

Curriculum Vitae (CV)

A. R. Niknam

Personal:

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Education & degrees:

1- 1989, B.Sc in Solid State Physics from Shahid Beheshti University, Tehran, Iran.

2- 2000, M.Sc in Atomic and Molecular Physics from Shahid Beheshti University, Tehran, Iran.

3- 2005, PhD in Plasma Physics from Shahid Beheshti University, Tehran, Iran.

Award:

1-Prize for the best graduate student in physics, Shahid Beheshti University (2000).

2-Selected Professor, Shahid Beheshti University (2009).

3-Selected Researcher, Shahid Beheshti University (2012).

4-Selected Researcher, Shahid Beheshti University (2015).

Work activity:

October 2005-December 2010: Assistant Professor at Laser and Plasma Research Institute of Shahid Beheshti University, Evin, 1983969411, Tehran, Iran.

December 2010- March 2015: Associate Professor at Laser and Plasma Research Institute of Shahid Beheshti University, Evin, 1983969411, Tehran, Iran.

March 2015-Present: Professor of Physics at Laser and Plasma Research Institute of Shahid Beheshti University, Evin, 1983969411, Tehran, Iran.

Teaching:

Basic Physics, Quantum Physics, Advanced Plasma Physics, Advanced Electrodynamics, Advanced Plasma Engineering, Atomic and Molecular Physics, Laser-Plasma Interactions, Numerical Physics, Numerical Electrodynamics, Physics of Non-neutral Plasmas, Physical Kinetics. Plasma Electrodynamics.

Research Objectives:

1-Gas discharges and plasma applications

2- Kinetic theory of plasma

3-Plasma instabilities

- 4- Interaction of high frequency electromagnetic wave with plasmas
- 5- Plasma sources and their applications

Research Projects:

- 1- Investigation of the possibility of finding a new type of instability in discharge plasma (2003)
- 2- Investigation of magnetic field effects on discharge plasma instabilities in the presence of an external constant electric field (2005)
- 3- Effect of the relativistic mass and ponderomotive force in the interaction of intense laser with plasma (2009)
- 4- The self-focusing of intense high frequency electromagnetic waves in collisional magnetized plasma (2011)

List of publications in ISI journals

- 1- B. Shokri, **A. R. Niknam**, Discharge plasma instabilities in the presence of an external constant electric field, *Phys. Plasmas*, **10**, 4153 (2003).
- 2- B. Shokri, **A. R. Niknam**, V. Krainov, Cluster structure effects on the interaction of an ultrashort intense laser field with large clusters, *Laser and particle beams*, **22**, 13, (2004).
- 3- B. Shokri, **A. R. Niknam**, M. Smirnov, Ionization processes in the ultrashort, intense laser field interaction with large clusters, *Laser and particle beams* **22**, 45, (2004).
- 4- B. Shokri, **A. R. Niknam**, Nonlinear dynamic of low-frequency Buneman instability of a current-driven plasma, *Phys. Plasmas*, **12**, 062110 (2005).
- 5- B. Shokri, **A. R. Niknam**, Kinetic theory of low-frequency instability of discharge plasma, *Phys. Plasmas*, **12**, 072107 (2005).
- 6- B. Shokri, **A. R. Niknam**, Field profiles of symmetric surface waves in diffusion-controlled regime of a non-isothermal plasma columns, *Plasma Phys. Control. Fusion*, **47**, 1805 (2005).
- 7- B. Shokri, **A. R. Niknam**, Nonlinear structure of the electromagnetic waves in underdense plasmas, *Phys. Plasmas*, **13**, 113110 (2006).
- 8- H. Ghomi, M. Sharifian, **A. R. Niknam**, B. Shokri, Effects of potential and duration of pulse-width on sheath dynamics related to a target with a groove in two-dimensional simulation, *J. Appl. Phys.* **100**, 113301 (2006).

- 9- B. Shokri, **A. R. Niknam**, Nonlinear regime of the filamentation of a microwave produced plasma, *Phys. Plasmas*, **14**, 032113 (2007).
- 10- **A. R. Niknam**, B. Shokri, Density steepening formation in the interaction of microwave field with a plasma, *Phys. Plasmas*, **14**, 052104 (2007).
- 11- A. R. Rastkar, **A. R. Niknam**, B. Shokri, The Effect of Two Surface Treatments on the Tribological Behavior of Gamma-Based Titanium Aluminides, *Plasma Process. Polym.* **4**, S761–S765 (2007)
- 12- **A. R. Niknam**, B. Shokri, Nonlinear filamentation of a current-carrying plasma, *Phys. Plasmas*, **15**, 012108 (2008).
- 13- **A. R. Niknam**, B. Shokri, Low-Frequency Temperature-Dependent Plasma Discharge Instabilities in the Presence of External Constant Electric and Magnetic Fields, *J. Plasma Phys.* **74**, 35-46 (2008).
- 14- M. M. Hatami, **A. R. Niknam**, B. Shokri, A. A. Rukhadze, Nonlinear Thermocurrent Beam Instability of a Weakly Ionized Plasma, *Phys. Plasmas*, **15**, 022107 (2008).
- 15- **A. R. Niknam**, B. Shokri, Nonlinear dynamics of the filamentation of the resistive instability of a current-carrying plasma , *J. Plasma Phys.* **74**, 319-326 (2008).
- 16- M. M. Hatami, **A. R. Niknam**, B. Shokri, H. Ghomi, Magnetized plasma sheath with two species of positive ions, *Phys. Plasmas*, **15**, 053508 (2008).
- 17- M. M. Hatami, B. Shokri, **A. R. Niknam**, Numerical investigation of the magnetized plasma sheath characteristics in the presence of negative ions, *Phys. Plasmas*, **15**, 123501 (2008).
- 18- M. M. Hatami, B. Shokri, **A. R. Niknam**, Collisional effects in magnetized plasma sheath with two species of positive ions, *J. Phys. D: Appl. Phys.* **42**, 025204 (2008).
- 19- A. R. Rastkar, **A. R. Niknam**, B. Shokri, Characterization of copper oxide nanolayers deposited by direct current magnetron sputtering, *Thin Solid Films*, **517**, 5464-5467 (2009)
- 20- **A. R. Niknam**, M. Hashemzadeh, B. Shokri, Weakly relativistic and ponderomotive effects on the density steepening in the interaction of an intense laser pulse with an underdense plasma, *Phys. Plasmas*, **16**, 033105 (2009).
Selected for a simultaneous publication in the Virtual Journal of Ultrafast Science, Volume 8, Issue 4 (2009).
- 21- B. Shokri, M. S. Yaghmaee, A. Sarani, **A. R. Niknam**, Chemical kinetics simulation of deposition and sp^2/sp^3 bond ratio of diamond like carbon film in plasma, *Vacuum*, **83**, S140 (2009).

- 22- M. M. Hatami, **A. R. Niknam**, B. Shokri, Characteristics of ions in a magnetized plasma sheath with two species of positive ions, *Vacuum*, **83**, S231 (2009).
- 23- M. M. Hatami, B. Shokri, **A. R. Niknam**, A. Aliakbari, Investigation of spatiotemporal behavior of the plasma density during the development of the thermocurrent instability, *Phys. Plasmas*, **16**, 052103 (2009).
- 24- **A. R. Niknam**, M. Hashemzadeh, B. Shokri, M. R. Rouhani, Rarefaction shock waves and Hugoniot curve in the presence of free and trapped particles, *Phys. Plasmas*, **16**, 122109 (2009).
Selected for a simultaneous publication in the Virtual Journal of Ultrafast Science, Volume 9, Issue 1 (2010).
- 25- H. Tashakori, **A. R. Niknam**, M. Nejati, B. Jazi, Generation and amplification of terahertz electromagnetic waves in a plasma waveguide with a dielectric rod and annular degenerate plasma, *Waves in Random and Complex Media*, **20**, 472 (2010).
- 26- **A. R. Niknam**, M. Hashemzadeh, M. M. Montazeri, Numerical Investigation of the Ponderomotive Force Effect in an Underdense Plasma With a Linear Density Profile, *IEEE Transactions on Plasma Science*, **38**, 2390 (2010).
- 27- M. M. Hatami, B. Shokri, **A. R. Niknam**, Evolution of non-resonant Buneman instability with a negative diffusion equation, *Phys. Scr.*, **82**, 065503 (2010).
- 28- B. Mohammadhosseini, **A. R. Niknam**, B. Shokri, Spatial and temporal evolution of filamentation instability in a current-carrying plasma, *Phys. Plasmas*, **17**, 122303 (2010).
- 29- **A. R. Niknam**, D. Komaizi, M. Hashemzadeh, Simulation of low frequency Buneman instability of a current-driven plasma by particle in cell method, *Phys. Plasmas*, **18**, 022301 (2011).
- 30- S. M. Khorashadizadeh, **A. R. Niknam**, T. Haghtalab, Dust-acoustic filamentation of a current-driven dusty plasma, *Phys. Plasmas*, **18**, 063703 (2011)
- 31- **A. R. Niknam**, A. Aliakbari, S. Majedi, F. Haji Mirzaei, M. Hashemzadeh, Self-focusing of intense high frequency electromagnetic waves in a collisional magnetoactive plasma, *Phys. Plasmas*, **18**, 112305 (2011)
Selected for a simultaneous publication in the Virtual Journal of Ultrafast Science, Volume 10, Issue 12 (2011).
- 32- **A. R. Niknam**, T. Haghtalab, S. M. Khorashadizadeh, Filamentation instability of current-driven dust ion-acoustic waves in a collisional dusty plasma, *Phys. Plasmas*, **18**, 113707 (2011)
- 33- B. Mohammadhosseini, **A. R. Niknam**, S. Majedi, B. Shokri, Study of nonlinear dynamics of the filamentation instability in a current-carrying plasma using Adomian decomposition method, *IEEE Transactions on Plasma Science*, **40**, 9 (2012).

- 34- B. Jazi, **A. R. Niknam**, A. Abdoli-Arani, Influence of thermal and collisional effects on the dielectric permittivity tensor in a multi layer plasma waveguide with elliptical cross section, *IEEE Transactions on Plasma Science*, **40**, 414 (2012).
- 35- S. M. Khorashadizadeh, **A. R. Niknam**, E. Rastbood, Low-frequency instabilities in the interaction of ion beam with magnetized plasma, *IEEE Transactions on Plasma Science*, **40**, 429 (2012).
- 36- **A. R. Niknam**, M. Menati, M. Hashemzadeh, M. M. Zahedi, Fundamentals of slot antenna designing for application in surface wave plasma sources, *IEEE Transactions on Plasma Science*, **40**, 470 (2012).
- 37- S. M. Khorashadizadeh, S. Taheri Boroujeni, E. Rastbood, **A. R. Niknam**, Theoretical study of the surface waves in semi-bounded quantum collisional plasmas, *Phys. Plasmas*, **19**, 032109 (2012).
- 38- **A. R. Niknam**, E. Rastbood, S. M. Khorashadizadeh, Ion beam driven instabilities in unmagnetized and strongly magnetized plasmas, *Waves in Random and Complex Media*, **22**, 356 (2012).
- 39- **A. R. Niknam**, P. S. Mostafavi, D. Komaizi, M. Salahshoor, Simulation of filamentation instability of a current-carrying plasma by particle in cell method, *Phys. Plasmas*, **19**, 082119 (2012).
- 40- H. Ghomi, A. Mahmoodpoor, H. Goudarzi, **A. R. Niknam**, Numerical simulation of pulsed plasma sheath dynamics around a micro-sized tip, *J. Plasma Phys.* **79**, 759 (2013).
- 41- **A. R. Niknam**, N. Akhlaghipour, Microwave ponderomotive action on the inhomogeneous collisionless and collisional plasmas, *Waves in Random and Complex Media*, **23**, 183 (2013).
- 42- M. Hashemzadeh, **A. R. Niknam**, D. Komaizi, PIC simulation of the current-driven Buneman instability in the presence of collisional and thermal effects, *Contrib. Plasma Phys.* **53**, 580 (2013).
- 43- S. M. Khorashadizadeh, F. Sabzinezhad, **A. R. Niknam**, Acceleration of dust grains by means of the high energy ion beam, *Phys. Lett. A.*, **377**, 2368 (2013).
- 44- S. M. Khorashadizadeh, E. Rastbood, H. Zeinaddini Meymand, **A. R. Niknam**, Nonlinear interaction of intense electromagnetic waves with a magnetoactive electron-positron-ion plasma, *Phys. Plasmas*, **20**, 082123 (2013).
- 45- M. Hashemzadeh, **A. R. Niknam**, D. Komaizi, Particle in cell simulation of relativistic Buneman instability in a current carrying plasma, *Waves in Random and Complex Media*, **23**, 383 (2013).

- 46- **A. R. Niknam**, H. Aki, S. M. Khorashadizadeh, Acceleration of positrons by a relativistic electron beam in presence of quantum effects, *Phys. Plasmas*, **20**, 092122 (2013).
- 47- **A. R. Niknam**, M. R. Taghadosi, S. Majedi, S. M. Khorashadizadeh, Formation of current filaments and magnetic field generation in a quantum current-carrying plasma, *Phys. Plasmas*, **20**, 092310 (2013).
- 48- B. Bokaei, **A. R. Niknam**, M. R. Jafari Milani, Turning point temperature and competition between relativistic and ponderomotive effects in self-focusing of laser beam in plasma, *Phys. Plasmas*, **20**, 103107 (2013).
- 49- S. M. Khorashadizadeh, T. Mirzaye, **A. R. Niknam**, Space charge and ponderomotive force effects in interaction of high-power microwave with plasma, *IEEE Transactions on Plasma Science*, **41**, 3094 (2013).
- 50- **A. R. Niknam**, S. Taheri Boroujeni, S. M. Khorashadizadeh, Propagation of surface waves on a semi-bounded quantum magnetized collisional plasma, *Phys. Plasmas*, **20**, 12106 (2013).
- 51- **A. R. Niknam**, S. Barzegar, M. Hashemzadeh, Self-focusing and stimulated Brillouin back-scattering of a long intense laser pulse in a finite temperature relativistic plasma, *Phys. Plasmas*, 122117 (2013).
- 52- N. Navab safa, H. Ghomi, M. Khoramabadi, S. Ghasemi, **A. R. Niknam**, External magnetic field effect on the sheath dynamics and implantation profiles in the vicinity of a long step shaped target in plasma immersion ion implantation, *Vacuum*, **101**, 354 (2014).
- 53- **A. R. Niknam**, M. R. Jafari Milani, B. Bokaei, M. Hashemzadeh, Weakly relativistic and ponderomotive effects in interaction of intense laser beam with inhomogeneous collisionless and collisional plasmas, *Waves in Random and Complex Media*, **24**, 1-18 (2014).
- 54- B. Jazi, B. Davoudi, M. R. Khajehmirzaei, **A. R. Niknam**, Energy distribution along the focal axis of a metallic cylindrical parabolic reflector covered with a plasma layer, *IEEE Transactions on Plasma Science*, **42**, 286 (2014).
- 55- M. R. Jafari Milani, **A. R. Niknam**, B. Bokaei, Temperature effect on self-focusing and defocusing of Gaussian laser beam propagation through plasma in weakly relativistic regime, *IEEE Transactions on Plasma Science*, **42**, 742 (2014).
- 56- B. Bokaei, **A. R. Niknam**, Increasing the upper-limit intensity and temperature range for thermal self-focusing of a laser beam by using plasma density ramp-up, *Phys. Plasmas*, **21**, 032309 (2014).
- 57- **A. R. Niknam**, E. Rastboud, F. Bafandeh S. M. Khorashadizadeh, Modulational instability of electromagnetic waves in a collisional quantum magnetoplasma, *Phys. Plasmas*, **21**, 042307 (2014).

- 58- M. Ghorbanalilu, S. Sadegzadeh, Z. Ghaderi, **A. R. Niknam**, Weibel instability for a streaming electron, counterstreaming e-e and e-p plasmas with intrinsic temperature anisotropy, *Phys. Plasmas*, **21**, 052102 (2014).
- 59- M. Hashemzadeh, **A. R. Niknam**, B. Bokaei, M. R. Jafari Milani, Nonlinear steepening of density profile by intense laser radiation in collisional inhomogeneous plasmas, *IEEE Transactions on Plasma Science*, **42**, 1353 (2014).
- 60- M. M. Hatami, **A. R. Niknam**, Characteristics of positive ions in the sheath region of magnetized collisional electronegative discharges, *Plasma Sci. Technol.*, **16**, 552 (2014).
- 61- M. R. Jafari Milani, **A. R. Niknam**, A. H. Farahbod, Ponderomotive self-focusing of Gaussian laser beam in warm collisional plasma, *Phys. Plasmas*, **21**, 063107 (2014).
- 62- M. Sharifian, H. R. Sharifinejad, M. Borhani Zarandi, **A. R. Niknam**, Effect of q-nonextensive distribution of electrons on the plasma sheath floating potential, *J. Plasma Phys.* **80**, 607 (2014).
- 63- **A. R. Niknam**, M. R. Khajehmirzaei, B. Davoudi-Rahaghi, Z. Rahmani, B. Jazi, A. Abdoli-Arani, Electromagnetic modeling of the energy distribution of a metallic cylindrical parabolic reflector covered with a magnetized plasma layer, *Phys. Plasmas*, **21**, 073107 (2014).
- 64- N. Navab Safa, H. Ghomi, **A. R. Niknam**, Effect of the q-nonextensive electron velocity distribution on a magnetized plasma sheath, *Phys. Plasmas*, **21**, 082111 (2014).
- 65- **A. R. Niknam**, H. Roozbahani, M. Hashemzadeh, D. Komaizi, Particle in cell simulations of Buneman instability of a current-driven plasma with qnonextensive electron velocity distribution, *Phys. Plasmas*, **21**, 092307 (2014).
- 66- M. Hashemzadeh, **A. R. Niknam**, Particle in cell simulation of low frequency instability in a current carrying plasma in the presence of negative ions, *Phys. Plasmas*, **21**, 092309 (2014).
- 67- H. Ahmadi, A. Maghari, H. Sabzyan, **A. R. Niknam**, and M. Vafaei, Effect of nuclear motion on high-order harmonic generation of H² in intense ultrashort laser pulses, *Phys. Rev. A*, **90**, 043411(2014).
- 68- B. Bokaei, **A. R. Niknam**, Weakly relativistic and ponderomotive effects on self-focusing and self-compression of laser pulses in near critical plasmas, *Phys. Plasmas*, **21**, 103107 (2014).
- 69- M. Salahshoor, **A. R. Niknam**, Dust magneto-gravitational drift wave in $\mathbf{g} \times \mathbf{B}$ configuration, *Phys. Plasmas*, **21**, 113702 (2014).

- 70- B. Bokaei, **A. R. Niknam**, M. R. Jafari Milani, Increasing the upper-limit intensity in relativistic and ponderomotive self-focusing by using plasma with a linear electron temperature ramp, *Plasma Sources Sci. Technol.*, **22**, 064011 (2014).
- 71- S. M. Khorashadizadeh, E. Rastbood, **A. R. Niknam**, Filamentation instability of nonextensive current-driven plasma in the ion acoustic frequency range, *Phys. Plasmas*, **21**, 122106 (2014).
- 72- M. Salahshoor, **A. R. Niknam**, Dust gravitational drift wave in complex plasma under gravity, *Phys. Plasmas*, **21**, 123706 (2014).
- 73- N. Navab Safa, H. Ghomi, **A. R. Niknam**, Plasma immersion ion implantation characteristics with q-nonextensive electron velocity distribution, *J. Plasma Phys.* **81**, 905810303 (2015).
- 74- S. M. Khorashadizadeh, M. R. Taghadosi, **A. R. Niknam**, Filamentation instability in a current-carrying plasma in the presence of quantum effects, *Contrib. Plasma Phys.* **55**, 315 (2015).
- 75- **A. R. Niknam**, T. Mirzaye, S. M. Khorashadizadeh, Ohmic heating and space charge effects in microwave-plasma interaction, *Laser and particle beams*, **33**, 87 (2015).
- 76- S. M. Khorashadizadeh, T. Mirzaye, **A. R. Niknam**, Weakly relativistic and space charge effects in interaction of high-power microwave with plasma, *Waves in Random and Complex Media*, **25**, 131 (2015).
- 77- **A. R. Niknam**, E. Rastbood, S. M. Khorashadizadeh, A. Entezari Roodbaraki, Effect of nonextensive velocity distribution on the filamentation instability in a current-driven dusty plasma, *Astrophysics and Space Science*, **357:50**, 1 (2015).
- 78- H. Moghadasin, **A. R. Niknam**, B. Shokri, Self similar solution of superradiant amplification of ultrashort laser pulses in plasma, *Phys. Plasmas*, **22**, 053105 (2015).
- 79- S. M. Khorashadizadeh, E. Rastbood, **A. R. Niknam**, Kinetic theory of the filamentation instability in a collisional current-driven plasma with nonextensive distribution, *Phys. Plasmas*, **22**, 072103 (2015).
- 80- M. Salahshoor, **A. R. Niknam**, Complex Plasma in $\mathbf{g} \times \mathbf{B}$ Configurations: Stability Switching and Stationary Structure, *Phys. Plasmas*, **22**, 083709 (2015).
- 81- B. Bokaei, **A. R. Niknam**, E. Imani, Spatiotemporal evolution of high power laser pulses in relativistic magnetized inhomogeneous plasmas, *Phys. Plasmas*, **22**, 092310 (2015).
- 82- **A. R. Niknam**, S. Barzegar, B. Bokaei, F. Haji Mirzaei, A. Aliakbari, Collisional effects on the modulational instability of intense laser pulses in magnetoactive plasmas, *Laser and particle beams*, **33**, 705 (2015).

- 83- M. Akhyani, F. Jahangiri, **A. R. Niknam**, R. Massudi, Optimizing chirped laser pulse parameters for electron acceleration in vacuum, *J. Appl. Phys.* **118**, 183106 (2015).
- 84- S. M. Khorashadizadeh, S. Taheri Boroujeni, **A. R. Niknam**, Nonlinear interaction between surface plasmons and ion oscillations in a semibounded collisional quantum plasma, *Phys. Plasmas*, **22**, 112115 (2015).
- 85- **A. R. Niknam**, E. Rastbood, S. M. Khorashadizadeh, Dielectric permittivity tensor and low frequency instabilities of a magnetoactive current-driven plasma with nonextensive distribution, *Phys. Plasmas*, **22**, 122102 (2015).
- 86- S. M. Khorashadizadeh, M. R. Taghadosi, **A. R. Niknam**, Nonlinear dynamics of filamentation instability and current filament merging in a high density current-driven plasma, *Radiation Effects & Defects in Solids*, **170**, 945 (2015).
- 87- **A. R. Niknam**, S. Taheri Boroujeni, S. M. Khorashadizadeh, Response to “Comment on ‘Propagation of surface waves on a semi-bounded quantum magnetized collisional plasma, *Phys. Plasmas*, **23**, 044702 (2016).
- 88- M. Eidi, M. Vafaei, **A. R. Niknam**, N. Morshedian, A new version of fermion coupled coherent states method: Theory and applications in simulation of two-electron systems, *Chemical Physics Letters*, **653**, 60 (2016).
- 89- **A. R. Niknam**, M. R. Banjafar, F. Jahangiri, S. Barzegar, R. Massudi, Resonant terahertz radiation from warm collisional inhomogeneous plasma irradiated by two Gaussian laser beams, *Phys. Plasmas*, **23**, 053110 (2016).
- 90- S. M. Khorashadizadeh, M. Barati Moqadam Niyat, **A. R. Niknam**, Numerical analysis of electrostatic ion cyclotron instability in an electron-positron-ion plasma, *Phys. Plasmas*, **23**, 062102 (2016).
- 91- M. J. Jafari, M. R. Jafari Milani, **A. R. Niknam**, Evolution of a Gaussian laser beam in warm collisional magnetoplasma, *Phys. Plasmas*, **23**, 073119 (2016).
- 92- M. Barati Moqadam Niyat, S. M. Khorashadizadeh, **A. R. Niknam**, Electrostatic ion cyclotron instability in a plasma with q-nonextensive distributions, *Phys. Plasmas*, **23**, 122110 (2016).
- 93- M. Rezaei-Pandari, **A. R. Niknam**, R. Massudi, F. Jahangiri, H. Hassaninejad, S. M. Khorashadizadeh, Wakefield evolution and electron acceleration in interaction of frequency-chirped laser pulse with inhomogeneous plasma, *Phys. Plasmas*, **24**, 023112 (2017).
- 94- M. Barati Moqadam Niyat, S. M. Khorashadizadeh, **A. R. Niknam**, Analytical study of effects of positron density and temperature anisotropy on electrostatic ion cyclotron instability, *Phys. Plasmas*, **24**, 032103 (2017).

- 95- M. Kabir, **A. R. Niknam**, Modification of electromagnetic fields and plasma resistance by thermal effects in helicon plasmas, *Phys. Plasmas*, **24**, 053511 (2017).
- 96- M. Hashemzadeh, **A. R. Niknam**, Nonlinear space charge dynamics and modulational instability in the interaction of intense laser pulses with electron-positron plasmas, *Phys. Plasmas*, **24**, 062102 (2017).
- 97- M. Akhyani, M. Rezaei-Pandari, F. Jahangiri, **A. R. Niknam**, R. Massudi, Electron acceleration by an asymmetric laser pulse, *Iranian Journal of Physics Research*. **17**, 293 (2017).
- 98- M. Kabir, **A. R. Niknam**, Effect of gas mixing on physical properties of warm collisional helicon plasmas, *Phys. Plasmas*, **24**, 103525 (2017).
- 99- M. A. Ansari , M. Zarei, N. Akhlaghipour, **A. R. Niknam**, Skull and cerebrospinal fluid effects on microwave radiation propagation in human brain, *Journal of Physics D: Applied Physics*, **50**, 495401 (2017).
- 100- M. Moradi, **A. R. Niknam**, Terahertz Dyakonov surface waves in plasma metamaterials, *Optics Letters*, **43**, 519 (2018)
- 101- A. Amouye Foumani, **A. R. Niknam**, Atomistic simulation of femtosecond laser pulse interactions with a copper film: Effect of dependency of penetration depth and reflectivity on electron temperature, , *J. Appl. Phys.* **123**, 043106 (2018).
- 102- S. Majedi, S. M. Khorashadizadeh, **A. R. Niknam**, Propagation of surface waves in a spin 1/2 magnetized collisional quantum plasma half-space, *Eur. Phys. J. Plus*, **133**, 77 (2018).
- 103- M. Jouhary, S. M. Khorashadizadeh, **A. R. Niknam**, Thermal effects on longitudinal waves instabilities in rotating beam-plasma interaction, *Phys. Plasmas*, **25**, 032118 (2018).
- 104- S. Safari, **A. R. Niknam**, F. Jahangiri, B. Jazi, Terahertz radiation generation through the nonlinear interaction of Hermite and Laguerre Gaussian laser beams with collisional plasma: Field profile optimization, *J. Appl. Phys.* **123**, 153101 (2018).
- 105- M. Moradi, **A. R. Niknam**, Terahertz Dyakonov plasmon surface waves supported by a plasma/TiO₂ interface, *Phys. Rev. B*. **98**, 085403 (2018).
- 106- M. Rezaei-Pandari, M. Akhyani, F. Jahangiri, **A. R. Niknam**, R. Massudi, Effect of temporal asymmetry of the laser pulse on electron acceleration in vacuum, *Optics Communications*, **229**, 46 (2018).
- 107- M. A. Ansari, N. Akhlaghipour, M. Zarei, **A. R. Niknam**, Microwave reflection, transmission, and absorption by human brain tissue, *Proc. of SPIE*, **10716**, 107160T-1 (2018).

- 108- S. M. Khorashadizadeh, S. Majedi, **A. R. Niknam**, Spin effect on propagation of surface waves in a magneto-active quantum plasma, *Contrib. Plasma Phys.* **58**, 820 (2018).
- 109- M. Jouhary, S. M. Khorashadizadeh, M. Barati Moqadam Niyat, **A. R. Niknam**, Dissipative instability of longitudinal wave in interaction between spiral electron beam and warm collisional magnetized plasma, *Phys. Plasmas*, **25**, 112108 (2018).
- 110- M. Ebdaei, B. Bokaei, **A. R. Niknam**, B. Mohammad Hosseini, The propagation of the rippled laser beam and the excitation of electron plasma wave for different densities of plasma based on nonlinear effects, *Iranian Journal of Physics Research.* **18**, 671 (2019).
- 111- M. Hashemzadeh, S. M. Baki, M. Momeni, **A. R. Niknam**, Resonance absorption of intense short laser pulse in near critical inhomogeneous plasma, *Waves in Random and Complex Media*, **29**, 215 (2019).
- 112- S. Safari, B. Jazi, **A. R. Niknam**, F. Jahangiri, The influence of static magnetic field on nonlinear response of a plasma background in the presence of two laser beams with different profiles (Hermite– and Laguerre–Gaussian), *Laser Physics*, **29**, 046002 (2019).
- 113- M. Rezaei-Pandari, F. Jahangiri, **A. R. Niknam**, Optimizing the electron acceleration in vacuum by chirped ultrashort laser pulse using particle swarm method, *Laser and particle beams*, **37**, 242 (2019).
- 114- H. Moghadasin, A. R. Niknam, D. Komaizi, M. R. Banjafar, Attosecond pulse generation by relativistic flying mirrors in laser-plasma interaction: Effect of plasma density and driver amplitude on the generated pulse, *Phys. Plasmas*, **26**, 093105 (2019).
- 115- S. Abbasi, S. M. Khorashadizadeh, **A. R. Niknam**, Interaction of counterstreaming rotating electron-positron beams with inhomogeneous electron-ion plasma, *Phys. Plasmas*, **26**, 092107 (2019).
- 116- S. M. Khorashadizadeh, Sh. Abbasi Rostami, **A. R. Niknam**, S. Vasheghani Farahani, R. Fallah, Longitudinal wave instability due to rotating beam-plasma interaction in weakly turbulent astrophysical plasmas, *MNRAS* **489**, 3059 (2019).
- 117- A. Rajabi, **A. R. Niknam**, B. Shokri, Using an alpha magnet to compress the electron bunches from a photocathode RF gun, *Journal of Instrumentation*, **14**, P10026 (2019).
- 118- S. Alikhani, M. A. Ansari, **A. R. Niknam**, Simulation of thermoacoustic resonance response of tumor by finite element method, *J. Appl. Phys.* **126**, 174701 (2019).

- 119- F. Asadiamiri, J. Ali, M. Bahadoran, K. Chaudhary, P. P. Yupapin, M. Nejati, **A. R. Niknam**, Terahertz Cherenkov radiation excited by an electron beam in a cylindrical metallic rippled-wall waveguide, *Optik*, **208**, 164127 (2020).
- 120- J. Sharifzadeh Tabrizi, S. M. Khorashadizadeh, R. Fallah, **A. R. Niknam**, Amplitude enhancement of plasma wakefield by interaction of relativistic Gaussian electron beam with inhomogeneous magnetized plasma, *AIP Advances*, **10**, 015330 (2020).
- 121- M. R. Taghadosi, **A. R. Niknam**, S. M. Khorashadizadeh, Electron-exchange and correlation effects on filamentation instability of a high-density current-driven plasma, *Phys. Plasmas*, **27**, 032113 (2020).
- 122- H. Alirezaee, M. Sharifian, S. M. R. Darbani, M. Saeed, A. Eslami Majd, **A. R. Niknam**, Terahertz radiation emission from three-color laser-induced air Plasma, *Eur. Phys. J. Plus*, **135**, 342 (2020).
- 123- F. Asadiamiri, M. Nejati, K. Chaudhary, M. Baboli, J. Ali, P. P. Yupapin, **A. R. Niknam**, Dispersion characteristics of terahertz transverse electric mode in a smooth-wall cylindrical waveguide with a degenerate plasma layer, *Opt. Quant. Electron.*, **52**, 254 (2020).
- 124- H. Moghadasin, **A. R. Niknam**, D. Komaizi, Influence of flying mirror features and time delay between two counterpropagating laser pulses on the generated attosecond pulse intensity in near-critical density plasmas, *AIP Advances*, **10**, 065133 (2020).
- 125- **A.R. Niknam**, M. Ghorbani, M. Solaimani, Analysis of filamentation instability in a current-carrying plasma using meshless method of lines coupled with radial basis functions, *Physics Letters A*, **384**, 126839, (2020).
- 126- Sh. Abbasi Rostami, S. M. Khorashadizadeh, **A. R. Niknam**, Quasilinear dynamics of ordinary mode electromagnetic cyclotron instability driven by the interaction of rotating electron beam with magnetized plasma, Published online: *Plasma Phys. Control. Fusion*, **62**, 115004 (2020).
- 127- S. M. Khorashadizadeh, S. Abbasi, **A. R. Niknam**, S. Vasheghani Farahani, R. Fallah, Rotating ion beam effects on temperature gradient instability in completely ionized plasmas, *Physical Review E*, **102**, 043208 (2020).
- 128- F. Asadiamiri, K. Chaudhary, J. Ali, M. Bahadoran, M. Nejati, P. P. Yupapin, **A. R. Niknam**, Dispersion of electromagnetic waves in coaxial cylindrical rippled-wall waveguide including plasma layer, *Waves in Random and Complex Media*, Published online: 13 May (2020).
- 129- A. Amouye Foumani, D. J. Förster, H. Ghorbanfekr, R. Weber, T. Graf, **Ali Reza Niknam**, Atomistic simulation of ultra-short pulsed laser ablation of metals with single

and double pulses: An investigation of the re-deposition phenomenon, *Applied Surface Science*, **537**, 147775 (2021).

130- M.M. Hatami, **A.R. Niknam**, Effects of two-temperature nonextensive electrons on ion-acoustic double layers, *Physica A*, **564**, 125533 (2021).

131- S. Barzegar, **A. R. Niknam**, Laser pulse-electron beam synergy effect on electron self-injection and higher energy gain in laser wakefield accelerators, *Scientific Reports*, **11**, 37 (2021).

132- R. Fallah, R. Khuniki, S. M. Khorashadizadeh, **A. R. Niknam**, Effects of relativistic and ponderomotive nonlinearities on the interaction of high-power laser beam with an inhomogeneous warm plasma, *Contributions to Plasma Physics*, **61**, e202000086. (2021).

133- M. Sedaghat, S. Barzegar, **A. R. Niknam**, Quasi-phase-matched laser wakefield acceleration of electrons in an axially density-modulated plasma channel, *Scientific Reports*, **11**, 15207 (2021).

134- S Alikhani, M. Zarei, M. A. Ansari, **A. R. Niknam**, An improved technique based on microwave thermoacoustic method for breast cancer screening, *Journal of Physics D: Applied Physics*, **54**, 415401 (2021).

135- **A. R. Niknam**, M. Joodaki, A. Abdolmaleki, M. Sedaghat, H. Saberi, M. R. Banjafar, F. Jahangiri, Magnetically tuned hybrid resonance emission of terahertz waves from the interaction of intense laser beams with warm collisional inhomogeneous plasma, *Waves in Random and Complex Media*, Published online: 5 July (2021).

136- **A. R. Niknam**, Sh. Dodge, M. Hajian, M. A. Ansari, Characterization of microwave heating for hyperthermia cancer treatment, *Waves in Random and Complex Media*, Published online: 29 March (2021).

137- M. Vafaei, M. Nejati, A. Abdoli–Arani, **A. R. Niknam**, Dispersion properties and beam excitation of symmetric slow waves in helix traveling wave tubes in the presence of plasma, *Journal of Electromagnetic Waves and Applications*, Published online: 26 September (2021).

138- J. Taghinejad, **A. R. Niknam** , A. R. Rastkar, H. Ghomi, Time-resolved evolution of collisional transient sheath in plasma source ion implantation, *Physica Scripta*, **96**, 125623 (2021).

139- S. Barzegar, M. Sedaghat, **A. R. Niknam**, Controlled electron injection into beam driven plasma wakefield accelerators employing a co-propagating laser pulse, *Plasma Phys. Control. Fusion*, **63**, 125016 (2021).

List of publications in proceedings:

- 1- **A. R. Niknam**, B. Shokri, Modeling of surfatron, First IPM International Workshop on Plasma Dynamics, Qeshm Island, Iran, (2002).
- 2- B. Shokri, **A.R. Niknam**, Electric field distribution in non-isothermal plasma column, Vth International Workshop on Microwave Discharges, 63, Greiswald, Germany (2003).
- 3- B. Shokri, **A.R. Niknam**, Radial electric field in surfatron produced plasma, ICPIG XXVI, 1, 57, Greiswald, Germany, (2003).
- 4- B. Shokri, **A. R. Niknam**, Temperature and density gradient effects in surface wave-sustained plasma columns, 12th International Congress on Plasma Physics(ICPP), Nice, France, (2004)
- 5- B. Shokri, M. Ghorbanalilu, **A. R. Niknam**, Self-consistent field profiles in surface wave-produced plasma columns, 57th Gaseous Electronics Conference, ES1.022, Shannon, Republic of Ireland, (2004).
- 6- B. Shokri, **A.R. Niknam**, Steepening of profile electron density in nonlinear regime of the Buneman instability, ICPIG XXVII, 13, 050, Eindhoven, Netherlands, (2005).
- 7- B. Shokri, **A.R. Niknam**, Nonlinear negative diffusion process in nonlinear regime of the thermocurrent instability, ICPIG XXVII, 13, 051, Eindhoven, Netherlands, (2005)
- 8- B. Shokri, H. Ghomi, **A.R. Niknam**, S, Kh, Alavi, M. Mirzaie, Diamond deposition by arc plasma jet for mechanical seals, ICPIG XXVII, 10, 324, Eindhoven, Netherlands, (2005)
- 9- **A. R. Niknam**, B. Shokri, Nonlinear propagation of high frequency electromagnetic wave into the underdense plasma, 13th International Congress on Plasma Physics (ICPP), A171p, Kiev, Ukraine, (2006)
- 10- H. Ghomi, M. M. Hatami, **A. R. Niknam**, B. Shokri , Effect of an oblique magnetic field on a plasma sheath consisting two-species positive ions, 13th International Congress on Plasma Physics (ICPP), D124p, Kiev, Ukraine, (2006)
- 11- **A. R. Niknam**, B. Shokri, Nonlinear dynamic of the magnetic field generation in a plasma produced by microwave, The Megagauss XI conference , P1.2, London, UK (2006)
- 12- **A. R. Niknam**, A. R. Rastkar, B. Shokri, Investigation of the thermo-current instability in the nonlinear regime, 8th Asia-Pacific Conference on Plasma Science and Technology and 19th Symposium on Plasma Science for Materials, abs_086, Canberra, Australia, (2006)
- 13- **A. R. Niknam**, A. R. Rastkar, B. Shokri, Surface Modifications by Various Gas Discharge Plasmas, 7th Surface Engineering and Heat Treatment Congress, P74, Isfahan, Iran (2006)

- 14- A. R. Rastkar, **A. R. Niknam**, B. Shokri, Effect of magnetron plasma parameters on the sputtered thin films of copper, 7th Surface Engineering and Heat Treatment Congress, P69, Isfahan, Iran (2006)
- 15- A. R. Rastkar, **A. R. Niknam**, B. Shokri, Tribological behavior of surface treated Gamma based Titanium Aluminides, 10th International Conference on Plasma Surface Engineering (PSE) , Po3098, Garmisch-Patenkirchen, Germany, (2006)
- 16- **A. R. Niknam**, B. Shokri, Steepening of the electron density in the interaction of laser with a plasma, Second IPM International Workshop on Plasma Dynamics, Tehran – Iran (December 18 - 22, 2006)
- 17- B. Shokri, A. Sarani, M.S. Yaghmaee, **A.R. Niknam**, Thermochemical modeling and computation of reaction rate Constant in plasma media (on the example of CH₄-H₂-Ar system), Second IPM International Workshop on Plasma Dynamics, Tehran – Iran (December 18 - 22, 2006)
- 18- **A. R. Niknam**, B. Shokri, Ponderomotive modification of the electron density distribution in the interaction of high power microwave field with a plasma, IEEE Pulsed Power and Plasma Science Conference, A46, Albuquerque, New Mexico, USA (June 17-22, 2007)
- 19- **A. R. Niknam**, A. R. Rastkar, B. Shokri, The field distribution of a symmetric surface wave in a non-isothermal plasma in a co-axial structure, IEEE Pulsed Power and Plasma Science Conference, A47, Albuquerque, New Mexico, USA (June 17-22, 2007)
- 20- **A. R. Niknam**, A. R. Rastkar, B. Shokri, The radial electric field profiles of a symmetric surface wave in a coaxial plasma waveguide, 6th Asian-European International Conference on Plasma Surface Engineering (APSE2007), Yasuragi-Ioujima Nagasaki, Japan (September 24-29, 2007)
- 21- A. R. Rastkar, **A. R. Niknam**, B. Shokri, Friction and indentation tests on the modified surface of titanium aluminides, 6th Asian-European International Conference on Plasma Surface Engineering (APSE2007), Yasuragi-Ioujima Nagasaki, Japan (September 24-29, 2007)
- 22- A. R. Rastkar, **A. R. Niknam** B. Shokri, Thickness measurement of dc magnetron sputtered nano layers of copper oxide, 2nd International Meeting on Developments in Materials Processes, & Applications of Nanotechnology (MPA-2008) Robinson College, University of Cambridge, UK, (January 6-8, 2008)
- 23- A. R. Rastkar, **A. R. Niknam**, B. Shokri, S. Babaei ,M. Amirzadeh, Production of nanocrystalline Aluminium oxide layers through a modified pulsed DC plasma electrolytic oxidation of aluminium, 2nd International Meeting on Developments in Materials Processes, & Applications of Nanotechnology (MPA-2008) Robinson College, University of Cambridge, UK, (January 6-8, 2008)

- 24- B. Shokri, S. I. Hosseini, M. Sharifian, **A. R. Niknam**, A. R. Rastkar, Low temperature deposition of nano sized diamond like carbon, 2nd International Meeting on Developments in Materials Processes, & Applications of Nanotechnology (MPA-2008) Robinson College, University of Cambridge, UK, (January 6-8, 2008)
- 25- M. Sharifian, B. Shokri, S. I. Hosseini, **A. R. Niknam**, A. R. Rastkar M. Gholami, Deposition of methyl methacrylate nanolayers on silica gel particles by microwave plasma polymerization, 2nd International Meeting on Developments in Materials Processes, & Applications of Nanotechnology (MPA-2008) Robinson College, University of Cambridge, UK, (January 6-8, 2008)
- 26- A. R. Rastkar, **A. R. Niknam**, B. Shokri, M. Kabir, M. Amirzadeh and M. R. Rahimpour, Plasma enhanced CVD of graphite nano particles from methane at low temperatures, 2nd International Meeting on Developments in Materials Processes, & Applications of Nanotechnology (MPA-2008) Robinson College, University of Cambridge, UK, (January 6-8, 2008)
- 27- M. M. Hatami, **A. R. Niknam**, B. Shokri, Characteristics of ions in a magnetized plasma sheath with two species of positive ions, 7th International conference Ion Implantation and other Application of Ions and Electrons (ION-2008), Kazimierz Dolny, Poland, (June 16-19, 2008).
- 28- S. Toroghi, **A. R. Niknam**, B. Shokri, Weld pool simulation in the electric arc interaction with different anode materials, 7th International conference Ion Implantation and other Application of Ions and Electrons (ION-2008), Kazimierz Dolny, Poland, (June 16-19, 2008).
- 29- B. Shokri, M.S. Yaghmaee, A. Sarani, **A.R. Niknam**, Chemical kinetics simulation of diamond like carbon film deposition in plasma medium and its biocompatibility feature, 7th International conference Ion Implantation and other Application of Ions and Electrons (ION-2008), Kazimierz Dolny, Poland, (June 16-19, 2008).
- 30- S. Babaei, A. R. Rastkar, **A. R. Niknam**, B. Shokri, Study and Sintering of Aluminium Oxide Ceramic Layers via Modified Plasma Electrolytic Oxidation, International Materials Research Conference (MRS), F21.7 Shanghai Institute of Ceramics, China (June 9 - 12, 2008)
- 31- M.R. Rezaee, **A.R. Niknam**, H. Ghomi, H. Latifi, Magnetized Plasma Sheath Dynamics in Plasma Source Ion Implantation, The 35th IEEE International Conference on Plasma Science, Karlsruhe, Germany (June 15–19, 2008)
- 32- B. Shokri, **A. R. Niknam**, M. Mahmoudi, P. Bakhtiarpoor, Description of Propagation of the Ultra-Short Pulses in Turbulence Atmosphere with Use of Nonlinear Schrödinger Equation, Annual Physics Conference, The Physics Society of Iran, Kashan University, Kashan, Iran, (August 25-28, 2008).

- 33- A. R. Rastkar, **A. R. Niknam**, B. Shokri, Modeling and experimental measurement of the thickness of cuprous oxide nanolayers deposited on glass by dc reactive magnetron sputtering, 11th International Conference on Plasma Surface Engineering (PSE), Po3055, Garmisch-Patenkirchen, Germany, (September 15-19, 2008)
- 34- **A. R. Niknam**, M. Hashemzadeh, B. Shokri, Investigation of Nonlinear Structure of Electromagnetic Waves Propagation in Underdense Plasmas in Relativistic Regime, 15th Iranian Conference on Optics and Photonics and 1th Iranian Conference on Photonics Engineering University of Isfahan, Iran (January 27-29, 2009)
- 35- M. Sharifian, B. Shokri, **A. R. Niknam**, Dependency of the electronegative sheath structure on the negative ion density and temperature, 36th International Conference on Plasma Science and 23rd Symposium on Fusion Engineering (ICOPS and SOFE), San Diego, California, USA, (May 31 – June 5, 2009).
- 36- M. M. Hatami, B. Shokri, **A. R. Niknam**, Effect of positive ion density on the characteristics of the magnetized plasma sheath, 36th International Conference on Plasma Science and 23rd Symposium on Fusion Engineering (ICOPS and SOFE), San Diego, California, USA, (May 31 – June 5, 2009).
- 37- **A. R. Niknam**, M. Hashemzadeh, M. M. Montazeri, Numerical investigation of ponderomotive force effect in an underdense plasma with a linear density profile, 21th International Conference on the Numerical Simulation of Plasmas (ICNSP 2009), Lisbon, Portugal, (October 6-9, 2009).
- 38- **A. R. Niknam**, A. Aliakbari, S. Majedi, F. Haji Mirzaei, The self-focusing effect of strong electromagnetic wave in a collisional plasma, 16th Iranian Conference on Optics and Photonics and 2th Iranian Conference on Photonics Engineering, University of Yazd, Iran (2010)
- 39- **A. R. Niknam**, M. Hashemzadeh, M. M. Montazeri, Investigation of the effect of ponderomotive force of electromagnetic waves in underdense plasmas with exponential density profile, 16th Iranian Conference on Optics and Photonics and 2th Iranian Conference on Photonics Engineering, University of Yazd, Iran (2010)
- 40- **A. R. Niknam**, S. Abdi, A. R. Rastkar, Electron density and electric field distributions in a cylindrical direct current discharge plasma, 4th National Conference on Vacuum, Isfahan, Iran (2010)
- 41- M. Hashemzadeh, M. Etehad, **A. R. Niknam**, B. Shokri, Nonlinear interaction of the high-frequency electromagnetic waves with dense collisional plasmas, Annual Physics Conference, The Physics Society of Iran, Abu-Ali-Sina University, Hamedan, Iran, (September, 11-14, 2010).
- 42- **A. R. Niknam**, F. Haji Mirzaei, A. Aliakbari, Modulation instability of strong electromagnetic waves in collisional plasma, Annual Physics Conference, The Physics Society of Iran, Abu-Ali-Sina University, Hamedan, Iran, (September, 11-14, 2010).

- 43- M. M. Hatami, B. Shokri, **A. R. Niknam**, Study of the nonresonant Buneman instability throughout the negative diffusion equation, 63rd Gaseous Electronics Conference and 7th International Conference on Reactive Plasmas, Paris, France (October, 4-8, 2010)
- 44- H. Goudarzi, **A. R. Niknam**, H. Ghomi, On the study of ion mass in the collisionless magnetized plasma sheath , 63rd Gaseous Electronics Conference and 7th International Conference on Reactive Plasmas, Paris, France (October, 4-8, 2010)
- 45- **A. R. Niknam**, S. Abdi, A. R. Rastkar, Theoretical analysis of direct current glow discharge plasma in a coaxial structure, 63rd Gaseous Electronics Conference and 7th International Conference on Reactive Plasmas, Paris, France (October, 4-8, 2010)
- 46- H. Goudarzi, H. Ghomi, **A. R. Niknam**, Investigation of the electric field around a carbon nanotube tip in pulsed plasma sheath , 18th Symposium on Application of Plasma Processes and Workshop on Plasmas as a Planetary Atmospheres Mimics, Vrátna, Slovakia (January, 15-20, 2011)
- 47- S. M. Khorashadizade, **A. R. Niknam**, T.Haghtalab, Filamentation instability of dust-acoustic wave in a current-carrying collisional plasma, 17th Iranian Conference on Optics and Photonics and 3th Iranian Conference on Photonics Engineering, University of Kerman, Mahan, Iran (February, 8-10, 2011)
- 48- S. M. Khorashadizade, **A. R. Niknam**, E. Rastboud, Investigation of the dissipative instability in the ion beam-isotropic plasma interaction, 17th Iranian Conference on Optics and Photonics and 3th Iranian Conference on Photonics Engineering, University of Kerman, Mahan, Iran (February, 8-10, 2011)
- 49- M. Hashemzadeh, **A. R. Niknam**, B. Bokaei, Propagation of the high-frequency electromagnetic waves in collisional inhomogeneous plasma with parabolic density profile, 17th Iranian Conference on Optics and Photonics and 3th Iranian Conference on Photonics Engineering, University of Kerman, Mahan, Iran (February, 8-10, 2011)
- 50- M. Menati, **A. R. Niknam**, M. Hashemzadeh, Simulation of the propagation and absorption of the electromagnetic waves in surface wave plasma sources using FDTD, 17th Iranian Conference on Optics and Photonics and 3th Iranian Conference on Photonics Engineering, University of Kerman, Mahan, Iran (February, 8-10, 2011)
- 51- **A. R. Niknam**, F. Asadi Amiri, M. Salahshoor, M. Nejati, Fast and Slow Waves Dispersion for TE Mode in a Cylindrical Waveguide with a Degenerate Plasma Column, 17th Iranian Conference on Optics and Photonics and 3th Iranian Conference on Photonics Engineering, University of Kerman, Mahan, Iran (February, 8-10, 2011)
- 52- H. Goudarzi, H. Ghomi, **A. R. Niknam**, Study on distribution of the electric field around an aligned nanotube in pulsed plasma enhanced chemical vapour deposition, IX Workshop on Frontiers in Low Temperature Plasma Diagnostics, Greifswald, Germany (May, 9-12, 2011)

- 53- M. Ghorbanalilu, **A. R. Niknam**, Z. Ghaderi, M. Sangari, Weibel instability in streaming plasmas with temperature anisotropies, Annual Physics Conference, The Physics Society of Iran, Urmia University, Urmia, Iran, (September, 5-8, 2011).
- 54- S. M. Khorashadizade, **A. R. Niknam**, E. Rastbood, The dissipative instability in ion beam-fully magnetized plasma interaction, Annual Physics Conference, The Physics Society of Iran, Urmia University, Urmia, Iran, (September, 5-8, 2011).
- 55- **A. R. Niknam**, M. Hashemzadeh, B. Bokaei, Density profile modification in interaction of high power laser pulse with a collisional inhomogeneous plasma, 6th Euro Mediterranean Symposium on Laser Induced Breakdown Spectroscopy, Izmir, Turkey (September, 11-15, 2011)
- 56- **A. R. Niknam**, H. Ghomi, H. Goudarzi, A. R. Rastkar, Analysis of Sheath Electric Fields in the Vicinity of a Nanotube Tip, 8th Asian-European International Conference on Plasma Surface Engineering (AEPSE2011) , Dalian, China, (September, 19-22, 2011)
- 57- S. M. Khorashadizade, **A. R. Niknam**, S. Taheri Boroujeni, Quantum pressure and Bohm potential effects on two-stream instability in gold metallic plasma, 1th National Conference on Electric Discharges, Plasma and Plasma Engineering, University of Kerman, Mahan, Iran (February, 2, 2012)
- 58- S. M. Khorashadizadeh, F. Sabzinezhad, **A. R. Niknam**, Effect of the magnetic field on the acceleration of dust grains by means of the low energy ion beam, 1th National Conference on Electric Discharges, Plasma and Plasma Engineering, University of Kerman, Mahan, Iran (February, 2, 2012)
- 59- S. M. Khorashadizade, **A. R. Niknam**, E. Rastbood, Interaction of an ion beam with magnetized plasma in low frequency, 1th National Conference on Electric Discharges, Plasma and Plasma Engineering, University of Kerman, Mahan, Iran (February, 2, 2012)
- 60- S.M. Khorashadizadeh, **A. R. Niknam**, T. Mirzaye, M. R. Taghadosi, The collision and ion thermal effects in counter streaming weakly ionized plasmas, 1th National Conference on Electric Discharges, Plasma and Plasma Engineering, University of Kerman, Mahan, Iran (February, 2, 2012)
- 61- H. Moghadasin, **A.R. Niknam**, B. Shokri, Theoretical investigation of superradiant amplification of a short laser pulse in plasma, 18th Iranian Conference on Optics and Photonics and 4th Iranian Conference on Photonics Engineering, Tabriz University, Tabriz, Iran (February, 7-9, 2012)
- 62- A. Alani, **A.R. Niknam**, J. Babaie, Simulation and numerical analysis electron capture and acceleration scenario in interaction by femtosecond laser pulse doughnut mode $TEM^*(0,1)$ in vacuum, 18th Iranian Conference on Optics and Photonics and 4th Iranian Conference on Photonics Engineering, Tabriz University, Tabriz, Iran (February, 7-9, 2012)

- 63- M. Hashemzadeh, **A. R. Niknam**, B. Bokaei, Investigation of the propagation of high-frequency electromagnetic waves in inhomogeneous plasmas in relativistic regime, 18th Iranian Conference on Optics and Photonics and 4th Iranian Conference on Photonics Engineering, Tabriz University, Tabriz, Iran (February, 7-9, 2012)
- 64- M. Sharifian, H. Golbakhshi, **A. R. Niknam**, Collision effects on the generation of the terahertz radiation by beating of two lasers with spatial-Gaussian in plasma, Annual Physics Conference, The Physics Society of Iran, Yazd University, Yazd, Iran, (August, 27-30, 2012).
- 65- M. Sharifian, E. Ataei, **A. R. Niknam**, M. Borhani Zarandi, Magnetic field effect on dispersion relation of EM waves in plasma photonic crystal, Annual Physics Conference, The Physics Society of Iran, Yazd University, Yazd, Iran, (August, 27-30, 2012).
- 66- A. R. Rastkar, J. Taghinejad, **A. R. Niknam**, Plasma nitriding of austenitic stainless steel 316 L, Annual Physics Conference, The Physics Society of Iran, Yazd University, Yazd, Iran, (August, 27-30, 2012).
- 67- **A. R. Niknam**, N. Akhlaghipoor, Nonlinear propagation of an intense microwave beam in an inhomogeneous plasma, VII Conference on Plasma Physics and Plasma Technology (PPPT-7) September 17- 21 Minsk, Belarus (2012).
- 68- M. M. Hatami, **A. R. Niknam**, Characteristics of multi-component plasma sheath containing two species of warm positive ions, VII Conference on Plasma Physics and Plasma Technology (PPPT-7) September 17- 21 Minsk, Belarus (2012)
- 69- S. M. Khorashadizadeh, **A. R. Niknam**, T. Mirzaye, The collision and ponderomotive force effects in interaction of plasma and microwave, The first Conference of Plasma Engineering and Physics Shahid Beheshti University, Tehran, Iran, (May, 22-23, 2013).
- 70- M. Masoudi, H. Moghadasin, **A. R. Niknam**, Investigation of electrical and magnetic fields with s-polarized laser beams inhomogeneous plasma with different dielectric functions, The first Conference of Plasma Engineering and Physics Shahid Beheshti University, Tehran, Iran, (May, 22-23, 2013).
- 71- M. Ghorbanalilu, S. Sadegzadeh, **A. R. Niknam**, Z. Ghaderi, Investigation of the temperature anisotropy and bulk streaming velocity effects on the Weibel instability, The first Conference of Plasma Engineering and Physics Shahid Beheshti University, Tehran, Iran, (May, 22-23, 2013).
- 72- M. Hashemzadeh, **A. R. Niknam**, Investigation of density steepening in electron-positron two stream instability, The first Conference of Plasma Engineering and Physics Shahid Beheshti University, Tehran, Iran, (May, 22-23, 2013).
- 73- M. Sharifian, H. R. Sharifinejad, H. Golbakhshi, **A. R. Niknam**, Terahertz waves generation by two spatial-Gaussian laser beating in plasma medium with collision, The

first Conference of Plasma Engineering and Physics Shahid Beheshti University, Tehran, Iran, (May, 22-23, 2013).

74- S. M. Khorashadizadeh, **A. R. Niknam**, S. Taheri Boroujeni, The effect of quantum corrections on stability of the two stream plasma in semiconductors, The first Conference of Plasma Engineering and Physics Shahid Beheshti University, Tehran, Iran, (May, 22-23, 2013).

75- B. Bokaee, M. R. Jafari Milani, **A. R. Niknam**, Study of self-focusing and defocusing of Gaussian electromagnetic beam in collisionless plasma; Effects of temperature and density of plasma, The first Conference of Plasma Engineering and Physics Shahid Beheshti University, Tehran, Iran, (May, 22-23, 2013).

76-P. S. Mostafavi, M. Salahshoor, D. Komaizi, **A. R. Niknam**, Particle in cell simulation of the filamentation instability of two cold electron beams, The first Conference of Plasma Engineering and Physics Shahid Beheshti University, Tehran, Iran, (May, 22-23, 2013).

77- H. Roozbahani, M. Hashemzadeh, **A. R. Niknam**, Simulation of Buneman instability in nonextensive current driven plasma using particle in cell method, The first Conference of Plasma Engineering and Physics Shahid Beheshti University, Tehran, Iran, (May, 22-23, 2013).

78- S. Ghasemi, H. R. Ghomi, **A. R. Niknam**, H. Latifi, Investigation of influence of gas ratio on the electron temperature in TiN magnetron sputtering deposition system, XXXI ICPIG Granada, Spain, (July, 14 – 19, 2013).

79- M. Eidi, **A. R. Niknam**, M. Vafaei, Numerical calculation of the Hydrogen molecule ground state using coherent states, 16th Iranian Physical Chemistry Conference, University Of Mazandaran, Babolsar, Iran (October, 29–31, 2013)

80- M. Ashoor, **A. R. Niknam**, Simulation of electron density distribution effect on the reflection of the terahertz wave from hot unmagnetized plasma slab by FDTD method, 20th Iranian Conference on Optics and Photonics and 6th Iranian Conference on Photonics Engineering, Shiraz University, Shiraz, Iran (January, 28-30, 2014)

81- B. Bokaee, M. R. Jafari Milani, **A. R. Niknam**, Increasing the temperature interval of relativistic self-focusing of a laser beam by using an upward plasma-density ramp, 20th Iranian Conference on Optics and Photonics and 6th Iranian Conference on Photonics Engineering, Shiraz University, Shiraz, Iran (January, 28-30, 2014)

82- M. R. Jafari Milani, B. Bokaee, **A. R. Niknam**, A. H. Farahbod, Investigation of Gaussian laser beam propagation in plasma with upward temperature ramp in relativistic and ponderomotive regime, The second Conference of Plasma Engineering and Physics, University of Mazandaran, Babolsar, Iran, (May, 22-23, 2014).

- 83- S. M. Khorashadizade, **A. R. Niknam**, S. Taheri Boroujeni, Propagation of surface plasmon waves in laser produced plasma, The second Conference of Plasma Engineering and Physics, University of Mazandaran, Babolsar, Iran, (May, 22-23, 2014).
- 84- - N. Navab Safa, H. Ghomi, **A. R. Niknam**, Effect of nonextensive electron distribution function on the plasma parameters in plasma immersion ion implantation, The second Conference of Plasma Engineering and Physics, University of Mazandaran, Babolsar, Iran, (May, 22-23, 2014).
- 85- A. R. Rastkar, J. Taghinejad, **A. R. Niknam**, Ion Bohm velocity is not constant, The second Conference of Plasma Engineering and Physics, University of Mazandaran, Babolsar, Iran, (May, 22-23, 2014).
- 86- B. Bokaei, **A. R. Niknam**, M. R. Jafari Milani, Study of relativistic and ponderomotive self-compression of a laser pulse in collisionless plasma: Effect of plasma density and electron temperature, The second Conference of Plasma Engineering and Physics, University of Mazandaran, Babolsar, Iran, (May, 22-23, 2014).
- 87- H. Moghadasin, F. Bagheri, D. Komaizi, **A. R. Niknam**, Study of plasma gratings induced by two counter propagating laser pulses, The second Conference of Plasma Engineering and Physics, University of Mazandaran, Babolsar, Iran, (May, 22-23, 2014).
- 88- N. Navab Safa, H. Ghomi, **A. R. Niknam**, S. Ghasemi, Modeling of magnetized plasma sheath by nonextensive electron distribution function, Annual Physics Conference, The Physics Society of Iran, University of Sistan and Baluchestan, Zahedan, Iran, (September, 8-11, 2014).
- 89- S. H. Ahmadi, A. Maghari, H. Sabzyan, M. Vafaei, **A. R. Niknam**, High-order harmonic generation of H_2^+ in intense ultrashort laser pulses: Beyond Born-Oppenheimer approximation, 3rd Conference on Lasers and their Applications, Tarbiat Modares University, Tehran, Iran (September, 3-4, 2014)
- 90- M. R. Khajehmirzaei, **A. R. Niknam**, Study of electron density and temperature in the chamber of the rectangular surface wave plasma source using the finite-difference method, 21st Iranian Conference on Optics and Photonics and 7th Iranian Conference on Photonics Engineering, Shahid Beheshti University, Tehran, Iran (January, 13-15, 2015)
- 91- S. S. Shariati, A. Amouie, **A. R. Niknam**, Atomistic simulation of femtosecond laser pulse interaction with Al target, 21st Iranian Conference on Optics and Photonics and 7th Iranian Conference on Photonics Engineering, Shahid Beheshti University, Tehran, Iran (January, 13-15, 2015)
- 92- A. Shiralinejad, H. Moghadasin, H. Roozbahani, **A. R. Niknam**, Particle in cell simulation of the Weibel instability in a current carrying plasma, The Third Conference of Plasma Engineering and Physics, University of Tabriz, Tabriz, Iran, (May, 21-22, 2015).

- 93- B. Bokaei, E. Imani, **A. R. Niknam**, Relativistic self-focusing and self-compression of Gaussian laser pulses through the magnetized plasma with density ramp up, The Third Conference of Plasma Engineering and Physics, University of Tabriz, Tabriz, Iran, (May, 21-22, 2015).
- 94- S. Taheri Boroujeni, S. M. Khorashadizadeh, **A. R. Niknam**, Nonlinear interactions between surface electron waves and ion oscillations, The Third Conference of Plasma Engineering and Physics, University of Tabriz, Tabriz, Iran, (May, 21-22, 2015).
- 95- S. Taheri Boroujeni, S. M. Khorashadizadeh, **A. R. Niknam**, Viscosity effect on the propagation of surface plasmons, The Third Conference of Plasma Engineering and Physics, University of Tabriz, Tabriz, Iran, (May, 21-22, 2015).
- 96- S. M. Khorashadizadeh, F. S. Abdollahi, **A. R. Niknam**, Effects of negative ions and collisions on oscillating two-stream instability of electromagnetic waves, The Third Conference of Plasma Engineering and Physics, University of Tabriz, Tabriz, Iran, (May, 21-22, 2015).
- 97- M. Rezaei pandari, M. Akhyani, F. Jahangiri, **A. R. Niknam**, R. Massudi, Optimizing the electron dynamics in plane wave laser field in vacuum, , The Third Conference of Plasma Engineering and Physics, University of Tabriz, Tabriz, Iran, (May, 21-22, 2015).
- 98- M. R. Jafari Milani, **A. R. Niknam**, A. H. Farahbod, Propagation of Gaussian laser beam in warm collisional plasma under temperature and plasma density ramp, The Third Conference of Plasma Engineering and Physics, University of Tabriz, Tabriz, Iran, (May, 21-22, 2015).
- 99- M. Akhyani, F. Jahangiri, **A. R. Niknam**, R. Massudi, Optimizing chirped laser parameters for electron acceleration in vacuum, The Third Conference of Plasma Engineering and Physics, University of Tabriz, Tabriz, Iran, (May, 21-22, 2015).
- 100- F. Rashidi Tel Gah, M. Salahshoor, S. M. Khorashadizadeh, **A. R. Niknam**, Effect of ion-dust collision on dust-acoustic wave in an inhomogeneous dusty plasma, The Third Conference of Plasma Engineering and Physics, University of Tabriz, Tabriz, Iran, (May, 21-22, 2015).
- 101- M. Salahshoor, **A. R. Niknam**, Magnetized Complex Plasma under Gravity: Stability Switching and Stationary Structure, The Third Conference of Plasma Engineering and Physics, University of Tabriz, Tabriz, Iran, (May, 21-22, 2015).
- 102- M. Salahshoor, **A. R. Niknam**, Influence of weak electric field on dust magneto-gravitational drift wave, The Third Conference of Plasma Engineering and Physics, University of Tabriz, Tabriz, Iran, (May, 21-22, 2015).
- 103- M. S. Seyedhasani S. M. Khorashadizadeh, **A. R. Niknam**, Collisional effects on the Jeans instability of self-gravitating dusty plasma in the presence of polarization force, The Third Conference of Plasma Engineering and Physics, University of Tabriz, Tabriz, Iran, (May, 21-22, 2015).

- 104- **A. R. Niknam**, A. Amouie, S. S. Shariati, Simulation of femtosecond laser pulse interaction with Aluminum target using TTM-MD model, The Asian Symposium on Laser Induced Breakdown Spectroscopy (ASLIBS 2015), Wuhan, China (24-26 June 2015).
- 105- S. M. Khorashadizadeh, H. Hassaninejad, **A. R. Niknam**, F. Jahangiri, Effect of temporal shape of chirped laser pulse on plasma wake field, Annual Physics Conference, The Physics Society of Iran, Ferdowsi University of Mashhad, Mashhad, Iran, (August, 24-27, 2015).
- 106- M. Rezaei pandari, M. Akhyani, F. Jahangiri, R. Massudi, **A. R. Niknam**, Optimizing the electron dynamics in laser Plane Wave Field with arbitrary polarization, Annual Physics Conference, The Physics Society of Iran, Ferdowsi University of Mashhad, Mashhad, Iran, (August, 24-27, 2015).
- 107- M. Akhyani, F. Jahangiri, **A. R. Niknam**, R. Massudi, Phase velocity evolution of chirped and unchirped laser pulse in electron acceleration, Annual Physics Conference, The Physics Society of Iran, Ferdowsi University of Mashhad, Mashhad, Iran, (August, 24-27, 2015).
- 108- M. Akhyani, F. Jahangiri, M. Rezaei Pandari, **A. R. Niknam**, R. Massudi, Electron acceleration by an asymmetric laser pulse, 2nd Iranian Particle Accelerators Conference (IranPAC2015), IPM, Iran, (25 Nov. 2015).
- 109- M. Karimi Hosseinabadi, F. Jahangiri, **A. R. Niknam**, R. Massudi, Time evaluation of the angular distribution of terahertz radiation from plasma produced by two-color laser pulses, The Fourth Conference of Plasma Engineering and Physics, Yazd University, Yazd, Iran, (May, 19-20, 2016).
- 110- M. Rezaei pandari, F. Jahangiri, **A. R. Niknam**, R. Massudi, Evolution of wakefield derived by chirped laser pulse in inhomogeneous plasma, The Fourth Conference of Plasma Engineering and Physics, Yazd University, Yazd, Iran, (May, 19-20, 2016).
- 111- F. Rashidi Tel Gah, S. M. Khorashadizadeh, **A. R. Niknam**, Dispersion of dust ion-acoustic waves in an inhomogeneous dusty plasma, The Fourth Conference of Plasma Engineering and Physics, Yazd University, Yazd, Iran, (May, 19-20, 2016).
- 112- M. Ebdaei, B. Bokaei, **A. R. Niknam**, B. Mohammadhosseini, Density ramp and relativistic ponderomotive effects on propagation of rippled laserbeam and the excitation of Electron plasma wave in plasmas, The Fourth Conference of Plasma Engineering and Physics, Yazd University, Yazd, Iran, (May, 19-20, 2016).
- 113- A. Bakhshayi, S. M. Khorashadizadeh, **A. R. Niknam**, Solitary waves in a plasma with nonthermal electrons featuring Tsallis distribution, The Fourth Conference of Plasma Engineering and Physics, Yazd University, Yazd, Iran, (May, 19-20, 2016).

- 114- F. S. Abdollahi, S. M. Khorashadizadeh, **A. R. Niknam**, Dispersion relation and growth rate of oscillating two-stream instability in a collisionless cold plasma in the presence of negative ions, The Fourth Conference of Plasma Engineering and Physics, Yazd University, Yazd, Iran, (May, 19-20, 2016).
- 115- M. Barati Moqadam Niyat, S. M. Khorashadizadeh, **A. R. Niknam**, Role of positrons on electrostatic ion cyclotron instability in collisional regime, The Fourth Conference of Plasma Engineering and Physics, Yazd University, Yazd, Iran, (May, 19-20, 2016).
- 116- M. Akhyani, F. Jahangiri, M. Rezaei Pandari **A. R. Niknam**, R. Massudi, Electron acceleration in vacuum by optimized nonlinearly chirped laser pulse, 17th International Conference “Laser Optics 2016”, St. Petersburg, Russia (27 Jun 2016 - 01 Jul 2016).
- 117- M. Rezaei Pandari, F. Jahangiri, **A. R. Niknam**, R. Massudi, Effects of pulse frequency chirping and plasma inhomogeneity on laser wakefield, The 7th Asian Summer School and Symposium on Laser-Plasma Acceleration and Radiation, Shanghai, China (July, 17-23, 2016).
- 118- N. Boroumand, T. Mahin Rusta, S. M. Hamidi, **A. R. Niknam**, Tunable optical properties of plasma photonic crystals with arbitrary magnetic field declination, 4th Conference on Laser and Its Applications, Sharif University of Technology, Tehran, Iran (Nov. 2-3, 2016)
- 119- M. Akhyani, F. Jahangiri, M. Rezaei Pandari, **A. R. Niknam**, R. Massudi, Electron acceleration in vacuum by optimized nonlinearly chirped laser pulse, 4th Conference on Laser and Its Applications, Sharif University of Technology, Tehran, Iran (Nov. 2-3, 2016)
- 120- M. Karimi Hosseinabad, F. Jahangirj, **A. R. Niknam**, R. Massudi, Dynamics of THz angular distribution radiated from air plasma produced by two-color laser pulses, 4th international conference on millimeter-wave and terahertz technologies, University of Tehran, Tehran, Iran (Dec. 20-22, 2016)
- 121- D. Akbary, F. Jahangiri, M. Akhyani, **A. R. Niknam**, R. Massudi, Estimating the final energy gain of electron in a gaussian laser field using plane wave approximation, 23rd Iranian Conference on Optics and Photonics and 9th Iranian Conference on Photonics Engineering, Tarbiat Modares University, Tehran, Iran (Jan. 31 –Feb. 2, 2017)
- 122- R. Sadeghi, B. Mohammadhosseini, **A. R. Niknam**, Electrostatic ion cyclotron instability in the presence of two types of ions, 5th Iranian Conference on Engineering Electromagnetics, Shahid Rajaei Teacher Training University, Tehran, Iran (Apr. 19-20, 2017)

- 123- F. S. Emamian, **A. R. Niknam**, Simulation of interaction of femtosecond laser pulse with Hydrogen cluster, The Fifth Conference of Engineering and Physics of plasma, Shahid Beheshti University, Tehran, Iran, (May, 11-12, 2017).
- 124- E. Imani, **A. R. Niknam**, B. Bokaei, Pulse shape effect on backward Raman amplification of laser pulse propagating through a plasma, The Fifth Conference of Engineering and Physics of plasma, Shahid Beheshti University, Tehran, Iran, (May, 11-12, 2017).
- 125- H. Moghadasin, **A. R. Niknam**, D. Komaizi M. R. Banjafar, Generation of attosecond pulses by interaction of short laser pulses with an underdense plasma, The Fifth Conference of Engineering and Physics of plasma, Shahid Beheshti University, Tehran, Iran, (May, 11-12, 2017).
- 126- R. Sadeghi, B. Mohammadhosseini, **A. R. Niknam**, M. Barati Moqadam Niyat, Effect Anisotropic Ion Temperature on Electrostatic Ion Cyclotron Instability, The Fifth Conference of Engineering and Physics of plasma, Shahid Beheshti University, Tehran, Iran, (May, 11-12, 2017).
- 127- M. Sedaghat, M. R. Banjafar, S. Barzegar, **A. R. Niknam**, Simulation of magnetized plasma gratings produced by laser-plasma interaction, The Fifth Conference of Engineering and Physics of plasma, Shahid Beheshti University, Tehran, Iran, (May, 11-12, 2017).
- 128- M. R. Kardgar, **A. R. Niknam**, Analytical study of space charge limited current in three different diode configurations, 6th Conference of Engineering and Physics of plasma, Imam Khomeini International University, Qazvin, Iran, (July, 18-19, 2018).
- 129- R. Sadeghi, B. Mohammadhosseini, S. Majedi, **A. R. Niknam**, Effect of inhomogeneous external magnetic field on electrostatic ion cyclotron instability, 6th Conference of Engineering and Physics of plasma, Imam Khomeini International University, Qazvin, Iran, (July, 18-19, 2018).
- 130- M. Moradi, **A. R. Niknam**, Propagation of Dyakonov surface waves in plasma metamaterials, 6th Conference of Engineering and Physics of plasma, Imam Khomeini International University, Qazvin, Iran, (July, 18-19, 2018).
- 131- S. Safari, B. Jazi, **A. R. Niknam**, F. Jahangiri, A mathematical description for the interaction of two laser beams with Laguerre and ermite Gaussian profiles in a plasma background for new harmonic generation, 6th Conference of Engineering and Physics of plasma, Imam Khomeini International University, Qazvin, Iran, (July, 18-19, 2018).
- 132- A. Abdolmaleki, M. Sedaghat, M. R. Banjafar, S. Barzegar, F. Jahangiri, **A. R. Niknam**, Terahertz radiation generation by interaction of laser pulses with warm magnetized plasmas, 6th Conference of Engineering and Physics of plasma, Imam Khomeini International University, Qazvin, Iran, (July, 18-19, 2018).

- 133- S. Safari, B. Jazi, **A. R. Niknam**, F. Jahangiri, Generation of terahertz vortex beam by the nonlinear interaction of two LaguerreGaussian laser beams with a collisional plasma background, 34th Annual Physics Conference, The Physics Society of Iran, Imam Khomeini International University, Qazvin, Iran, (August, 27-30, 2018).
- 134- H. Delshad Hemat Abadi, R. Fallah, S. M. Khorashadizadeh, **A. R. Niknam**, Simulation of propagation of Terahertz pulse in a collision cold plasma slab with FDTD method, The 25th Iranian Conference on Optics and Photonics (ICOP 2019) and the 11th Iranian Conference on Photonics Engineering and Technology, University of Shiraz, Shiraz, Iran (Jan. 29 –31, 2019).
- 135- R. Khuniki, R. Fallah, S. M. Khorashadizadeh, **A. R. Niknam**, Investigation of self-focusing of Gaussian laser beam with circular polarization in magnetized plasma, The 25th Iranian Conference on Optics and Photonics (ICOP 2019) and the 11th Iranian Conference on Photonics Engineering and Technology, University of Shiraz, Shiraz, Iran (Jan. 29 –31, 2019).
- 136- R. Khuniki, R. Fallah, S. M. Khorashadizadeh, **A. R. Niknam**, Effect of an inhomogeneous external magnetic field on the self-focusing of a circular polarized laser beam in plasma, 7th Conference of Engineering and Physics of Plasma, Shahrood University of Technology, Shahrood, Iran (July, 17-18, 2019).
- 137- R. Khuniki, R. Fallah, S. M. Khorashadizadeh, **A. R. Niknam**, Effect of relativistic ponderomotive force on propagation of high power pulse in inhomogeneous warm plasma, 7th Conference of Engineering and Physics of Plasma, Shahrood University of Technology, Shahrood, Iran (July, 17-18, 2019).
- 138- S. Abbasi, S. Abbasi Rostami, S. M. Khorashadizadeh, **A. R. Niknam**, Investigation of gradient drift instability in spatially inhomogeneous magnetized plasma in presence of rotating ion beam, 7th Conference of Engineering and Physics of Plasma, Shahrood University of Technology, Shahrood, Iran (July, 17-18, 2019).
- 139- J. Sharifzadeh Tabrizi, S. M. Khorashadizadeh, R. Fallah, **A. R. Niknam**, Effect of laser pulse chirping on wakefield potential amplitude in inhomogeneous plasma, 7th Conference of Engineering and Physics of Plasma, Shahrood University of Technology, Shahrood, Iran (July, 17-18, 2019).
- 140- S. Abbasi Rostami, S. Abbasi, S. M. Khorashadizadeh, **A. R. Niknam**, Quasi-linear theory to study the temporal evolution of the longitudinal wave driven by rotating electron beam-plasma interaction, 7th Conference of Engineering and Physics of Plasma, Shahrood University of Technology, Shahrood, Iran (July, 17-18, 2019).
- 141- R. Dadashi Motlagh, M. Rezaei Pandari, A. S. Arabanian, **A. R. Niknam**, R. Massudi, Investigation of the temporal profile effect of femtosecond laser pulse on electron acceleration in argon cluster, The 26th Iranian Conference on Optics and Photonics (ICOP 2020) and the 12th Iranian Conference on Photonics Engineering and Technology (ICPET 2020), Kharazmi University, Karaj, Iran (February, 4-5, 2020).

142- M. Hajian, M. R. Ansari, **A. R. Niknam**, Study of skin tissue heating by microwave radiation, The 26th Iranian Conference on Optics and Photonics (ICOP 2020) and the 12th Iranian Conference on Photonics Engineering and Technology (ICPET 2020), Kharazmi University, Karaj, Iran (February, 4-5, 2020).

143- E. Gholipour, R. Fallah, S. M. Khorashadizadeh, **A. R. Niknam**, Self-focusing of Gaussian laser beams in magnetized inhomogeneous plasma, The 26th Iranian Conference on Optics and Photonics (ICOP 2020) and the 12th Iranian Conference on Photonics Engineering and Technology (ICPET 2020), Kharazmi University, Karaj, Iran (February, 4-5, 2020).

144- D. J. Förster, A. Amouye Foumani, S. Faas, **A. R. Niknam**, R. Weber, T. Graf, Analysis of shielding and re-deposition effects during processing of metals with single and double pulses, 21st International Symposium on Laser Precision Microfabrication (LPM2020), Technische Universität Dresden, Dresden, Germany (23 - 26 June 2020).