

# David J Bergman

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	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. <i>Physical Review B</i> , <b>2021</b> , 103,	3.3	2
59	Surface versus localized plasmons in an assembly of metal-dielectric parallel flat slabs in the presence of an in-plane magnetic field. <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	2
58	Angular Anisotropy of Thermoelectric Properties of a Periodic Composite Medium in the Presence of a Magnetic Field. <i>Journal of Electronic Materials</i> , <b>2019</b> , 48, 4507-4514	1.9	3
57	Generalizing Normal Mode Expansion of Electromagnetic Green's Tensor to Open Systems. <i>Physical Review Applied</i> , <b>2019</b> , 11,	4.3	23
56	Macroscopic magnetoresistance of an assembly of parallel flat conducting slabs. <i>Physical Review B</i> , <b>2019</b> , 100,	3.3	2
55	Spectral method for the static electric potential of a charge density in a composite medium. <i>Physical Review A</i> , <b>2018</b> , 97,	2.6	2
54	Thermoelectric response of a periodic composite medium in the presence of a magnetic field: Angular anisotropy. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	9
53	Electromagnetic eigenstates and the field of an oscillating point electric dipole in a flat-slab composite structure. <i>Physical Review A</i> , <b>2016</b> , 93,	2.6	15
52	Perfect imaging of a point charge in the quasistatic regime. <i>Physical Review A</i> , <b>2014</b> , 89,	2.6	10
51	Analysis of a Veselago lens in the quasistatic regime. <i>Physical Review A</i> , <b>2014</b> , 90,	2.6	6
50	Strong angular magneto-induced anisotropy of Voigt effect in metal-dielectric metamaterials with periodic nanostructures. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	14
49	Magneto-optical spaser. <i>Optics Letters</i> , <b>2013</b> , 38, 2002-4	3	17
48	Strong-field magnetotransport in a two-constituent columnar composite medium where the constituents have comparable resistivity tensors. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	4
47	Strong-field magnetotransport in a normal conductor/perfect conductor/insulator disordered composite material: Simulations of a discrete model. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	1
46	Exact asymptotics for the strong-field macroscopic magnetotransport of a composite medium. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	5
45	Transmittance and transparency of subwavelength-perforated conducting films in the presence of a magnetic field. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	56
44	Do bees and hornets use acoustic resonance in order to monitor and coordinate comb construction?. <i>Bulletin of Mathematical Biology</i> , <b>2007</b> , 69, 1777-90	2.1	7

43	Surface plasmon amplification by stimulated emission in nanolenses. <i>Physical Review B</i> , <b>2005</b> , 71,	3.3	90
42	Enhanced second harmonic generation in a self-similar chain of metal nanospheres. <i>Physical Review B</i> , <b>2005</b> , 72,	3.3	69
41	A Mixed-Transfer-Matrix Method for Simulating Normal Conductor/Perfect Insulator/Perfect Conductor Random Networks. <i>Journal of Statistical Physics</i> , <b>2004</b> , 117, 427-452	1.5	1
40	Coherent control of nanoscale localization of ultrafast optical excitation in nanosystems. <i>Physical Review B</i> , <b>2004</b> , 69,	3.3	80
39	Exact Relations Between Elastic and Electrical Response of d-Dimensional Percolating Networks with Angle-Bending Forces. <i>Journal of Statistical Physics</i> , <b>2003</b> , 111, 171-199	1.5	6
38	Surface plasmon amplification by stimulated emission of radiation: quantum generation of coherent surface plasmons in nanosystems. <i>Physical Review Letters</i> , <b>2003</b> , 90, 027402	7.4	1261
37	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. <i>Physical Review B</i> , <b>2003</b> , 67,	3.3	22
36	Exact relations between critical exponents for elastic stiffness and electrical conductivity of two-dimensional percolating networks. <i>Physical Review E</i> , <b>2002</b> , 65, 026124	2.4	7
35	Localization versus delocalization of surface plasmons in nanosystems: can one state have both characteristics?. <i>Physical Review Letters</i> , <b>2001</b> , 87, 167401	7.4	294
34	Enhancement of Power Factor in A Thermoelectric Composite With A Periodic Microstructure. <i>Materials Research Society Symposia Proceedings</i> , <b>2000</b> , 626, 651		1
33	Magnetoresistance of normal conductor/insulator/perfect conductor composites with a columnar microstructure. <i>Physical Review B</i> , <b>2000</b> , 62, 14313-14325	3.3	9
32	High-field magnetotransport in composite conductors: Effective-medium approximation. <i>Physical Review B</i> , <b>2000</b> , 62, 6603-6613	3.3	46
31	Molecular diffusion in periodic porous media. <i>Journal of Applied Physics</i> , <b>2000</b> , 87, 1704-1711	2.5	9
30	Optical transmission through metal films with a subwavelength hole array in the presence of a magnetic field. <i>Physical Review B</i> , <b>1999</b> , 59, R12763-R12766	3.3	68
29	Magnetotransport in conducting composite films with a disordered columnar microstructure and an in-plane magnetic field. <i>Physical Review B</i> , <b>1999</b> , 60, 13016-13027	3.3	53
28	Permeability relation with other petrophysical parameters for periodic porous media. <i>Geophysics</i> , <b>1999</b> , 64, 470-478	3.1	28
27	Enhancement of thermoelectric power factor in composite thermoelectrics. <i>Journal of Applied Physics</i> , <b>1999</b> , 85, 8205-8216	2.5	161
26	Duality Transformation in a Three Dimensional Conducting Medium with Two Dimensional Heterogeneity and an In-Plane Magnetic Field. <i>Physical Review Letters</i> , <b>1998</b> , 80, 3356-3359	7.4	23

25	Anisotropic ac Electrical Permittivity of a Periodic Metal-Dielectric Composite Film in a Strong Magnetic Field. <i>Physical Review Letters</i> , <b>1998</b> , 80, 857-860	7.4	44
24	Effective medium approximation for strongly nonlinear media. <i>Journal of Statistical Physics</i> , <b>1997</b> , 86, 455-479	1.5	13
23	Weakly nonlinear conductivity of random composites: A series expansion approach. <i>Journal of Statistical Physics</i> , <b>1996</b> , 82, 1327-1344	1.5	3
22	Anisotropic Magnetoresistance of a Classical Antidot Array. <i>Physical Review Letters</i> , <b>1996</b> , 77, 147-150	7.4	52
21	Interference of current distortion patterns and magnetoresistance anisotropy in a composite with periodic microstructure. <i>Physical Review B</i> , <b>1996</b> , 53, 11051-11059	3.3	19
20	Strong-field magnetoresistance anisotropy in thin composite films with a periodic microstructure. <i>Physical Review B</i> , <b>1995</b> , 51, 13845-13848	3.3	26
19	Quasi-static electrical resonances and optical bistability in periodic composite materials. <i>Journal of Applied Physics</i> , <b>1995</b> , 77, 4263-4273	2.5	18
18	Calculation of strong-field magnetoresistance in some periodic composites. <i>Physical Review B</i> , <b>1994</b> , 49, 16256-16268	3.3	35
17	Theory of magnetotransport in a composite medium with periodic microstructure for arbitrary magnetic fields. <i>Physical Review B</i> , <b>1994</b> , 50, 14001-14015	3.3	43
16	Field-induced tuning of the optical properties of nonlinear composites near resonance. <i>Journal of Applied Physics</i> , <b>1994</b> , 76, 1431-1435	2.5	5
15	THE ROLE OF MICROGEOMETRY IN THE ELECTRICAL BREAKDOWN OF METAL-INSULATOR MIXTURES. <i>International Journal of Modern Physics B</i> , <b>1993</b> , 07, 3353-3374	1.1	19
14	Theory of high-field magnetotransport in a percolating medium. <i>Physical Review B</i> , <b>1993</b> , 48, 3145-3155	3.3	37
13	High-field vs. low-field magneto-transport in a percolating medium. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>1993</b> , 200, 231-240	3.3	3
12	Bulk effective dielectric constant of a composite with a periodic microgeometry. <i>Physical Review B</i> , <b>1992</b> , 45, 13262-13271	3.3	110
11	Physical Properties of Macroscopically Inhomogeneous Media. <i>Solid State Physics</i> , <b>1992</b> , 147-269	2	445
10	High field magneto-transport in a Sierpiński gasket fractal. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>1992</b> , 191, 470-474	3.3	5
9	Composite Thermoelectrics - Exact Results and Computational Methods. <i>Materials Research Society Symposia Proceedings</i> , <b>1991</b> , 234, 39		4
8	Thermoelectric properties of a composite medium. <i>Journal of Applied Physics</i> , <b>1991</b> , 70, 6821-6833	2.5	245

7	Thermoelectric Properties of Two Component Composites. <i>Materials Research Society Symposia Proceedings</i> , <b>1990</b> , 195, 205		1
6	Bulk Effective Moduli: Their Calculation and Usage for Describing Physical Properties of Composite Media. <i>Materials Research Society Symposia Proceedings</i> , <b>1990</b> , 195, 247		4
5	Fluid flow in a random porous medium: A network model and effective medium approximation. <i>Journal of Applied Physics</i> , <b>1987</b> , 62, 1616-1621	2.5	5
4	Scaling theory of the low-field Hall effect and magnetoresistance near a percolation threshold. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , <b>1987</b> , 56, 983-990		20
3	Theory of resonances in the electromagnetic scattering by macroscopic bodies. <i>Physical Review B</i> , <b>1980</b> , 22, 3527-3539	3.3	69
2	Dielectric constant of a two-component granular composite: A practical scheme for calculating the pole spectrum. <i>Physical Review B</i> , <b>1979</b> , 19, 2359-2368	3.3	129
1	Hydrodynamic theory of fourth sound in clamped conditions. <i>Journal of Low Temperature Physics</i> , <b>1974</b> , 15, 559-576	1.3	5