Curriculum Vitae

PERSONAL INFORMATION

Surname: Malekmohammad
name : Mohammad
Gender: male | **Date of birth:** July 11, 1975
Place of Birth: Isfahan Iran | **Nationality:** Iranian



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WORK EXPERIENCE

Laser (Experimental)
Spectroscopy (Experimental)
Nanophotonic (Experimental and Simulation)
Photonic crystals (Experimental and Simulation)
Graphene (Experimental and Simulation)
Simulation

EDUCATION

2007 - 2011	Isfahan University , Ph.D. Major: Physics (nanophotonics)
1999 - 2001	Sharif University of technology, M.Sc. Major: Physics (Laser)
1994 - 1999	Sharif University of technology, B.Sc Major: Physics

Computer skills

- Lumerical
- Opti FDTD
- Matlab

Publications

- Z. Ebtehaj, A. Hatef, M. Malekmohammad, and M. Soltanolkotabi; "Computational modeling and validation of thermally induced electrical capacitance changes for biological membranes irradiated by pulsed lasers" *J. Phys.* Chem. B, (2018), 122 (29), pp 7319–7331.
- M. Hoseini, M. Malekmohammad; "All-optical high performance graphene-photonic crysta lswitch" Optics Communications 383 (2017) 159–164.
- H. Nayeri ; R. Asadi ; M. Malekmohammad "Fabrication of optical ridge waveguide in lithium niobate by argon sputtering and titanium self-alignment in-diffusion",J. Nanophoton. 10(3), 036016, (2016).
- M. Malekmohammad; R. Asadi ;"High performance electro-optical modulator based on photonic crystal and graphene" Optics Communications, http://dx.doi.org/10.1016/j. optcom.2016.01.072 (2016)
- R. Asadi, Z. Ouyang.and M. Malekmohammad "Compact, all-optical, THz wave generator based on self modulation in a slab photonic crystal waveguide with a single graphene layer", Nanoscale, 7, (2015) 11379
- E. Jaafari, M. Kavosh , M. Malekmohammad, and H. Saghafifar, "Theoretical and experimental study for shortening laser pulse width by pinhole plasma shutter"Eur. Phys. J. Appl. Phys. (2015)
- M. Kavosh, M. Malekm, E. Jaafari and A .Mobashery, "Setting up a mobile Lidar (DIAL) system for detecting chemical warfare agents"Laser Phys. 25 (2015) 035701 (5pp)
- Malekmohammad, M.; Soltanolkotabi, M; Erfanian, A.; Asadi, R.;Zahedinejad, M., Bagheri, S., Khaje, M. ” Efficiency

Enhancement of PtSi Detectors by Photonic Crystals" ,, IEEE SENSORS JOURNAL, VOL. 14, NO. 11, NOVEMBER (2014)

- **Mohammad Malekmohammad, Reza Asadi, Shahin Bagheri, Mohammad Zahedinejad, Mehdi Khaje, Alireza Erfaniyan, Mahmood Soltanolkotabi " photonic crystal broadband antireflection" Journal of the European Optical Society, 7, 12008 (2012)**
- **M. Malekmohammad; M. Soltanolkotabi; R. Asadi; M. H. Naderi; A. Erfanian; M. Zahedinejad; Sh. Bagheri; M. Khaje;" Combining micro- and nano-texture to fabricate an antireflective layer" J. Micro/Nanolith. MEMS MOEMS 11(1), (2012)**
- **Malekmohammad, M.; Soltanolkotabi, M; Erfanian, A.; Asadi, R.;Zahedinejad, M., Bagheri, S., Khaje, M. " Combination of photonic crystal and nanoporous structure for efficiency enhancement of photovoltaic devices" Applied surface science, under revision.**
- **M. Malekmohammad; R. Asadi; S. Bagheri; M. Zahedinejad; M. Khaje; M. Soltanolkotabi; A. Erfanian; M. H. Naderi. "Micro-nano textured black silicon using RIE and metal assisted chemical etching" 4th International Conference on Nanostructures (ICNS4) 12-14 March, 2012, Kish Island, I.R. Iran**
- **Ghorbanzadeh AM, Madani A, Kheyrandish B, Malek Mohammad M, Keshavarz S, Moghaddam A, "Small signal gain characteristics and gas analysis of medium power combustion driven CO2-gasdynamic laser", 5th Conf (Intl) Atomic and Molecular Pulsed laser, Russia, 2001.**
- **Ghorbanzadeh AM, Madani A, Kheyrandish B, Malek Mohammad M, Keshavarz S, Moghaddam A, "Small signal gain characteristics and gas analysis of medium power combustion driven CO2-gasdynamic laser",** Atmospheric **And Oceanic Optics, Volume 14, Number 11, 2001.**
- **Reza Asadi, Mohammad Malek-Mohammad, Sina Khorasani" All optical switch based on Fano resonance in metal**

nanocomposite photonic crystals" Optics Communications, 284 (2011) 2230–2235

- Reza Asadi, Mohammad Malek Mohammad, and Mohammad Taghi Tavassoly "Fabrication of Metal Nanocomposite Photonic Crystal for Switching" IEEE PHOTONICS TECHNOLOGY LETTERS, VOL. 23, NO. 20, OCTOBER 15, (2011), 1436–1438

- Reza Asadi, Shahin Bagheri, Mehdi Khaje, Mohammad Malekmohammad,Mohammad-Taghi Tavassoly " Tunable Fano resonance in large scale polymer-dielectric slab photonic crystals" 37th International Conference on Micro and Nano Engineering 19 - 23 September 2011. BERLIN.

- Reza Asadi, Shahin Bagheri, Mehdi Khaje, Mohammad Malekmohammad,Mohammad-Taghi Tavassoly " Tunable Fano resonance in large scale polymer-dielectric slab photonic crystals" accepted for publication in Microelectronic Engineering.

- M. Malekmohammad; R. Asadi; S. Bagheri; M. Zahedinejad; M. Khaje; M. Soltanolkotabi; A. Erfanian; M. H. Naderi. " Reflectance investigation of Si photonic crystals by polarization elipsometry" International Conference on elipsometry, 2012, Germany.

Projects

1- Efficiency Enhancement of PtSi Detectors by Photonic Crystals
2- Detecting chemical warfare agents using mobile Lidar (DIAL) system
3- Design, simulation and fabrication of a microstructure width band antireflection layer on curved substrate.