Mikhael A Liberman

List of Publications by Year
in descending order

112 papers	2,583 citations	172457 29 h-index	214800 47 g-index
114 all docs	114 docs citations	114 times ranked	801 citing authors

#	Article	IF	Citations
1	Hydrogen atom in a magnetic field as an exactly solvable system without dynamical symmetries?. Physics Letters, Section A: General, Atomic and Solid State Physics, 2022, 445, 128250.	2.1	1
2	Autoignition and detonation development from a hot spot inside a closed chamber: Effects of end wall reflection. Proceedings of the Combustion Institute, 2021, 38, 5905-5913.	3.9	18
3	Convergence properties of detonation simulations. Geophysical and Astrophysical Fluid Dynamics, 2020, 114, 58-76.	1.2	8
4	Influence of chemical kinetics on detonation initiating by temperature gradients in methane/air. Combustion and Flame, 2018, 197, 400-415.	5.2	39
5	Landau quantization, Rashba spin-orbit coupling and Zeeman splitting of two-dimensional heavy-hole gases. Physica Status Solidi (B): Basic Research, 2015, 252, 730-742.	1.5	4
6	Two-dimensional cavity polaritons under the influence of the perpendicular strong magnetic and electric fields. The gyrotropy effects. Solid State Communications, 2015, 222, 58-64.	1.9	3
7	Influence of radiation absorption by microparticles on the flame velocity and combustion regimes. Journal of Experimental and Theoretical Physics, 2015, 121, 166-178.	0.9	5
8	Ignition of deflagration and detonation ahead of the flame due to radiative preheating of suspended micro particles. Combustion and Flame, 2015, 162, 3612-3621.	5.2	31
9	Hydrogenâ€“oxygen flame acceleration and deflagration-to-detonation transition in three-dimensional rectangular channels with no-slip walls. International Journal of Hydrogen Energy, 2013, 38, 16427-16440.	7.1	105
10	True, quasi and unstable Nambuâ€“Goldstone modes of the two-dimensional Boseâ€“Einstein condensed magnetoexcitons. Solid State Communications, 2013, 155, 57-61.	1.9	2
11	Coherence of two-dimensional electron-hole systems: Spontaneous breaking of continuous symmetries: A review. Physics of the Solid State, 2013, 55, 1563-1595.	0.6	7
12	Mechanisms of ignition by transient energy deposition: Regimes of combustion wave propagation. Physical Review E, 2013, 87, .	2.1	29
13	Mixed excitonâ€“plasmon collective elementary excitations of the Boseâ€“Einstein condensed twoâ€dimensional magnetoexcitons with motional dipole moments. Physica Status Solidi (B): Basic Research, 2013, 250, 115-127.	1.5	0
14	Study of Singlet Delta Oxygen O₂(¹Î”_g) Impact on H₂â€“O₂Mixture Ignition in Flow Reactor: 2D Modeling. Combustion Science and Technology, 2012, 184, 1768-1786.	2.3	16
15	Regimes of chemical reaction waves initiated by nonuniform initial conditions for detailed chemical reaction models. Physical Review E, 2012, 85, 056312.	2.1	58
16	Nambu-Goldstone modes of the two-dimensional Bose-Einstein condensed magnetoexcitons. European Physical Journal B, 2012, 85, 1.	1.5	3
17	Hydrogen-Oxygen Flame Acceleration in Channels of Different Widths with No-Slip Walls and the Deflagration-to-Detonation Transition. , 2012, , 337-342.		0
18	Deflagration-to-Detonation Transition in Highly Reactive Combustible Mixtures. , 2012, , 331-336.		0

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19	Spontaneous Symmetry Breaking and Coherence in Two-Dimensional Electronâ€“Hole and Exciton Systems. Journal of Nanoelectronics and Optoelectronics, 2012, 7, 640-670.	0.5	3
20	Shock-Flame Interaction and Deflagration-to-Detonation Transition in Hydrogen/Oxygen Mixtures. , 2012, , 325-330.		0
21	Hydrogen-oxygen flame acceleration and transition to detonation in channels with no-slip walls for a detailed chemical reaction model. Physical Review E, 2011, 83, 056313.	2.1	75
22	The influence of the Rashba spinâ€“orbit coupling on the two-dimensional magnetoexcitons. Journal of Physics Condensed Matter, 2011, 23, 345405.	1.8	9
23	On detonation initiation by a temperature gradient for a detailed chemical reaction models. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 1803-1808.	2.1	51
24	Flame acceleration and DDT of hydrogenâ€“oxygen gaseous mixtures in channels with no-slip walls. International Journal of Hydrogen Energy, 2011, 36, 7714-7727.	7.1	68
25	Exciton Condensation Under High Magnetic Field. Journal of Nanoelectronics and Optoelectronics, 2011, 6, 393-419.	0.5	4
26	Optical properties of the two-dimensional magnetoexcitons under the influence of the Rashba spin-orbit coupling. , 2010, , .		0
27	The flame-acceleration mechanism and transition to detonation of a hydrogen-oxygen mixture in a channel. Doklady Physics, 2010, 55, 480-484.	0.7	16
28	On the mechanism of the deflagration-to-detonation transition in a hydrogen-oxygen mixture. Journal of Experimental and Theoretical Physics, 2010, 111, 684-698.	0.9	10
29	Deflagration-to-detonation transition in highly reactive combustible mixtures. Acta Astronautica, 2010, 67, 688-701.	3.2	172
30	Collective properties and combined quantum transitions of twoâ€dimensional magnetoexcitons. International Journal of Quantum Chemistry, 2010, 110, 177-194.	2.0	2
31	Experimental Study of the Preheat Zone Formation and Deflagration to Detonation Transition. Combustion Science and Technology, 2010, 182, 1628-1644.	2.3	80
32	The collective elementary excitations of 2D magnetoexcitons in the BEC state with wave vector k=0. Proceedings of SPIE, 2010, , .	0.8	0
33	Intra-Landau-level excitations of the two-dimensional electronâ€“hole liquid. Journal of Physics Condensed Matter, 2009, 21, 235801.	1.8	3
34	On the theory of two-dimensional combined magnetoexciton-cyclotron resonances. Europhysics Letters, 2009, 85, 57002.	2.0	0
35	Formation of the preheated zone ahead of a propagating flame and the mechanism underlying the deflagration-to-detonation transition. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 501-510.	2.1	80
36	Exciton-cyclotron resonance in two-dimensional structures in a strong perpendicular magnetic field and optical orientation conditions. Physical Review B, 2009, 79, .	3.2	11

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37	Collective Elementary Excitations of Two-Dimensional Magnetoexcitons in the Bose-Einstein Condensation State. Journal of Nanoelectronics and Optoelectronics, 2009, 4, 52-75.	0.5	5
38	Bose-Einstein condensation of two-dimensional magnetoexcitons on the superposition state. Proceedings of SPIE, 2007, , .	0.8	0
39	Influence of Coulomb scattering of electrons and holes between Landau levels on energy spectrum and collective properties of two-dimensional magnetoexcitons. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 39, 137-149.	2.7	13
40	Clustering of aerosols in atmospheric turbulent flow. Environmental Fluid Mechanics, 2007, 7, 173-193.	1.6	19
41	Influence of excited Landau levels on a two-dimensional electronâ€“hole system in a strong perpendicular magnetic field. Solid State Communications, 2006, 140, 236-239.	1.9	12
42	HOT SPOT FORMATION BY THE PROPAGATING FLAME AND THE INFLUENCE OF EGR ON KNOCK OCCURRENCE IN SI ENGINES. Combustion Science and Technology, 2006, 178, 1613-1647.	2.3	45
43	Coexistence of two Boseâ€“Einstein condensates of two-dimensional magnetoexcitons. Exciton-plasmon collective elementary excitations. Solid State Communications, 2005, 134, 23-26.	1.9	3
44	Boseâ€“Einstein condensation of magnetoexcitons in ideal two-dimensional system in a strong magnetic field. Physica B: Condensed Matter, 2004, 346-347, 460-464.	2.7	5
45	NUMERICAL MODELING OF THE PROPAGATING FLAME AND KNOCK OCCURRENCE IN SPARK-IGNITION ENGINES. Combustion Science and Technology, 2004, 177, 151-182.	2.3	38
46	Boseâ€“Einstein condensation of excitons in ideal two-dimensional system in a strong magnetic field. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 19, 278-288.	2.7	16
47	Numerical studies of curved stationary flames in wide tubes. Combustion Theory and Modelling, 2003, 7, 653-676.	1.9	29
48	Conductance of a disordered double quantum wire in a magnetic field: Boundary roughness scattering. Physical Review B, 2003, 67, .	3.2	5
49	Effect of the boundary roughness on the conductance of double quantum wire in a magnetic field. Europhysics Letters, 2003, 64, 239-245.	2.0	0
50	Propagation Hanle effect of quadrupole polaritons in Cu2O. Physical Review B, 2002, 65, .	3.2	7
51	Propagation Hanle effect of quadrupole polaritons in Cu 2 O. , 2002, , .		0
52	Polarizability, correlation energy, and dielectric liquid phase of Bose-Einstein condensate of two-dimensional excitons in a strong perpendicular magnetic field. Physical Review B, 2002, 66, .	3.2	42
53	Tunnel-coupled double quantum wires in a magnetic field: electron scattering on impurities and boundary roughness. Physica B: Condensed Matter, 2002, 322, 92-109.	2.7	12
54	Numerical studies of flames in wide tubes:â€ƒStability limits of curved stationary flames. Physical Review E, 2000, 61, 468-474.	2.1	44

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55	Transport properties of double quantum wires in a magnetic field. Physical Review B, 1999, 60, 13770-13775.	3.2	11
56	Nonlinear equation for curved nonstationary flames and flame stability. Physical Review E, 1999, 60, 2897-2911.	2.1	21
57	Scattering from defects in double quantum wires. Solid State Communications, 1999, 111, 409-414.	1.9	5
58	Influence of compressibility on propagation of curved flames. Physics of Fluids, 1999, 11, 2657-2666.	4.0	19
59	The excitonic spectrum of germanium in a high magnetic field. JETP Letters, 1998, 67, 429-433.	1.4	2
60	Terms of a Hydrogen Molecule in a High Magnetic Field. Physica Scripta, 1998, 57, 573-580.	2.5	3
61	Hydrogen molecule in a strong parallel magnetic field. Physical Review A, 1998, 57, 3403-3418.	2.5	25
62	Stability of a Flame in a Closed Chamber. Physical Review Letters, 1997, 78, 1371-1374.	7.8	22
63	Three-dimensional curved flames:â€ƒStationary flames in cylindrical tubes. Physical Review E, 1997, 56, R36-R39.	2.1	12
64	Growth of the Rayleighâ€“Taylor instability in an imploding Z-pinch. Physics of Plasmas, 1997, 4, 737-747.	1.9	29
65	Hydrogen molecular ion in a strong parallel magnetic field. Physical Review A, 1997, 55, 2701-2710.	2.5	35
66	Stability of a planar flame front in a compressible flow. Physics of Fluids, 1997, 9, 3935-3937.	4.0	20
67	Numerical Simulation of Curved Flames in Cylindrical Tubes. Combustion Science and Technology, 1997, 129, 217-242.	2.3	40
68	Ground state of the hydrogen molecule in a strong magnetic field. Physical Review A, 1997, 56, R2510-R2513.	2.5	24
69	On the dynamics of a curved deflagration front. Journal of Experimental and Theoretical Physics, 1997, 84, 281-288.	0.9	8
70	On the application of extended precision arithmetic to quantum mechanical calculations. International Journal of Quantum Chemistry, 1997, 62, 593-601.	2.0	9
71	Application of Gaussian-type basis sets to ab initio calculations in strong magnetic fields. International Journal of Quantum Chemistry, 1997, 64, 513-522.	2.0	11
72	On the application of extended precision arithmetic to quantum mechanical calculations. International Journal of Quantum Chemistry, 1997, 62, 593-601.	2.0	6

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73	Exact solution for a hydrogen atom in a magnetic field of arbitrary strength. Physical Review A, 1996, 54, 287-305.	2.5	138
74	Highly Accurate Solution for a Hydrogen Atom in a Uniform Magnetic Field. Physical Review Letters, 1996, 77, 619-622.	7.8	43
75	Propagation of curved stationary flames in tubes. Physical Review E, 1996, 54, 3713-3724.	2.1	87
76	Stability and the Fractal Structure of a Spherical Flame in a Self-Similar Regime. Physical Review Letters, 1996, 76, 2814-2817.	7.8	49
77	Stability of Solid Propellant Combustion. Physical Review Letters, 1995, 74, 2148-2148.	7.8	0
78	Korolev and Liberman Reply:. Physical Review Letters, 1995, 74, 4096-4096.	7.8	7
79	Stabilization of sausage and kink instability modes of a plasma pinch by radial oscillations. Physics of Plasmas, 1995, 2, 792-802.	1.9	8
80	Analytical solutions for the growth rates of localized pressure-driven modes in the screw-pinch configuration. Physica Scripta, 1994, 49, 340-344.	2.5	0
81	Stability of a planar flame front in the slow-combustion regime. Physical Review E, 1994, 49, 445-453.	2.1	44
82	Stability of Solid Propellant Combustion. Physical Review Letters, 1994, 73, 1998-2000.	7.8	9
83	Selfâ€consistent model of the Rayleighâ€"Taylor instability in ablatively accelerated laser plasma. Physics of Plasmas, 1994, 1, 2976-2986.	1.9	56
84	Bose condensation and superfluidity of excitons in a high magnetic field. Physical Review B, 1994, 50, 14077-14089.	3.2	18
85	Superfluidity of excitons in a high magnetic field. Physical Review Letters, 1994, 72, 270-273.	7.8	39
86	Superfluidity of deuterium gas in an ultrahigh magnetic field. Physica A: Statistical Mechanics and Its Applications, 1993, 193, 347-358.	2.6	7
87	Superfluidity of a hydrogenlike gas in a strong magnetic field. Physical Review B, 1993, 47, 14318-14325.	3.2	18
88	Selfâ€similar solutions for trapping and diffusion of magnetic flux during formation of fieldâ€reversed configuration. Physics of Fluids B, 1993, 5, 457-463.	1.7	3
89	On the stability of combustion and laserâ€produced ablation fronts. Physics of Fluids B, 1993, 5, 3822-3824.	1.7	8
90	Suppression of the Rayleigh-Taylor instability by convection in ablatively accelerated laser targets. Physical Review Letters, 1992, 68, 178-181.	7.8	13

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91	Binding energy and triplet-singlet splitting for the hydrogen molecule in ultrahigh magnetic fields. Physical Review A, 1992, 45, 1762-1766.	2.5	45
92	Stabilization of the Rayleighâ€“Taylor instability by convection in smooth density gradient: Wentzelâ€“Kramersâ€“Brillouin analysis. Physics of Fluids B, 1992, 4, 3499-3506.	1.7	42
93	Suppression of Rayleighâ€“Taylor and bulk convective instabilities in imploding plasma liners and pinches. Physics of Fluids B, 1990, 2, 1159-1169.	1.7	39
94	Self-similar solutions for plasma dynamics in a high-density pinch. Journal of Applied Mechanics and Technical Physics, 1990, 30, 831-835.	0.5	0
95	Self-similar dynamics of dense Z-pinches. Plasma Physics and Controlled Fusion, 1990, 32, 309-317.	2.1	5
96	Plasma compression, heating and fusion in megagauss Z- Î¸ pinch systems. Plasma Physics and Controlled Fusion, 1990, 32, 319-326.	2.1	20
97	Comment on â€˜â€˜Analytic solutions for Rayleigh-Taylor growth rates in smooth density gradientsâ€™â€™. Physical Review A, 1990, 42, 5031-5032.	2.5	4
98	Stability analysis of dynamic Z pinches and theta pinches. Physics of Fluids B, 1989, 1, 598-607.	1.7	37
99	Compression of ultrahigh magnetic fields in a gas-puff Z pinch. Physics of Fluids, 1988, 31, 2053.	1.4	76
100	Magnetic flux compression by dynamic plasmas. I. Subsonic self-similar compression of a magnetized plasma-filled liner. Physics of Fluids, 1988, 31, 3675.	1.4	20
101	Ultrahigh magnetic fields produced in a gasâ€puff Z pinch. Journal of Applied Physics, 1988, 64, 3831-3844.	2.5	67
102	Magnetic flux compression by dynamic plasmas. II. Supersonic self-similar solutions for magnetic cumulation. Physics of Fluids, 1988, 31, 3683.	1.4	10
103	Gasâ€“puff Z pinches with strong axial magnetic fields. Laser and Particle Beams, 1987, 5, 699-706.	1.0	6
104	Optical hysteresis and multistability in a double resonator system with an additional feedback. Optics Communications, 1987, 64, 181-185.	2.1	8
105	Methods for producing ultrahigh magnetic fields. Applied Physics Letters, 1985, 46, 1042-1044.	3.3	71
106	Distribution function and diffusion of Î±-particles in DT fusion plasma. Journal of Plasma Physics, 1984, 31, 369-380.	2.1	17
107	On the ignition of a self-sustained fusion reaction in a dense DT plasma. Journal of Plasma Physics, 1984, 31, 381-393.	2.1	21
108	On possible structures of normal ionizing shock waves in electromagnetic shock tubes. Plasma Physics, 1982, 24, 519-541.	0.9	0

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109	Evolution of the initial ionizing discontinuity in a transverse magnetic field. Plasma Physics, 1980, 22, 317-330.	0.9	6
110	Effect of charge separation on the structure of the front of a shock wave in a plasma. Fluid Dynamics, 1978, 12, 452-457.	0.9	0
111	On possible structures of transverse ionizing shock waves. Plasma Physics, 1978, 20, 439-449.	0.9	5
112	Quantum numbers for the problem of two coulomb centers. Soviet Physics Journal (English) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 622 T	0.0	1