David J Bergman

List of Publications by Citations

60 papers	3,767 citations	23 h-index	61 g-index
68 ext. papers	4,149 ext. citations	3.2 avg, IF	5.47 L-index

#	Paper	IF	Citations
60	Surface plasmon amplification by stimulated emission of radiation: quantum generation of coherent surface plasmons in nanosystems. *Physical Review Letters*, **2003**, 90, 027402	7.4	1261
59	Physical Properties of Macroscopically Inhomogeneous Media. *Solid State Physics*, **1992**, 147-269	2	445
58	Localization versus delocalization of surface plasmons in nanosystems: can one state have both characteristics?. *Physical Review Letters*, **2001**, 87, 167401	7.4	294
57	Thermoelectric properties of a composite medium. *Journal of Applied Physics*, **1991**, 70, 6821-6833	2.5	245
56	Enhancement of thermoelectric power factor in composite thermoelectrics. *Journal of Applied Physics*, **1999**, 85, 8205-8216	2.5	161
55	Dielectric constant of a two-component granular composite: A practical scheme for calculating the pole spectrum. *Physical Review B*, **1979**, 19, 2359-2368	3.3	129
54	Bulk effective dielectric constant of a composite with a periodic microgeometry. *Physical Review B*, **1992**, 45, 13262-13271	3.3	110
53	Surface plasmon amplification by stimulated emission in nanolenses. *Physical Review B*, **2005**, 71,	3.3	90
52	Coherent control of nanoscale localization of ultrafast optical excitation in nanosystems. *Physical Review B*, **2004**, 69,	3.3	80
51	Enhanced second harmonic generation in a self-similar chain of metal nanospheres. *Physical Review B*, **2005**, 72,	3.3	69
50	Theory of resonances in the electromagnetic scattering by macroscopic bodies. *Physical Review B*, **1980**, 22, 3527-3539	3.3	69
49	Optical transmission through metal films with a subwavelength hole array in the presence of a magnetic field. *Physical Review B*, **1999**, 59, R12763-R12766	3.3	68
48	Transmittance and transparency of subwavelength-perforated conducting films in the presence of a magnetic field. *Physical Review B*, **2008**, 77,	3.3	56
47	Magnetotransport in conducting composite films with a disordered columnar microstructure and an in-plane magnetic field. *Physical Review B*, **1999**, 60, 13016-13027	3.3	53
46	Anisotropic Magnetoresistance of a Classical Antidot Array. *Physical Review Letters*, **1996**, 77, 147-150	7.4	52
45	High-field magnetotransport in composite conductors: Effective-medium approximation. *Physical Review B*, **2000**, 62, 6603-6613	3.3	46
44	Anisotropic ac Electrical Permittivity of a Periodic Metal-Dielectric Composite Film in a Strong Magnetic Field. *Physical Review Letters*, **1998**, 80, 857-860	7.4	44

43	Theory of magnetotransport in a composite medium with periodic microstructure for arbitrary magnetic fields. *Physical Review B*, **1994**, 50, 14001-14015	3.3	43
42	Theory of high-field magnetotransport in a percolating medium. *Physical Review B*, **1993**, 48, 3145-3155	3.3	37
41	Calculation of strong-field magnetoresistance in some periodic composites. *Physical Review B*, **1994**, 49, 16256-16268	3.3	35
40	Permeability relation with other petrophysical parameters for periodic porous media. *Geophysics*, **1999**, 64, 470-478	3.1	28
39	Strong-field magnetoresistance anisotropy in thin composite films with a periodic microstructure. *Physical Review B*, **1995**, 51, 13845-13848	3.3	26
38	Generalizing Normal Mode Expansion of Electromagnetic Green Tensor to Open Systems. *Physical Review Applied*, **2019**, 11,	4.3	23
37	Duality Transformation in a Three Dimensional Conducting Medium with Two Dimensional Heterogeneity and an In-Plane Magnetic Field. *Physical Review Letters*, **1998**, 80, 3356-3359	7.4	23
36	Exact relations between macroscopic moduli of composite media in three dimensions: Application to magnetoconductivity and magneto-optics of three-dimensional composites with related columnar microstructures. *Physical Review B*, **2003**, 67,	3.3	22
35	Scaling theory of the low-field Hall effect and magnetoresistance near a percolation threshold. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **1987**, 56, 983-990		20
34	Interference of current distortion patterns and magnetoresistance anisotropy in a composite with periodic microstructure. *Physical Review B*, **1996**, 53, 11051-11059	3.3	19
33	THE ROLE OF MICROGEOMETRY IN THE ELECTRICAL BREAKDOWN OF METAL-INSULATOR MIXTURES. *International Journal of Modern Physics B*, **1993**, 07, 3353-3374	1.1	19
32	Quasi-static electrical resonances and optical bistability in periodic composite materials. *Journal of Applied Physics*, **1995**, 77, 4263-4273	2.5	18
31	Magneto-optical spaser. *Optics Letters*, **2013**, 38, 2002-4	3	17
30	Electromagnetic eigenstates and the field of an oscillating point electric dipole in a flat-slab composite structure. *Physical Review A*, **2016**, 93,	2.6	15
29	Strong angular magneto-induced anisotropy of Voigt effect in metal-dielectric metamaterials with periodic nanostructures. *Physical Review B*, **2014**, 89,	3.3	14
28	Effective medium approximation for strongly nonlinear media. *Journal of Statistical Physics*, **1997**, 86, 455-479	1.5	13
27	Perfect imaging of a point charge in the quasistatic regime. *Physical Review A*, **2014**, 89,	2.6	10
26	Thermoelectric response of a periodic composite medium in the presence of a magnetic field: Angular anisotropy. *Physical Review B*, **2017**, 96,	3.3	9

25	Magnetoresistance of normal conductor/insulator/perfect conductor composites with a columnar microstructure. *Physical Review B*, **2000**, 62, 14313-14325	3.3	9
24	Molecular diffusion in periodic porous media. *Journal of Applied Physics*, **2000**, 87, 1704-1711	2.5	9
23	Do bees and hornets use acoustic resonance in order to monitor and coordinate comb construction?. *Bulletin of Mathematical Biology*, **2007**, 69, 1777-90	2.1	7
22	Exact relations between critical exponents for elastic stiffness and electrical conductivity of two-dimensional percolating networks. *Physical Review E*, **2002**, 65, 026124	2.4	7
21	Analysis of a Veselago lens in the quasistatic regime. *Physical Review A*, **2014**, 90,	2.6	6
20	Exact Relations Between Elastic and Electrical Response of d-Dimensional Percolating Networks with Angle-Bending Forces. *Journal of Statistical Physics*, **2003**, 111, 171-199	1.5	6
19	Exact asymptotics for the strong-field macroscopic magnetotransport of a composite medium. *Physical Review B*, **2010**, 82,	3.3	5
18	Field-induced tuning of the optical properties of nonlinear composites near resonance. *Journal of Applied Physics*, **1994**, 76, 1431-1435	2.5	5
17	High field magneto-transport in a Sierpi□ki gasket fractal. *Physica A: Statistical Mechanics and Its Applications*, **1992**, 191, 470-474	3.3	5
16	Fluid flow in a random porous medium: A network model and effective medium approximation. *Journal of Applied Physics*, **1987**, 62, 1616-1621	2.5	5
15	Hydrodynamic theory of fourth sound in clamped conditions. *Journal of Low Temperature Physics*, **1974**, 15, 559-576	1.3	5
14	Strong-field magnetotransport in a two-constituent columnar composite medium where the constituents have comparable resistivity tensors. *Physical Review B*, **2012**, 86,	3.3	4
13	Composite Thermoelectrics - Exact Results and Calculational Methods. *Materials Research Society Symposia Proceedings*, **1991**, 234, 39		4
12	Bulk Effective Moduli: Their Calculation and Usage for Describing Physical Properties of Composite Media. *Materials Research Society Symposia Proceedings*, **1990**, 195, 247		4
11	Angular Anisotropy of Thermoelectric Properties of a Periodic Composite Medium in the Presence of a Magnetic Field. *Journal of Electronic Materials*, **2019**, 48, 4507-4514	1.9	3
10	Weakly nonlinear conductivity of random composites: A series expansion approach. *Journal of Statistical Physics*, **1996**, 82, 1327-1344	1.5	3
9	High-field vs. low-field magneto-transport in a percolating medium. *Physica A: Statistical Mechanics and Its Applications*, **1993**, 200, 231-240	3.3	3
8	Spectral method for the static electric potential of a charge density in a composite medium. *Physical Review A*, **2018**, 97,	2.6	2

7	Surface versus localized plasmons in an assembly of metal-dielectric parallel flat slabs in the presence of an in-plane magnetic field. *Physical Review B*, **2020**, 102,	3.3	2
6	Itinerant versus localized plasmons in an assembly of metal-dielectric parallel flat slabs in the presence of a perpendicular magnetic field: Faraday and magneto-optical Kerr effects. *Physical Review B*, **2021**, 103,	3.3	2
5	Macroscopic magnetoresistance of an assembly of parallel flat conducting slabs. *Physical Review B*, **2019**, 100,	3.3	2
4	Strong-field magnetotransport in a normal conductor/perfect conductor/insulator disordered composite material: Simulations of a discrete model. *Physical Review B*, **2011**, 83,	3.3	1
3	A Mixed-Transfer-Matrix Method for Simulating Normal Conductor/Perfect Insulator/Perfect Conductor Random Networks. *Journal of Statistical Physics*, **2004**, 117, 427-452	1.5	1
2	Enhancement of Power Factor in A Thermoelectric Composite With A Periodic Microstructure. *Materials Research Society Symposia Proceedings*, **2000**, 626, 651		1
1	Thermoelectric Properties of Two Component Composites. *Materials Research Society Symposia Proceedings*, **1990**, 195, 205		1