Babak Shokri

List of Publications by Year
in descending order

114 papers	1,524 citations	304743 22 h-index	395702 33 g-index
116 all docs	116 docs citations	116 times ranked	1646 citing authors

#	Article	IF	Citations
1	Application of cold plasma to develop carboxymethyl cellulose-coated polypropylene films containing essential oil. Carbohydrate Polymers, 2017, 176, 1-10.	10.2	79
2	Investigation of antibacterial and wettability behaviours of plasma-modified PMMA films for application in ophthalmology. Journal Physics D: Applied Physics, 2014, 47, 085401.	2.8	75
3	Modifications of protein-based films using cold plasma. International Journal of Biological Macromolecules, 2020, 142, 769-777.	7.5	65
4	Atmospheric-pressure DBD plasma-assisted surface modification of polymethyl methacrylate: A study on cell growth/proliferation and antibacterial properties. Applied Surface Science, 2016, 360, 641-651.	6.1	49
5	The effect of TEOS plasma parameters on the silicon dioxide deposition mechanisms. Journal of Non-Crystalline Solids, 2013, 368, 86-92.	3.1	47
6	Development and characterisation of chitosan or alginate-coated low density polyethylene films containing Satureja hortensis extract. International Journal of Biological Macromolecules, 2017, 105, 121-130.	7.5	45
7	Physico-chemical induced modification of seed germination and early development in artichoke (Cynara scolymus L.) using low energy plasma technology. Physics of Plasmas, 2018, 25, .	1.9	44
8	Atmospheric-pressure plasma jet characterization and applications on melanoma cancer treatment (B/16-F10). Physics of Plasmas, 2015, 22, .	1.9	40
9	Reflection and Absorption of Electromagnetic Wave Propagation in an Inhomogeneous Dissipative Magnetized Plasma Slab. IEEE Transactions on Plasma Science, 2013, 41, 290-295.	1.3	37
10	Direct plasma treatment approach based on non-thermal gliding arc for surface modification of biaxially-oriented polypropylene with post-exposure hydrophilicity improvement and minus aging effects. Applied Surface Science, 2020, 509, 144815.	6.1	36
11	Investigating effects of atmospheric-pressure plasma on the process of wound healing. Biointerphases, 2015, 10, 029504.	1.6	35
12	Anisotropic infrared light emission from quasi-1D layered TiS₃. 2D Materials, 2020, 7, 015022.	4.4	33
13	Cold low pressure O 2 plasma treatment of Crocus sativus : An efficient way to eliminate toxicogenic fungi with minor effect on molecular and cellular properties of saffron. Food Chemistry, 2018, 257, 310-315.	8.2	32
14	First-passage properties of asymmetric LÃ©vy flights. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 454004.	2.1	30
15	Magnetized plasma sheath with two species of positive ions. Physics of Plasmas, 2008, 15, .	1.9	29
16	Investigation of Cracking by Cylindrical Dielectric Barrier Discharge Reactor on the n-Hexadecane as a Model Compound. IEEE Transactions on Plasma Science, 2011, 39, 1807-1813.	1.3	29
17	Numerical investigation of the magnetized plasma sheath characteristics in the presence of negative ions. Physics of Plasmas, 2008, 15, 123501.	1.9	25
18	Relativistic effects in the interaction of high intensity ultra-short laser pulse with collisional underdense plasma. Physics of Plasmas, 2011, 18, .	1.9	25

#	Article	IF	Citations
19	The effects of microwave plasma torch on the cracking of Pyrolysis Fuel Oil feedstock. Chemical Engineering Journal, 2014, 237, 169-175.	12.7	25
20	Comparison study of root canal disinfection by cold plasma jet and photodynamic therapy. Photodiagnosis and Photodynamic Therapy, 2019, 26, 327-333.	2.6	25
21	Bohmâ€™s criterion in a collisional magnetized plasma with thermal ions. Physics of Plasmas, 2012, 19, .	1.9	24
22	Area coverage of radial LÃ©vy flights with periodic boundary conditions. Physical Review E, 2013, 87, 042136.	2.1	24
23	A novel method for decoking of Ptâ€“Sn/Al2O3 in the naphtha reforming process using RF and pin-to-plate DBD plasma systems. Applied Catalysis A: General, 2015, 493, 8-16.	4.3	24
24	Study on the Feasibility of Plasma (DBD Reactor) Cracking of Different Hydrocarbons (<inline-formula> <tex-math notation="TeX">(n)) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 542 Td (</tex-math></inline-fo on Plasma Science, 2014, 42, 2213-2220.	1.3	23
25	Surface characterization of an organosilane-grafted moisture-crosslinked polyethylene compound treated by air atmospheric pressure non-equilibrium gliding arc plasma. Applied Surface Science, 2019, 490, 436-450.	6.1	22
26	Low-frequency waves and relaxation processes in semibounded and bounded plasma-like media. Physics of Plasmas, 2000, 7, 3867.	1.9	21
27	Thermal motion effect on the filamentation of a strongly collisional current-driven plasma. Physics of Plasmas, 2001, 8, 788-790.	1.9	21
28	Relativistic effects on the Weibel instability of circularly polarized microwave produced plasmas. Physics of Plasmas, 2004, 11, 5398-5401.	1.9	21
29	On the design and characterization of a new cold atmospheric pressure plasma jet and its applications on cancer cells treatment. Biointerphases, 2015, 10, 029510.	1.6	19
30	A study of the effect of gliding arc non-thermal plasma on almonds decontamination. AIP Advances, 2018, 8, .	1.3	19
31	Improving the oxygen barrier properties of PET polymer by radio frequency plasma-polymerized SiOxNy thin film. Surface and Coatings Technology, 2019, 358, 91-97.	4.8	18
32	Direct cold atmospheric plasma and plasmaâ€activated medium effects on breast and cervix cancer cells. Plasma Processes and Polymers, 2020, 17, 1900241.	3.0	18
33	Effect of microwave plasma torch on the pyrolysis fuel oil in the presence of methane and ethane to increase hydrogen production. International Journal of Hydrogen Energy, 2014, 39, 18812-18819.	7.1	17
34	The single-wall carbon nanotube waveguides and excitation of their Ïƒ+Ï€ plasmons by an electron beam. Physics of Plasmas, 2009, 16, .	1.9	15
35	Determination of the optimum conditions for lung cancer cells treatment using cold atmospheric plasma. Physics of Plasmas, 2016, 23, .	1.9	15
36	First passage time moments of asymmetric LÃ©vy flights. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 275002.	2.1	15

#	Article	IF	Citations
37	Dielectric barrier discharge plasma torch treatment of pyrolysis fuel oil in presence of methane and ethane. Journal of Electrostatics, 2015, 76, 178-187.	1.9	14
38	Acceleration of an Electron Inside the Circular and Elliptical Waveguides by Microwave Radiation. IEEE Transactions on Plasma Science, 2013, 41, 62-69.	1.3	13
39	Characterization of fluorinated silica thin films with ultra-low refractive index deposited at low temperature. Thin Solid Films, 2015, 577, 67-73.	1.8	13
40	Analysis of radial and longitudinal field of plasma wakefield generated by a Laguerre-Gauss laser pulse. Physics of Plasmas, 2016, 23, .	1.9	13
41	The Processing of Pyrolysis Fuel Oil by Dielectric Barrier Discharge Plasma Torch. Plasma Chemistry and Plasma Processing, 2018, 38, 365-378.	2.4	13
42	Characterization of physicochemical and antimicrobial properties of plasmaâ€treated starch/chitosan composite film. Packaging Technology and Science, 2021, 34, 385-392.	2.8	13
43	Optimizing the operating conditions for hydrogen-rich syngas production in a plasma co-gasification process of municipal solid waste and coal using Aspen Plus. International Journal of Hydrogen Energy, 2022, 47, 26891-26900.	7.1	13
44	Low-frequency instability of circularly polarized microwave-pulsed-field-produced plasmas. Physics of Plasmas, 2004, 11, 5162-5166.	1.9	12
45	Trapping and acceleration of hollow electron and positron bunch in a quasi-linear donut wakefield. Physics of Plasmas, 2017, 24, .	1.9	12
46	Surface modification of PLA scaffold using radio frequency (RF) nitrogen plasma in tissue engineering application. Surface Topography: Metrology and Properties, 2020, 8, 015012.	1.6	12
47	The reflection of an electromagnetic wave from the self-produced plasma. Physics of Plasmas, 2010, 17, 012104.	1.9	11
48	LÃ©vy noise-driven escape from arctangent potential wells. Chaos, 2020, 30, 123103.	2.5	11
49	The Rod Degenerate Plasma-Rippled-Wall Waveguide and Its Excitation by Relativistic Electron Beam Injection. IEEE Transactions on Plasma Science, 2012, 40, 3029-3036.	1.3	10
50	Characteristics of ultra low-k nanoporous and fluorinated silica based films prepared by plasma enhanced chemical vapor deposition. Journal of Applied Physics, 2013, 114, .	2.5	10
51	Decomposition of high concentration benzene (produced in paper and painting industries) and its byproducts, methane and carbon dioxide, using plate gliding arc. Journal of Environmental Health Science & Engineering, 2019, 17, 549-560.	3.0	10
52	Transport of cystine across xCâ˜ antiporter. Archives of Biochemistry and Biophysics, 2019, 664, 117-126.	3.0	10
53	Treatment of starch films with a glow discharge plasma in air and O₂ at low pressure. Food Science and Technology International, 2021, 27, 276-285.	2.2	10
54	In vivo study of the effects of a portable cold plasma device and vitamin C for skin rejuvenation. Scientific Reports, 2021, 11, 21915.	3.3	10

#	Article	IF	Citations
55	Numerical modeling of plasma gasification process of polychlorinated biphenyl wastes. Energy Reports, 2021, 7, 270-285.	5.1	10
56	Effects of fast monoenergetic electrons on the ion dynamics near the cathode in a pulsed direct current plasma sheath. Physics of Plasmas, 2008, 15, .	1.9	9
57	Study on Physio-chemical Properties of plasma polymerization in C2H2/N2 plasma and Their Impact on COL X. Scientific Reports, 2017, 7, 9149.	3.3	9
58	Plasma pyrolysis feasibility study of spent petrochemical catalyst wastes to hydrogen production. Journal of Material Cycles and Waste Management, 2020, 22, 2059-2070.	3.0	9
59	Conversion of Pyrolysis Fuel Oils by a Dielectric Barrier Discharge Reactor in the Presence of Methane and Ethane. Chemical Engineering and Technology, 2015, 38, 1452-1459.	1.5	8
60	Antitumor Effects in Gas Plasma-Treated Patient-Derived Microtissuesâ€"An Adjuvant Therapy for Ulcerating Breast Cancer?. Applied Sciences (Switzerland), 2021, 11, 4527.	2.5	8
61	Effect of oxidative stress on cystine transportation by xCâ€¾ antiporter. Archives of Biochemistry and Biophysics, 2019, 674, 108114.	3.0	7
62	Deposition of high transparent and hard optical coating by tetraethylorthosilicate plasma polymerization. Thin Solid Films, 2020, 698, 137857.	1.8	7
63	Efficacy and safety of non-thermal nitrogen plasma versus long-pulsed Nd:YAG laser for hand rejuvenation. Lasers in Medical Science, 2022, 37, 181-191.	2.1	7
64	Change of radiation pattern in a plasma monopole antenna. Waves in Random and Complex Media, 2016, 26, 328-338.	2.7	6
65	Four-photon Kapitza-Dirac effect as an electron spin filter. Physical Review A, 2018, 98, .	2.5	6
66	Flame versus air atmospheric gliding arc plasma treatment of polypropyleneâ€based automotive bumpers: Physicochemical characterization and investigation of coating properties. Polymer Engineering and Science, 2021, 61, 1581-1593.	3.1	6
67	Defect engineering in few-layer black phosphorus for tunable and photostable infrared emission. Optical Materials Express, 2020, 10, 1488.	3.0	6
68	Attosecond charge migration following oxygen K-shell ionization in DNA bases and base pairs. Physical Chemistry Chemical Physics, 2021, 23, 23005-23013.	2.8	6
69	The evaluation of efficacy of atmospheric pressure plasma in diabetic ulcers healing: A randomized clinical trial. Dermatologic Therapy, 2021, 34, e15169.	1.7	6
70	Cylindrical dielectric barrier discharge plasma catalytic effect on chemical methods of silver nano-particle production. Physics of Plasmas, 2016, 23, .	1.9	5
71	Degradation of 4-chlorophenol in aqueous solution by dielectric barrier discharge system: effect of fed gases. Journal of Environmental Health Science & Engineering, 2019, 17, 1185-1194.	3.0	5
72	Dry Reforming of Methane over Ni/Î³â€MgO Catalysts in a Coaxial Dielectric Barrier Discharge Reactor. Chemical Engineering and Technology, 2021, 44, 589-599.	1.5	5

#	Article	IF	Citations
73	Anti-screening in magnetically quantized plasmas. Pramana - Journal of Physics, 2004, 62, 69-76.	1.8	4
74	Quasi elasto-electromagnetic surface waves on a piezo-plasma-like layer. Waves in Random and Complex Media, 2006, 16, 87-95.	2.7	4
75	Study of geometrical effects on the characteristics of metallic double-walled carbon nanotube waveguides through quantum hydrodynamics. Physics of Plasmas, 2009, 16, 063501.	1.9	4
76	Behavior of the floating potential in an electronegative sheath as a function of electronegativity and negative ion temperature. Journal of Plasma Physics, 2011, 77, 307-314.	2.1	4
77	The dispersion relation and excitation of transverse magnetic mode electromagnetic waves in rippled-wall waveguide with a plasma rod and an annular dielectric. Physics of Plasmas, 2012, 19, 013109.	1.9	4
78	Acceleration and dynamics of an electron in the degenerate and magnetized plasma elliptical waveguide. Physics of Plasmas, 2013, 20, .	1.9	4
79	Investigation of electron spin dynamic in the bichromatic Kapitza-Dirac effect via frequency ratio and amplitude of laser beams. Physical Review A, 2019, 100, .	2.5	4
80	Charge migration in caffeine: A realâ€time timeâ€dependent density functional theory study. International Journal of Quantum Chemistry, 2021, 121, e26754.	2.0	4
81	Publisher's Note: Area coverage of radial LÃ©vy flights with periodic boundary conditions [Phys. Rev. E87, 042136 (2013)]. Physical Review E, 2013, 87, .	2.1	3
82	Study of scattering cross section of a plasma column using Green's function volume integral equation method. Physics of Plasmas, 2017, 24, 053301.	1.9	3
83	Oblique propagation of solitary waves in weakly relativistic magnetized plasma with kappa distributed electrons in the presence of negative ions. Physics of Plasmas, 2018, 25, 032102.	1.9	3
84	Protein ion yield enhancement in matrixâ€assisted laser desorption/ionization mass spectrometry after sample and matrix lowâ€pressure glow discharge plasma irradiation. Rapid Communications in Mass Spectrometry, 2021, 35, e8964.	1.5	3
85	Electrodynamics of Conducting Dispersive Media. Springer Series on Atomic, Optical, and Plasma Physics, 2019, , .	0.2	3
86	Nanosized Diamond Deposition via Plasma Medium. Plasma Processes and Polymers, 2007, 4, S273-S277.	3.0	2
87	Surface Binding Stability of Metallic Nanoparticles. Plasma Processes and Polymers, 2007, 4, S891-S896.	3.0	2
88	Excitation of surface elasticity waves in piezoelectric media by ion beamsâˆ—. Waves in Random and Complex Media, 2008, 18, 623-626.	2.7	2
89	Analysis of the reflection of electromagnetic waves in an unsteady moving magnetized plasma slab. Waves in Random and Complex Media, 2012, 22, 571-588.	2.7	2
90	Amplification of filamentation instability by negative hydrogen ions stream driven by a magnetized counterstreaming eâ€“Hâˆ’ plasmas. Laser and Particle Beams, 2015, 33, 481-487.	1.0	2

#	Article	IF	Citations
91	The Effect of Two Surface Treatments on the Tribological Behavior of Gamma-Based Titanium Aluminides. Plasma Processes and Polymers, 2007, 4, S761-S765.	3.0	1
92	The effect of transition layer inhomogeneity on the stability of compressible MHD fluids. Journal of Plasma Physics, 2008, 74, 827-837.	2.1	1
93	Response to â€œComment on â€˜The single-wall carbon nanotube waveguides and excitation of their Ïƒ+Ï€ plasmons by an electron beamâ€™â€‰â€•[Phys. Plasmas 16, 054705 (2009)]. Physics of Plasmas, 2009, 16, 054706.	1.9	1
94	The study of the wake field effects on the self-focusing and the compression of the laser pulse in plasma at the relativistic regime by Lagrangian method. Waves in Random and Complex Media, 2013, 23, 396-410.	2.7	1
95	Radiation of charge bunches revolving around a metamaterial sphere. Physics of Plasmas, 2017, 24, .	1.9	1
96	Investigating higher order modes effects on thermionic RF gun transverse emittance. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 846, 64-74.	1.6	1
97	Investigation of optical properties of an overdense magnetized plasma lens in the interaction with high-intensity Gaussian laser pulses. Applied Physics B: Lasers and Optics, 2018, 124, 1.	2.2	1
98	Anisotropic metamaterial waveguide driven by a cold and relativistic electron beam. Physics of Plasmas, 2018, 25, 033110.	1.9	1
99	The effect of temperature on frequency and instability variations in a smooth-bore magnetron. Physics of Plasmas, 2022, 29, 013106.	1.9	1
100	Increasing DESI-MS Ion Signal by Plasma Treatment. Journal of the American Society for Mass Spectrometry, 2022, , .	2.8	1
101	Dielectric Cherenkov maser with a magnetically confined plasma column in a dielectric rod slow-wave waveguide. , 0, , .		0
102	Reflection of an electromagnetic pulse incident on a magnetoactive nonlinear medium. Journal of Plasma Physics, 2002, 67, 73-78.	2.1	0
103	The extraordinary wave excitation in microwave gas breakdown in the adiabatic approximation. Physics of Plasmas, 2008, 15, .	1.9	0
104	Electrostatic instabilities in circularly polarized microwave produced magnetized plasmas. Physics of Plasmas, 2009, 16, 123505.	1.9	0
105	Description of an electron transport in plasma by fractal distribution. , 2009, , .		0
106	Dependency of the electronegative sheath structure on the negative ion density and temperature. , 2009, , .		0
107	Response to â€œComment on â€˜Study of geometrical effects on the characteristics of metallic double-walled carbon nanotube waveguides through quantum hydrodynamicsâ€™â€‰â€•[Phys. Plasmas 16, 084703 (2009)]. Physics of Plasmas, 2009, 16, 084704.	1.9	0
108	Magnetic field effect on self focusing of high intensity gussian laser beam in underdense plasma. , 2009, , .		0

#	Article	IF	Citations
109	Effect of Magnetic Field Curvature on Penetration of the Magnetic Field into the Plasma. Plasma and Fusion Research, 2011, 6, 1401020-1401020.	0.7	0
110	Effects of hydrogen flux and pressure on the structural properties of PECVD-synthesized carbon thin films. , 2015, , .		0
111	Electron self-injection in the donut bubble wakefield. Physics of Plasmas, 2018, 25, 053103.	1.9	0
112	Standard variable short period microwave-plasma undulator. Waves in Random and Complex Media, 2023, 33, 1045-1059.	2.7	0
113	Elliptical plasma-filled waveguide as a new standard short-period undulator. Journal of Synchrotron Radiation, 2021, 28, 1050-1058.	2.4	0
114	The effect of temperature on frequency and instability variations in a smooth-bore relativistic magnetron. Physics of Plasmas, 2022, 29, 063107.	1.9	0