

R Orbach

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/10967733/publications.pdf>

Version: 2024-02-01

121
papers

8,808
citations

61857

43
h-index

40881

93
g-index

123
all docs

123
docs citations

123
times ranked

2629
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of the thermal quench on aging in spin glasses. Physical Review B, 2013, 88, .	1.1	11
2	Role of initial conditions in spin-glass aging experiments. Physical Review B, 2003, 67, .	1.1	37
3	From linear to nonlinear response in spin glasses: Importance of mean-field-theory predictions. Physical Review B, 2002, 66, .	1.1	8
4	Extraction of the Spin Glass Correlation Length. Physical Review Letters, 1999, 82, 438-441.	2.9	103
5	Anharmonicity and thermal transport in network glasses. Europhysics Letters, 1999, 47, 468-473.	0.7	19
6	Spin-glass dynamics and the barrier model: Extraction of the Parisi physical order parameter. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1998, 77, 231-238.	0.6	6
7	Relations between the Parisi physical order parameter and ac magnetic susceptibility in spin glasses. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1998, 77, 221-229.	0.6	1
8	Transport and vibrational lifetimes in amorphous structures. Physica B: Condensed Matter, 1996, 219-220, 231-234.	1.3	10
9	Spin Glass Dynamics under a Change in Magnetic Field. Physical Review Letters, 1996, 77, 4648-4651.	2.9	35
10	Thermoremanent magnetization as a probe of the field-quenched states in spin glasses. Physical Review B, 1995, 52, 3479-3483.	1.1	12
11	Effect of magnetic fields on the relaxation of the thermoremanent magnetization in spin glasses. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1995, 71, 479-488.	0.6	30
12	Phonon localization and transport in disordered systems. Journal of Non-Crystalline Solids, 1993, 164-166, 917-922.	1.5	19
13	Frequency Dependent Electrical Conductivity of Mixed (Na ⁺ , Ba ²⁺) ²⁺ -alumina. , 1993, , 383-391.		0
14	Spin-glass dynamics. Physica A: Statistical Mechanics and Its Applications, 1992, 185, 278-294.	1.2	57
15	Vibrational transport in disordered systems. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1992, 65, 289-301.	0.6	35
16	Barrier heights versus temperature in spin glasses. Journal of Magnetism and Magnetic Materials, 1992, 104-107, 1617-1618.	1.0	6
17	Temperature dependence of the magnetization in high fields in the diluted antiferromagnet Fe ₄₆ Zn ₅₄ F ₂ . Journal of Applied Physics, 1991, 69, 5249-5251.	1.1	7
18	Temperature dependence of barrier heights in spin glasses. Journal of Applied Physics, 1991, 69, 5234-5236.	1.1	8

#	ARTICLE	IF	CITATIONS
19	Magnetic field dependence of T _g in bulk Cu:Mn and Cu:Mn/Cu multilayer systems. Journal of Applied Physics, 1991, 69, 5240-5242.	1.1	8
20	Irreversibility crossover in a Cu:Mn spin glass in high magnetic fields: Evidence for the Gabay-Toulouse transition. Physical Review Letters, 1991, 66, 2923-2926.	2.9	100
21	Dynamics in spin glasses. Physical Review B, 1991, 44, 7403-7412.	1.1	117
22	Thermal Conduction due to Hopping Processes in Amorphous Solids. Modern Problems in Condensed Matter Sciences, 1991, 28, 125-141.	0.1	3
23	Excitations of/on Fractal Networks. , 1991, , 335-359.		0
24	Approach to equilibrium of a spin-glass. Physical Review B, 1990, 41, 4465-4468.	1.1	9
25	Temperature and frequency dependence of the sound velocity in vitreous silica due to scattering off localized modes. Physical Review B, 1990, 41, 3153-3157.	1.1	25
26	Effective-medium approximation for the dynamical excitations of percolating antiferromagnets. Physical Review B, 1989, 39, 9353-9359.	1.1	19
27	NMR dynamics in disordered magnets. Hyperfine Interactions, 1989, 49, 325-333.	0.2	2
28	Fracton dynamics. Physica D: Nonlinear Phenomena, 1989, 38, 266-272.	1.3	20
29	Thermal conductivity of amorphous materials above the plateau. Physical Review B, 1989, 39, 13465-13477.	1.1	121
30	Dynamics of Tenuous Structures. Springer Proceedings in Physics, 1989, , 288-296.	0.1	1
31	Dynamics of Nonlinear Tenuous Structures. Springer Series in Synergetics, 1989, , 183-188.	0.2	0
32	DYNAMICS OF TENUOUS STRUCIURES: LOCALIZED CHARACTER OF VIBRATIONAL EXCITATIONS. , 1989, , 87-104.		0
33	Evidence for differing short- and long-time decay behavior in the dynamic response of the insulating spin-glass Eu _{0.4} Sr _{0.6} S. Physical Review B, 1988, 37, 4708-4713.	1.1	31
34	Dynamical Excitations of Site-Diluted Magnets. Springer Proceedings in Physics, 1988, , 212-220.	0.1	0
35	Cross-over from phonons to fractons. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1987, 56, 949-955.	0.6	18
36	Scattering of fractons, the Ioffe-Regel criterion, and the (4/3) conjecture. Physical Review Letters, 1987, 58, 132-135.	2.9	116

#	ARTICLE	IF	CITATIONS
37	Evidence for the $d\hat{a}^{\text{TM}}\text{Almeida}\hat{a}^{\text{C}}$ Thouless transition line in a dilute metallic spin glass from time response measurements near T_g . Journal of Applied Physics, 1987, 61, 4089-4091.	1.1	2
38	Relaxation and nonradiative decay in disordered systems. III. Statistical character of Raman (two-quanta) spin-lattice relaxation. Physical Review B, 1987, 35, 1166-1173.	1.1	17
39	Magnons and factons in diluted antiferromagnets (invited). Journal of Applied Physics, 1987, 61, 3689-3691.	1.1	28
40	Scaling Theories for Anomalous Dynamics on Fractals: Fractons. , 1987, , 233-241.		1
41	Fracton Interpretation of Thermal Conductivity of Amorphous Materials. , 1987, , 243-249.		2
42	Phonon-fracton anharmonic interactions: The thermal conductivity of amorphous materials. Physical Review B, 1986, 34, 2726-2734.	1.1	157
43	Dynamics of Fractal Networks. Science, 1986, 231, 814-819.	6.0	377
44	Relaxation and nonradiative decay in disordered systems. II. Two-fracton inelastic scattering. Physical Review B, 1986, 33, 3935-3946.	1.1	40
45	Experimental search for the spin-glass transition in $\text{Eu}_{0.4}\text{Sr}_{0.6}\text{S}$: A dynamic scaling analysis. Journal of Magnetism and Magnetic Materials, 1986, 54-57, 1-5.	1.0	32
46	Time dependent response for the ferromagnetic and spin-glass phase in an insulating re-entrant material: $\text{Eu}_{0.54}\text{Sr}_{0.46}\text{S}$. Journal of Magnetism and Magnetic Materials, 1986, 54-57, 177-178.	1.0	5
47	Time decay of the thermoremanent magnetization in the insulating spin glass $\text{Eu}_{0.4}\text{Sr}_{0.6}\text{S}$. Journal of Magnetism and Magnetic Materials, 1986, 54-57, 211-212.	1.0	19
48	Spin-glass response near the glass temperature. Physical Review B, 1986, 33, 6531-6532.	1.1	13
49	Temperature dependence of the response time of dilute metallic spin glasses. Physical Review B, 1986, 34, 1719-1727.	1.1	51
50	The Thermal Conductivity of Amorphous Insulators. Springer Series in Solid-state Sciences, 1986, , 15-19.	0.3	2
51	Frequency-dependent hopping conductivity in disordered networks in the presence of a biased electric field. Physical Review B, 1985, 31, 6337-6344.	1.1	7
52	Inelastic extended-electron \hat{a}^{C} localized-vibrational-state scattering rate. Physical Review B, 1985, 32, 8007-8012.	1.1	30
53	Spin-glass response time in Ag:Mn : Exponential temperature dependence. Physical Review Letters, 1985, 55, 111-113.	2.9	79
54	Relaxation and nonradiative decay in disordered systems. I. One-fracton emission. Physical Review B, 1985, 32, 6447-6455.	1.1	63

#	ARTICLE	IF	CITATIONS
55	Scaling approach to phonon-fracton crossover. <i>Physical Review B</i> , 1985, 31, 2565-2567.	1.1	113
56	Critical scaling of the EPR linewidth in the Ag-Mn spin glass. <i>Physical Review B</i> , 1985, 31, 4557-4561.	1.1	27
57	Relaxation rate distribution and decay profile : one fracton emission. <i>Journal De Physique (Paris), Lettres</i> , 1985, 46, 549-554.	2.8	20
58	Relaxation rate distribution and decay profile : two fracton relaxation. <i>Journal De Physique (Paris), Lettres</i> , 1985, 46, 555-560.	2.8	26
59	Dynamic scaling in the $\text{Eu}_{0.4}\text{Sr}_{0.6}\text{S}$ spin-glass. <i>Physical Review B</i> , 1984, 30, 6514-6520.	1.1	133
60	Chamberlin, Mozurkewich, and Orbach Respond. <i>Physical Review Letters</i> , 1984, 53, 1025-1025.	2.9	9
61	Fracton contribution to the optical linewidth in glasses. <i>Physical Review B</i> , 1984, 29, 2300-2301.	1.1	46
62	Percolation in the effective-medium approximation: Crossover between phonon and fracton excitations. <i>Physical Review B</i> , 1984, 29, 6645-6651.	1.1	98
63	Time Decay of the Remanent Magnetization in Spin-Glasses. <i>Physical Review Letters</i> , 1984, 52, 867-870.	2.9	406
64	Spin waves in a percolating antiferromagnet. <i>Physical Review B</i> , 1984, 30, 2760-2764.	1.1	17
65	Excitation spectrum for vibrations on a percolating network: Effective-medium approximation. <i>Physical Review B</i> , 1984, 29, 4588-4594.	1.1	55
66	Exchange-narrowed anisotropy contribution to the EPR width and shift in the Ag-Mn spin-glass. <i>Physical Review B</i> , 1984, 29, 278-287.	1.1	54
67	Dynamics of fractal structures. <i>Journal of Statistical Physics</i> , 1984, 36, 735-748.	0.5	46
68	Energy gap and thermal properties of selfsimilar structures: An application to epoxy resin. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1983, 98, 357-360.	0.9	33
69	Fracton interpretation of vibrational properties of cross-linked polymers, glasses, and irradiated quartz. <i>Physical Review B</i> , 1983, 28, 4615-4619.	1.1	267
70	The H-T phase diagram for the spin-glass Ag : Mn. <i>Journal of Magnetism and Magnetic Materials</i> , 1983, 31-34, 1423-1424.	1.0	1
71	Frequency dependence of the conductivity in presence of an electric field in one dimension: Weak-disorder limit. <i>Physical Review B</i> , 1983, 27, 4694-4701.	1.1	20
72	Time dependent critical field transition line in an insulating spin-glass. <i>Journal De Physique (Paris), Lettres</i> , 1983, 44, 47-52.	2.8	50

#	ARTICLE	IF	CITATIONS
73	H ⁺ phase diagram for spin-glasses: An experimental study of Ag:Mn. Physical Review B, 1982, 25, 6720-6729.	1.1	193
74	Frequency-Dependent Conductivity of Quasi-One-Dimensional Electronic Conductors. Molecular Crystals and Liquid Crystals, 1982, 85, 121-128.	0.9	11
75	Density of states on fractals : « fractons ». Journal De Physique (Paris), Lettres, 1982, 43, 625-631.	2.8	1,932
76	Frequency-dependent charge transport in a one-dimensional disordered metal. Physical Review B, 1981, 24, 7474-7477.	1.1	42
77	Frequency dependence of the conductivity for variable range rate hopping in 1-D. Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics, 1981, 107, 675-676.	0.9	5
78	Reversibility and time dependence of the magnetization in Ag:Mn and Cu:Mn spin glasses. Journal of Applied Physics, 1981, 52, 1771-1772.	1.1	47
79	Excitation dynamics in random one-dimensional systems. Reviews of Modern Physics, 1981, 53, 175-198.	16.4	719
80	EPR study of cold-worked dilute gold-erbium alloys. Journal of Applied Physics, 1979, 50, 7735.	1.1	7
81	Classical Diffusion in One-Dimensional Disordered Lattice. Physical Review Letters, 1978, 41, 185-187.	2.9	84
82	Time-dependent spectral transport: A Monte Carlo study. Physical Review B, 1978, 18, 3048-3053.	1.1	12
83	Spectral diffusion in a one-dimensional percolation model. Physical Review B, 1978, 17, 4311-4314.	1.1	56
84	ESR and spin-lattice relaxation of Nd ³⁺ in a metallic host: LaRh ₂ . Physical Review B, 1978, 18, 1016-1019.	1.1	12
85	Optical energy storage and retrieval. Physics Letters, Section A: General, Atomic and Solid State Physics, 1977, 62, 55-56.	0.9	2
86	Exchange and hyperfine interactions in Ag:Mn dilute alloys. Physical Review B, 1975, 11, 3546-3558.	1.1	48
87	Magnetic resonance of thin-film single-crystal epitaxial dilute alloys. Physical Review B, 1975, 12, 5068-5074.	1.1	19
88	Relaxation and Energy Transfer. , 1975, , 355-399.		17
89	Electron spin resonance of Gd in the intermetallic compounds YCu, YAg, and LaAg: Wave vector dependence of the exchange interaction. Solid State Communications, 1973, 12, 621-625.	0.9	105
90	Crystalline-Field Effects in the Electron-Spin Resonance of Rare Earths in the Noble Metals. Physical Review B, 1973, 8, 3563-3568.	1.1	52

#	ARTICLE	IF	CITATIONS
91	Electron-Spin Resonance of Rare Earths in Aluminum. Physical Review B, 1973, 7, 1-12.	1.1	74
92	Superexchange. , 1973, , .		0
93	Magnetic Resonance of Au:Er167and Au:Yb171. Physical Review B, 1972, 5, 2735-2736.	1.1	15
94	Electron-Spin Resonance of Rare-Earth Ions in the Actinide Cubic Metal Th. Physical Review B, 1972, 5, 1711-1716.	1.1	21
95	Anisotropic Behavior of Dilute Au:Dy Alloys: Observation of the ⁸ (Quartet) Resonance. Physical Review Letters, 1972, 28, 490-493.	2.9	27
96	Electron spin resonance of Dy and Er in Ir. Physics Letters, Section A: General, Atomic and Solid State Physics, 1972, 40, 269-271.	0.9	10
97	Electron Spinâ€™Lattice Relaxation. , 1972, , 121-216.		32
98	Hyperfine splitting in the electron spin resonance of Dy and Er in the transition metal-Rh. Physics Letters, Section A: General, Atomic and Solid State Physics, 1971, 37, 361-363.	0.9	19
99	Hyperfine Splitting of Er and Yb Resonances in Au: A Separation between the Atomic and Covalent Contributions to the Exchange Integral. Physical Review B, 1971, 4, 5-9.	1.1	103
100	Hyperfine Splitting in a Metal of a Localized Moment. Journal of Applied Physics, 1971, 42, 1659-1665.	1.1	23
101	Resolved "Fine Structure" in the Magnetic Resonance of a Localized Moment in a Metal. Physical Review Letters, 1971, 27, 582-586.	2.9	38
102	Hyperfine Splitting of a Localized Moment in a Metal. Physical Review B, 1970, 2, 2298-2301.	1.1	28
103	Zero-Field Splitting of S-State Ions. III. Corrections to Parts I and II and Application to Distorted Cubic Crystals. Physical Review, 1968, 171, 378-388.	2.7	122
104	Paramagnetic Resonance of Erbium in a Single Crystal of Magnesium. Physical Review Letters, 1967, 19, 1133-1136.	2.9	33
105	Zero-Field Splitting of S-State Ions. II. Overlap and Covalency Model. Physical Review, 1967, 155, 338-352.	2.7	127
106	"Super" Transferred Hyperfine Interactions for Fe ³⁺ +Salts. Journal of Applied Physics, 1967, 38, 1072-1073.	1.1	21
107	Phonon-Induced Ion-Ion Coupling in Paramagnetic Salts. Physical Review, 1967, 158, 524-529.	2.7	87
108	Phonon breakdown. IEEE Transactions on Sonics and Ultrasonics, 1967, 14, 140-141.	1.0	22

#	ARTICLE	IF	CITATIONS
109	Phonon-Induced Corrections to the Van Vleck Temperature-Independent Susceptibility. Physical Review, 1966, 143, 168-171.	2.7	14
110	Temperature Dependence of Hyperfine Coupling of S-State Ions in Cubic Environment. Physical Review, 1966, 145, 191-194.	2.7	116
111	Nonlinear Phonon Generation. Physical Review Letters, 1966, 16, 15-16.	2.9	44
112	Zero-Field Splitting of S-State Ions. I. Point-Multipole Model. Physical Review, 1966, 149, 257-269.	2.7	210
113	The phonon maser. Physics Letters, 1965, 15, 43-45.	2.2	3
114	Spin-Lattice Relaxation in the \tilde{E}_2 State of d^3 Ions in Corundum. Physical Review, 1965, 139, A314-A321.	2.7	74
115	Second-Order Nonradiative Processes in $\text{CaF}_2:\text{Sm}^{2+}$. Physical Review, 1964, 133, A34-A36.	2.7	17
116	The attenuation of high frequency phonons at low temperatures. Physics Physique $\text{D}\text{D}\text{D}\text{D}^\circ$, 1964, 1, 91-94.	2.3	92
117	Spin-Lattice Relaxation of S-State Ions: Mn^{2+} in a Cubic Environment. Physical Review, 1962, 127, 1587-1592.	2.7	212
118	On the scattering of phonons by spins at low temperatures theoretical. Philosophical Magazine and Journal, 1960, 5, 1303-1307.	1.8	13
119	Antiferromagnetic Magnon Dispersion Law and Bloch Wall Energies in Ferromagnets and Antiferromagnets. Journal of Applied Physics, 1959, 30, S233-S234.	1.1	0
120	Antiferromagnetic Magnon Dispersion Law and Bloch Wall Energies in Ferromagnets and Antiferromagnets. Physical Review, 1959, 115, 1181-1184.	2.7	53
121	Linear Antiferromagnetic Chain with Anisotropic Coupling. Physical Review, 1958, 112, 309-316.	2.7	451