier photodetector with periodic corrugated electrode." *Micro and Nanostructures* (2022): 207338.
23. Rostami-Khomami, Ali, and Mahmoud Nikoufard. "Hybrid Plasmonic Ring-Resonator Uni-Traveling Carrier Pin-Photodetector on InGaAsP/InP Layer Stack." *IEEE Transactions on Electron Devices* (2020).
24. Sadeghzadeh Maraghi, Vahid, Mahdi Eslami, and Mahmoud Nikoufard. "Efficient Coupling in Transverse Strip Metal-Insulator-Metal Structure on Silicon-on-Insulator Layer Stack." *Silicon* 14.6 (2022): 2921-2929.
25. Mehragha, Rouholla, Mahmoud Nikoufard, and Hassanaen Al-Hakkak. "Goos–Hänchen effect in a metal-coated sidewall hybrid plasmonic multimode interference power splitter." *IET Optoelectronics* (2020).
26. Firouzabadi, Mojtaba Dehghani, Mahmoud Nikoufard, and Mohammad Bagher Tavakoli. "An investigation on shallow-etched InP-based hybrid nanoplasmonic waveguides for nonlinear applications." *Journal of Computational Electronics* (2020): 1-5.
27. Soleimannezhad, Farshad, Mahmoud Nikoufard, and Mohammad Amin Mahdian. "Low-loss indium phosphide-based hybrid plasmonic waveguide." *Microwave and Optical Technology Letters* (2020).
28. Nematpour, Abedin, and Mahmoud Nikoufard. "Plasmonic thin film InP/graphene-based Schottky-junction solar cell using nanorods." *Journal of advanced research* 10 (2018): 15-20.
29. Nematpour, Abedin, Mahmoud Nikoufard, and Rouholla Mehragha. "Design and optimization of the plasmonic graphene/InP thin-film solar-cell structure." *Laser Physics* 28.6 (2018): 066202.
30. Nourmohammadi, Abbas, and Mahmoud Nikoufard. "Ultra-Wideband Photonic Hybrid Plasmonic Horn Nanoantenna with SOI Configuration." *Silicon* (2019): 1-6.
31. Firouzabadi, Mojtaba Dehghani, Mahmoud Nikoufard, and Mohammad Bagher Tavakoli. "Modifying the figure of merit in hybrid plasmonic waveguide for Kerr nonlinear effect." *Indian Journal of Physics* (2019): 1-6.
32. Nikoufard, Mahmoud, Abbas Nourmohammadi, and Saeid Esmaeili. "Hybrid plasmonic nanoantenna with the capability of monolithic integration with laser and photodetector on InP-substrate." *IEEE Transactions on Antennas and Propagation* 66 (2018): 3-8.
33. Nikoufard, Mahmoud, Masoud Kazemi Alamouti, and Soheil Pourgholi. "Multimode Interference Power-Splitter Using InP-Based Deeply Etched Hybrid Plasmonic Waveguide." *IEEE Transactions on Nanotechnology* 16.3 (2017): 477-483.
34. Nikoufard, Mahmoud, and Mohsen Hatami. "Extremely compact slanted waveguide hybrid plasmonic polarization rotator." *Optics Communications* 382 (2017): 232-236.
35. Nikoufard, M., et al. "Novel hybrid plasmonic-based directional coupler on InP substrate." *Photonics and Nanostructures-Fundamentals and Applications* 22 (2016): 9-17.
36. Firouzabadi, Mojtaba Dehghani, Mahmoud Nikoufard, and Mohammad Bagher Tavakoli. "Optical Kerr nonlinear effect in InP-based hybrid plasmonic waveguides." *Optical and Quantum Electronics* 49.12 (2017): 390.
37. Soltani, Mohamadreza, Mahmoud Nikoufard, and Massoud Dousti. "Enhancement of Second Harmonic Generation in Metal-Insulator-Metal Plasmonic Waveguides." *Plasmonics* (2017): 1-5.
38. Nikoufard, Mahmoud, and Mohsen Hatami. "Analysis of Ultra-Compact TE to TM Polarization Rotator in InGaAsP and SOI Technologies." *Optik-International Journal for Light and Electron Optics* (2017).
39. Soltani, Mohamadreza, and Mahmoud Nikoufard. "Second harmonic generation using an electrically controlled asymmetric plasmonic waveguide." *Journal of Experimental Nanoscience* 12.1 (2017): 104-113.

40. Nikufard, M., and A. Rostami Khomami. "Hybrid plasmonic polarization splitter using three-waveguide directional coupler in InGaAsP/InP." *Optical and Quantum Electronics* 48.5 (2016): 296.
41. Nikoufard, Mahmoud, and Masoud Kazemi Alamouti. "Full analysis of a high-bandwidth microring-based PIN modulator." (2017).
42. Nikoufard, Mahmoud, Masoud Kazemi Alamouti, and Alireza Adel. "Ultra-compact photonic crystal based water temperature sensor." *Photonic Sensors* 6.3 (2016): 274-278.
43. Nikoufard, Mahmoud, and Masoud Kazemi Alamouti. "Design of Photonic Crystal Polarization Splitter on InP Substrate." *Journal of Optoelectronical Nanostructures* 1.2 (2016): 69-76.
44.
45. Nikoufard, M., and S. Amadeh., "InP-Based Photonic Crystal Electro-Optic Modulator" ,*Optik-International Journal for Light and Electron Optics*, No. 19, Vol. 126, pp. 2219–2222, 2015.
46.
47. Soltani, M., Nikoufard M., and Dousti M., "Investigation of Second Harmonic Generation in Asymmetric Metal-Insulator-Metal Plasmonic Waveguides", *Plasmonics*, pp. 1-7, 2015.

48. Nikoufard, M., and M. Hatami. "Ultra-short novel transverse magnetic to transverse electric polarization rotator in hybrid integration of InGaAsP/silicon-on-insulator technologies." *Indian Journal of Physics*, pp. 1-7, 2015.

49. Kari M., and Nikoufard M.," Ring Resonator-Based Monolithic Integrated Optical Transceiver," *Iranian Journal of Electrical and Computer Engineering (IJECE)*, No.1, Vol. 12, 2014.

50. Nikoufard M., and Taheri R. ," Hybrid spot-size converter on semi-insulating InP substrate at 1.55µm wavelength," *Cyber Journals: Multidisciplinary Journals in Science and Technology, Journal of selected Areas in Microelectronics (JSAM*), May Edition, 2012.

51. Nikoufard M., Alaei Tabatabaei F. S., and Ghafouri S. N.," High-speed pin-traveling wave photodetector based on a semiconductor optical amplifier layer stack on semi-insulating InP substrate," *Progress In Electromagnetic Research C*, Vol. 28, pp. 271-281, 2012.

52. Nikoufard M., and Ghafouri S. N.," Symmetric twin-waveguide photodetector on semi-insulating InP substrate at 1.55µm wavelength," *Journal of Optics*, Vol. 13, 2011.

53. Xu L., Nikoufard M., Leijtens X. J. M., Vries T. de, Smalbrugge E., Nötzel, R., Oei Y. S., and Smit M. K.," High bandwidth waveguide photodetector based on an amplifier layer stack on an active-passive semi-insulating InP at 1.55µm," *IEEE Photonics Technol. Lett.*, Vol. 20, No. 23, Dec. 2008.

54. Nikoufard M. ,"Integrated wavelength division multiplexing receivers", Technische Universiteit Eindhoven, Eindhoven, The Netherlands, 2008.

Publications on photonics (conferences):

1. Nikoufard, M., A. Farahani Dastjani, and A. Farhadi. "Photonic Crystal Based MZI Biosensor on InP materials", *23rd Iranian Conference on Electrical Engineering (ICEE)*, pp. 1180-1182, 2015.

2. Nikoufard M., and Farhadi A.,"Photonic crystal based gas sensor on InP substrate," *5th international conference on Nanostructure*, Mar. 2014, Kish, Iran.

3. Nikoufard M., and Ranjbaran A.,"Novel pilar-based photonic crystal polarization splitter at 1.55µm," *5th international conference on Nanostructure*, Mar. 2014, Kish, Iran.

4. Nikoufard M., Adel A., and Hatami M.," Gas-sensor based on photonic crystal to identify carbon dioxide," *6th Iranian Conference on Electrical and Electronics Engineeering*, Aug. 2014, Gonabad, Iran.

5. Nikoufard M., and Ranjbaran M.," Polarization filter on InP substrate at 1.55µm wavelength," *20th conference on Optics and Photonics*, Jan. 2014, Shiraz, Iran.

6. Nikoufard M., Fallah M., and Elhamnia M.,"All-optical AND-gate using Y-junction photonic crystal on InP substrate," *3rd National Conference on Optic and Laser Engineering*, Oct. 2013, Shahin Shahr, Iran.

7. Nikoufard M., Fallah M., and Elhamnia M.,"Design of NOR-gate using nonlinear ring resonator," *3rd National Conference on Optic and Laser Engineering*, Oct. 2013, Shahin Shahr, Iran.

8. Nikoufard M., Adel A., and Hatami M., Gas-sensor based on photonic crystal to identify Xenon," *2nd International Conference on Nano Technology*, July 2014, Istanbul, Turkey.

9. Nikoufard M., Adel A., and Esmaeili R.," Photonic crystal based gas-sensor on InP substrate at 1.55µm wavelength," *Nano symposium 93*, Apr. 2014, Najafabad, Iran.

10. Nikoufard M., Pourmousa M., Esmaeili A, and Izadi F.," Graded-doping double junction solar cell on GaInP/GaAs material," *3rd Iranian conference of renewable Energy and distributed*, Apr. 2013, Isfahan, Iran.

11. Nikoufard M., Omidi Roozbahani, and Mirzaei A.," Design of photonic crystal polarization splitter on InP substrate at 1.55µm wavelength," *Procedings of Iranian Conference of Electromagnetics Engineering*, Sep. 2012, Tehran, Iran.

12. Nikoufard M., and Kari M.,"Design of novel ring reflector modulator on semi-insulating InP," *Procedings of Iranian Conference of Electromagnetics Engineering*, Sep. 2012, Tehran, Iran.

13. Nikoufard M., Pourmousa M., Esmaeili A, and Karamdel J.," single junction solar cell on graded doped InP," *National Congress of Electrical, Computer and Information Technology*, Oct. 2012, Khorasan, Iran.

14. Nikoufard M., Pourmousa M., Esmaeili A, and Karamdel J.," single junction solar cell on modified structure GaAs," *National Congress of Electrical, Computer and Information Technology*, Oct. 2012, Khorasan, Iran.

15. Nikoufard M., Hajiloo N., Amadeh S., and Farshadpour A.," Resonant cavity add-drop filter on InP substrate", *Proceedings of the International Congress on Nanoscience and Nanotechnology (ICNN2012),* Sep. 2012, Kashan, Iran.

16. Nikoufard M., Omidi Roozbahani M., and Mirzaei A.," Photonic crystal polarization splitter on InP substrate", *Proceedings of the International Congress on Nanoscience and Nanotechnology (ICNN2012),* Sep. 2012, Kashan, Iran.

17. Nikoufard M., Mirzaei A., and Omidi Roozbahani M.," Photonic crystal-based polarization splitter on InP substrate", *Proceedings of the Iran-Belarus International Conference on Modern Application of Nanotechnology (IBCN2012),* Jun. 2012, Minsk, Belarus.

18. Nikoufard M., and Amadeh S.," InP-based photonic crystal electro-optic modulator", *Proceedings of the Iran-Belarus International Conference on Modern Application of Nanotechnology (IBCN2012),* Jun. 2012, Minsk, Belarus.

19. Nikoufard M., Amadeh S., and Hajiloo N.," Optimized Y-junction based on directional coupler photonic crystal on InP substrate ", *Proceedings of the 4th International Conference on Nanostructures (ICNS4),* Mar. 2012, pp. 85, Kish, Iran.

20. Nikoufard M., Amadeh S., and Hajiloo N.," Photonic crystal MZI modulator by using directional coupler on InP substrate", *Proceedings 18th Iranian conference on Optics and Photonics (ICOP2012),* Feb. 2012, pp. 155-158, Tabriz, Iran.

21. Nikoufard M., and Yazdanpanah J.," Twin-waveguide uni-travelling carrier photodetector ", *Proceedings 18th Iranian conference on Optics and Photonics (ICOP2012),* Feb. 2012, pp. 41-44, Tabriz, Iran.

22. Kari M., and Nikoufard M.," Ring-based monolithic optical transciver ", *Proceedings 18th Iranian conference on Optics and Photonics (ICOP2012),* Feb. 2012, pp. 71-74, Tabriz, Iran.

23. Firoozi S, Abaeiani GH., and Nikoufard M.," Calculation and analysis of structural dependency of the plasmonic fiber-optic sensors characteristics ", *Proceedings 18th Iranian conference on Optics and Photonics (ICOP2012),* Feb. 2012, pp. 646-649, Tabriz, Iran.

24. Nikoufard M., Amadeh S., Farshadpour A.," Photonic crystal power splitter-based directional couplers on InP substrate", *The Annual physics conference of Iran (PSI2011),* Sep. 2011, Uramiah, Iran.

25. Nikoufard M., Rezazadeh A, Jahani Bahnamiri H.," Design of a 3D-compact lateral taper on semi-insulating InP substrate", *The Annual physics conference of Iran (PSI2011),* Sep. 2011, Uramiah, Iran.

26. Kari M., Nikoufard M., Abaeiani Gh., and Anis A.," Monolithic integrated transcieverbased on ring-resonator," *Proceedings 19th Iranian Conference on Electrical Engineering (ICEE),* 2011, Tehran, Iran.

27. Farshadpour A., and Nikoufard M.," Photonic crystal ring resonator-based wavelength division multiplexer on InP substrate," *Proceedings 19th Iranian Conference on Electrical Engineering (ICEE),* 2011, Tehran, Iran.

28. Anis A., Nikoufard M., and Kari M.," Wavelength converter based on cross-phase modulation on InP substarte at 1.55µm wavelength," *2nd National Conference on Optics and Laser Engineering (ICOLE),* 2011, Shahin-shahr, Iran.

29. Kari M., Nikoufard M., and Anis A.," Ring-based monolithic integrated optical transceiver on semi-insulating InP substrate," *2nd National Conference on Optics and Laser Engineering (ICOLE),* 2011, Shahin-shahr, Iran.

30. Alaei Tabatabaei F. S., and Nikoufard M.," Design and RF-analysis of a high-speed, high-efficiency traveling-wave photodetector," *2nd National Conference on Optics and Laser Engineering (ICOLE),* 2011, Shahin-shahr, Iran.

31. Nikoufard M., Alaei Tabatabaei F. S., Kari M. and Sheikhan M.," Design and RF-analysis of a high-speed traveling-wave photodetector based on InP material at 1.55µm wavelength**,"** *Proceedings 17th Iranian Conference on Photonics and Optics (ICOP),* 2011, Kerman, Iran.

32. Nikoufard M., and Farshadpour A.," Photonic crystal ring resonator-based wavelength division multiplexer on InP substrate," *Proceedings 176th Iranian Conference on Photonics and Optics (ICOP),* 2011, Kerman, Iran.

33. Nikoufard M., Ghafouri S. N., and Alaei Tabatabaei F. S.," DC-analysis of a traveling-wave photodetector on semi-insulating InP at 1.55um wavelength," *Proceedings 3rd Iranian Conference on Photonics Engineering,* 2011, Kerman, Iran.

34. Nikoufard M., Alaei Tabatabaei S. F., and Sheikhan M.," Efficient pin-Travelling Wave Photodetector Based on a Semiconductor Optical amplifier layer stack on Semi-Insulating InP Substrate at 1.55µm," *Numerical Simulation of Optoelectronic Devices (NUSOD2010)*, Sep. 2010, USA.

35. Nikoufard M., Taheri R., Farrokhi A..," Hybrid Spot Size converter on Semi-Insulating InP substrate at 1.55µm wavelength," *Numerical Simulation of Optoelectronic Devices (NUSOD2010)*, Sep. 2010, USA.

36. Nikoufard M., Taheri R., Farrokhi A..," Monolithic Integration of a Spot-Size Converter and active and passive photonic devices on Semi-Insulating InP substrate at 1.55µm wavelength window," *The Annual physics conference of Iran (PSI2010),* Sep. 2010, Hamadan, Iran.

37. Nikoufard M., and Taheri R., Farrokhi A., "Design of a Low-Coupling Loss Hybrid Spot-Size Converter Based on SI-InP substartel at 1.55µm Wavelength Window," *Proceedings 18th Iranian Conference on Electrical Engineering (ICEE),* 2010, Isfahan, Iran.

38. Nikoufard M., Taheri R., Farrokhi A., "Design of Hybrid Spot-Size Converter Based on InP Material at 1.55µm Wavelength Window," *Proceedings 16th Iranian Conference on Photonics and Optics (ICOP),* 2010, Yazd, Iran.

39. Nikoufard M.," Design and characterization of a monolithic integrated eight-channel WDM receiver on InP-based material," *Proceedings 15th Iranian Conference on Photonics and Optics (ICOP),* 2009, Isfahan, Iran.

40. Nikoufard M.," Design and fabrication of edge-illuminated photodetector based on vertical coupler on InP-substrate," *First National Conference on Optics and Laser Engineering (NCOLE),* 2009, Shahin-shahr, Iran.

41. Nikoufard M.," Planarization, passivation and metallization processes in the fabrication of the microwave-photonic integrated circuits," *First National Conference on Optics and Laser Engineering (NCOLE)*, 2009, Shahin- shahr, Iran.

42. Ph.D. thesis titled "Integrated Wavelength Division Multiplexing Receivers", Eindhoven University of Technology, Eindhoven, the Netherlands, March 2008.

43. Nikoufard M., Xu L., Leijtens X. J. M., Vries T. de, Smalbrugge E., Nötzel, R., Oei Y. S., and Smit M. K.," High bandwidth waveguide photodetector based on an amplifier layer stack on an active-passive semi-insulating InP at 1.55µm," *Proceedings 14th European Conference on Integrated Optics (ECIO), 2008, Eindhoven, Holland*.

44. Nikoufard M. , Leijtens X. J. M., La Porta A. ,Binetti P. R. A., Smalbrugge E., Vries T. de, Veldhoven P. J. van, Notzel R., Oei Y. S., and Smit M. K., "An efficient waveguide photodetector fabricated in an InP-based amplifier layer stack," *proc. IEEE/LEOS Benelux Chapter 2007*. Brussels, Belgium.

45. Binetti P. R. A., La Porta A., Leijtens X. J. M., Nikoufard M., de Vries T., Oei Y. S. Di Cioccio L., Fedeli J. M. Lagahe C., Orobtchouk R., Seassal C., Van Campenhout J., Van Thourhout D., van Veldhoven P. J., Nötzel R. and Smit M. K., "InP-based membrane photodetector for optical interconnections on CMOS ICs," *proc. IEEE/LEOS Benelux Chapter 2007*. Brussels, Belgium.

46. Binetti P. R. A., Campenhout J. van, Leijtens X. J. M., Nikoufard M., Vries T. de, Oei Y. S., Di Cioccio L., Fedeli J. -M., Lagahe C., Orobtchouk R., Letartre X., Regreny P., Rojo-Romeo P., Seassal C., Veldhoven P. J. van, Nötzel R., Thourhout D. van, Baets R., and Smit M. K.," An optical interconnect layer on silicon," *Proceedings 13th European Conference on Integrated Optics (ECIO), 2007, (pp. 1-3)* Copenhagen, Denmark.

47. Binetti P. R. A., Leijtens X. J. M., Nikoufard M., Vries T. de, Oei Y. S., Di Cioccio L., Fedeli J.-M., Lagahe C., Orobtchouk R., Seassal C., Campenhout J. van, Thourhout D. van, Veldhoven P. J. van, Nötzel R., and Smit M. K.,"InP-based membrane photodetectors for optical interconnects to Si," *proc. 4th International Conference on Group IV Photonics. (Vol. WB4, pp. 1-3).* 2007,Tokyo, Japan.

48. Binetti P. R. A., Leijtens X. J. M., Nikoufard M., Vries T. de, Oei Y. S., Di Cioccio L., Fedeli J.-M., Lagahe C., Orobtchouk R., Seassal C., Veldhoven P. J. van, Nötzel R., and Smit, M. K.," Membrane couplers and photodetectors for optical interconnections on CMOS ICs," *proc. ePIXnet Winter School 2007. (pp. 1-1).* Pontresina, Switzerland.

49. Binetti P. R. A., Leijtens X. J. M., Nikoufard M., Vries T. de, Oei Y. S., Di Cioccio L., Fedeli J.-M., Lagahe C., Orobtchouk R., Seassal C., Veldhoven P. J. van, Nötzel R., and Smit M. K.," Membrane couplers and photodetectors for optical interconnections on CMOS ICs," *proc. IEEE/LEOS Benelux Symposium 2006. (pp. 237-240).* Eindhoven, The Netherlands: IEEE/LEOS.

50. Nikoufard M., Zhu Y., Bennekom P. K. van, Kwaspen J. J. M., Leijtens X. J. M., and Smit M.K.," Design and characterization of a high-speed WDM receiver," In *proc. IEEE/LEOS Benelux Chapter 2005* (pp. 145-148). Mons, Belgium.

51. Nikoufard M., Besten J. H. den, Heck M. J. R., Zhu Y., Smalbrugge E., Vries T. de, Veldhoven P. J. van, Leijtens X. J. M., Oei Y. S., Notzel R., and Smit M. K., "InP-based ridge lasers with lateral n-contacts," In *proc. IEEE/LEOS Benelux Chapter 2005* (pp. 261-264). Mons, Belgium.

52. Binetti P. R. A., Leijtens X. J. M., Nikoufard M., Orobtchouk R., Benyattou T., Vries T. de, Oei Y.S., and Smit M. K., "A compact detector for use in photonic interconnections on CMOS ICs," In *proc. IEEE/LEOS Benelux Chapter 2005* (pp. 233-236). Mons, Belgium.

53. Nikoufard M., Leijtens X. J. M., Zhu Y., Kwaspen J. J. M., Bente E. A. J. M., Groen F. H., and Smit M. K. ," An 8 x 25 Ghz polarization-independent integrated multi-wavelength receiver," In *proc. IPR 2004* (pp. iTHB2). San Francisco, USA.

54. Nikoufard M., Besten J. H. den, Leijtens X. J. M., and Smit M. K. , " Design and measurement of a reversely biased SOA as high-speed photodetector," In *proc. IEEE/LEOS Benelux Chapter 2004* (pp. 71-74). Gent, Belgium.

55. Nikoufard M., Leijtens X. J. M., Zhu Y., Bennekom P. K. van, Kwaspen J. J. M., Bente E. A. J. M., Groen F. H., and Smit M. K., "An 8x20 GHz polarization independent WDM receiver", In *proc. IEEE/LEOS Benelux chapter 2003,* Enschede, The Netherlands (pp. 153-156). Enschede, The Netherlands.

56. Nikoufard M., Leijtens X. J. M., Zhu Y., Kwaspen T., & Smit M. K, " Modeling and characterization of InP-based high-speed pin-photodiodes," In *proc. IEEE/LEOS Benelux Chapter 2003* (pp. 149-152). Enschede, The Netherlands.

57. M. Nikoufard, A.Hadidi," Simulation of Electromagnetic Waves in the Plasma Media", 6th ICEE, Vol. 2, PP 43-47, 1998, Tehran, Iran.

58. Master Thesis Titled "Propagation of Electromagnetic Waves in Plasma Media", Teheran, Iran, 1994.

Books:

1- B. A. Saleh, and M. Teich,"Fundamentals of Photonics", Translation to Farsi Language by Nikoufard M., University of Kashan, Iran, 2013.
2- M. Nikoufard, "Photonic integrated circuits", University of Kashan Press, 2018.

Design, processing and characterization of photonic devices at TU/e-Netherlands:

1. Design of the complicated optical integrated circuits in the conjunction with microwave considerations and plotting mask layout with ADS and CLEWIN software.
2. Experience in the clean room environment for about 5 years based on InP technology: lithography, PECVD machine for the deposition of SiN, RIE machine, SEM machine, optimization of the processing, etc.
3. Experience with optical and microwave equipments: lightwave component analyzer, vector network analyzer, pulse response setup, BER and eye diagram setup, static and dynamic characterization of SOA, photodetector, AWG, laser, etc.
4. Design, fabrication, and characterization of SOA, photodetector, Arrayed waveguide grating (AWG), multimode interference (MMI) coupler, and laser based on InGaAsP/InP materials.

Academic Activities:

1. Researcher at Eindhoven University of Technology, Eindhoven, the Netherlands, Since 2000-2008.
2. Associate Prof. at department of Electronic Eng., Faculty of Electrical and Computer Eng., University of Kashan, Kashan, Iran, 1995-2000 & 2008-now.
3. Vice director of Faculty of Eng., Kashan University, 1996-1997.
4. Head of Departments of Electronics, University of Kashan, since 2014.
5. Establishing several laboratories such as Electronics, communication circuits, and digital circuits, University of Kashan, since 1995.
6. Supervisor of more than ten PhD students (six of them graduated) and more than 60 M.Sc. students.

Academic Honors and Awards:

1. Received the best article award in the first National Conference on Optic and Laser, Iran.
2. Received the best poster award in the 2nd National Conference on Optic and Laser, Iran.
3. Received the best researcher award at Kashan University, 2013, 2017, 2019, 2024.

Computer Software Skills:

Advanced Design Systems (ADS), COMSOL, OPTIWAVE, FIMMWAVE, LUMERICAL, MATLAB, and general software.

Subjects Lectured:

Theory and fabrication technology of semiconductor devices, Semiconductor devices, Opto-electronic devices, Design of photonic integrated circuits, Electromagnetics, Communication Circuits, Communication Systems, Basics of Electrical Eng., Advanced Engineering Mathematics, Signals and Systems, Digital Circuits,….