Peter A Beckmann

List of Publications by Year
in descending order

54 papers	1,033 citations	516710 16 h-index	454955 30 g-index
55 all docs	55 docs citations	55 times ranked	785 citing authors

#	Article	IF	Citations
1	Spectral densities and nuclear spin relaxation in solids. Physics Reports, 1988, 171, 85-128.	25.6	242
2	A Thermometer for Nonspinning Solid-State NMR Spectroscopy. Journal of Magnetic Resonance, 2000, 146, 379-380.	2.1	140
3	Nuclear-spin relaxation in molecular solids with reorienting methyl andt-butyl groups: The spectral density and the state of the solid. Physical Review B, 1988, 38, 11098-11111.	3.2	31
4	1H nuclear magnetic resonance spin-lattice relaxation, 13C magic-angle-spinning nuclear magnetic resonance spectroscopy, differential scanning calorimetry, and x-ray diffraction of two polymorphs of 2,6-di-tert-butylnaphthalene. Journal of Chemical Physics, 2000, 113, 1958-1965.	3.0	30
5	¹²⁷I and ²⁰⁷Pb Solid-State NMR Spectroscopy and Nuclear Spin Relaxation in PbI₂: A Preliminary Study. Journal of Physical Chemistry C, 2014, 118, 9143-9153.	3.1	29
6	Solid state phase transitions and molecular reorientation inorthoâ€•andparaâ€carborane: An isomer effect. Journal of Chemical Physics, 1980, 72, 4600-4607.	3.0	28
7	A New Mechanism for Spinâ^'Lattice Relaxation of Heavy Nuclei in the Solid State:Â207Pb Relaxation in Lead Nitrate. Journal of the American Chemical Society, 2001, 123, 7094-7100.	13.7	28
8	CF3 Rotation in 3-(Trifluoromethyl)phenanthrene. X-ray Diffraction and ab Initio Electronic Structure Calculations. Journal of Physical Chemistry A, 2006, 110, 3954-3960.	2.5	27
9	Methyl group rotation, 1H spin-lattice relaxation in an organic solid, and the analysis of nonexponential relaxation. Journal of Chemical Physics, 2012, 136, 054508.	3.0	27
10	Intramolecular and Intermolecular Contributions to the Barriers for Rotation of Methyl Groups in Crystalline Solids: Electronic Structure Calculations and Solid-State NMR Relaxation Measurements. Journal of Organic Chemistry, 2011, 76, 5170-5176.	3.2	26
11	Solid state proton spin relaxation in ethylbenzenes: Methyl reorientation barriers and molecular structure. Journal of Chemical Physics, 1991, 95, 828-835.	3.0	25
12	Methyl andt-butyl group reorientation in planar aromatic solids: Low-frequency nuclear magnetic resonance relaxometry and x-ray diffraction. Journal of Chemical Physics, 2003, 118, 11129-11138.	3.0	20
13	CF3 Rotation in 3-(Trifluoromethyl)phenanthrene:â€‰ Solid State 19F and 1H NMR Relaxation and Blochâ^'Wangsnessâ^'Redfield Theory. Journal of Physical Chemistry A, 2006, 110, 3947-3953.	2.5	19
14	Superpositions of intramolecular reorientations and nuclear spin relaxation. Molecular Physics, 1980, 41, 1227-1238.	1.7	17
15	Solid state proton spin relaxation and methyl and tâ€butyl reorientation. Journal of Chemical Physics, 1994, 100, 752-753.	3.0	17
16	Methyl reorientation in solid 3-ethylchrysene and 3-isopropylchrysene. Solid State Nuclear Magnetic Resonance, 1998, 12, 251-256.	2.3	17
17	Proton spinâ€“lattice relaxation in metaâ€carborane. Journal of Chemical Physics, 1980, 73, 3514-3515.	3.0	16
18	Cd111andCd113spin-lattice relaxation inCdMoO4by paramagnetic centers in the absence of spin diffusion. Physical Review B, 2005, 71, .	3.2	16

#	Article	IF	Citations
19	Spin-lattice relaxation of heavy spin-1/2 nuclei in diamagnetic solids: A Raman process mediated by spin-rotation interaction. Physical Review B, 2006, 74, .	3.2	16
20	Methoxy and Methyl Group Rotation: Solidâ€State NMR ¹H Spinâ€Lattice Relaxation, Electronic Structure Calculations, Xâ€ray Diffractometry, and Scanning Electron Microscopy. ChemPhysChem, 2015, 16, 1509-1519.	2.1	15
21	The relationship between crystal structure and methyl and t-butyl group dynamics in van der Waals organic solids. Journal of Chemical Physics, 2004, 120, 5309-5314.	3.0	14
22	Distributions of methyl group rotational barriers in polycrystalline organic solids. Journal of Chemical Physics, 2013, 139, 204501.	3.0	14
23	Superlattices, polymorphs and solid-state NMR spinâ€“lattice relaxation (T1) measurements of 2,6-di-tert-butylnaphthalene. Chemical Communications, 2000, , 651-652.	4.1	13
24	The quenching of isopropyl group rotation in van der Waals molecular solids. Journal of Chemical Physics, 2008, 128, 124502.	3.0	13
25	Dipole-dipole spin relaxation in solids. Physica B: Condensed Matter, 1993, 190, 267-284.	2.7	12
26	Singleâ€Crystal Xâ€Ray Diffraction, Isolatedâ€Molecule and Cluster Electronic Structure Calculations, and Scanning Electron Microscopy in an Organic solid: Models for Intramolecular Motion in 4,4â€²â€Dimethoxybiphenyl. ChemPhysChem, 2012, 13, 2082-2089.	2.1	12
27	Nonexponential 1H spinâ€“lattice relaxation and methyl group rotation in molecular solids. Solid State Nuclear Magnetic Resonance, 2015, 71, 91-95.	2.3	12
28	The electron-methyl group spin-spin interaction. Molecular Physics, 1977, 34, 665-680.	1.7	11
29	Solid state proton spinâ€“lattice relaxation in four structurally related organic molecules. Chemical Physics, 2003, 290, 241-250.	1.9	10
30	S119nspin-lattice relaxation inÎ±-SnF2. Physical Review B, 2009, 79, .	3.2	10
31	A proton spin-lattice relaxation rate study of methyl and t-butyl group reorientation in the solid state. Solid State Nuclear Magnetic Resonance, 2010, 38, 31-35.	2.3	9
32	Nonexponential Solid State ¹H and ¹⁹F Spinâ€“Lattice Relaxation, Single-crystal X-ray Diffraction, and Isolated-Molecule and Cluster Electronic Structure Calculations in an Organic Solid: Coupled Methyl Group Rotation and Methoxy Group Libration in 4,4â€²-Dimethoxyoctafluorobiphenyl. Journal of Physical Chemistry A, 2012, 116, 11946-11956.	2.5	9
33	Proton spin-lattice relaxation in MBDBP. Molecular Physics, 1980, 41, 1239-1258.	1.7	8
34	Proton spin relaxation, internal motion and structure in solid 1,2,4,5-tetraisopropylbenzene. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 3801.	1.7	8
35	Pb207spin-lattice relaxation in solidPbMoO4andPbCl2. Physical Review B, 2006, 74, .	3.2	8
36	Methyl and t-butyl reorientation in an organic molecular solid. Solid State Nuclear Magnetic Resonance, 2009, 36, 86-91.	2.3	8

#	Article	IF	Citations
37	Solid state 1H spin-lattice relaxation and isolated-molecule and cluster electronic structure calculations in organic molecular solids: The relationship between structure and methyl group and t-butyl group rotation. Journal of Chemical Physics, 2014, 140, 194304.	3.0	8
38	Solid-State Proton Spin Relaxation and Methyl Reorientation in Isopropylbenzene. The Journal of Physical Chemistry, 1995, 99, 391-394.	2.9	7
39	Unusual proton Zeeman spin relaxation in an organic solid: several crystal polymorphs or different glass structures?. Solid State Nuclear Magnetic Resonance, 2000, 16, 239-244.	2.3	7
40	The relationship between crystal structure and NMR relaxation in molecular solids with tert-butyl groups. Chemical Physics, 2008, 345, 116-118.	1.9	7
41	1H and 19F spin-lattice relaxation and CH3 or CF3 reorientation in molecular solids containing both H and F atoms. Journal of Chemical Physics, 2016, 144, 154308.	3.0	7
42	Solid state proton spin relaxation andtâ€butyl and methyl group reorientation in 1â€bromoâ€2,4,6â€triâ€tâ€butylbenzene. Journal of Chemical Physics, 1991, 95, 4778-4782.	3.0	6
43	Methyl Group Rotation and 1H and 2H Zeeman Relaxation in Organic Solids. Journal of Physical Chemistry A, 2001, 105, 7350-7355.	2.5	6
44	Methyl and t-butyl group rotation in a molecular solid:¹H NMR spin-lattice relaxation and X-ray diffraction. Physical Chemistry Chemical Physics, 2016, 18, 1720-1726.	2.8	6
45	Solidâ€“Solid Phase Transitions and tert-Butyl and Methyl Group Rotation in an Organic Solid: X-ray Diffractometry, Differential Scanning Calorimetry, and Solid-State ¹H Nuclear Spin Relaxation. Journal of Physical Chemistry A, 2017, 121, 6220-6230.	2.5	6
46	Proton spin-lattice relaxation and intramolecular reorientation in solids. Journal of Magnetic Resonance, 1984, 59, 63-70.	0.5	5
47	Proton Spinâ€Lattice Relaxation in Organic Molecular Solids: Polymorphism and the Dependence on Sample Preparation. ChemPhysChem, 2018, 19, 2423-2436.	2.1	3
48	Concomitant Polymorphism in an Organic Solid: Molecular and Crystal Structure and Intraâ€and Intermolecular Potential Contributions to tert â€Butyl and Methyl Group Rotation. ChemPhysChem, 2019, 20, 2887-2894.	2.1	3
49	Proton Spin Relaxation and Thermal History Effects in Organic Molecular Solids. , 1992, , 357-362.		3
50	Physics in Elementary School. MRS Bulletin, 1992, 17, 47-48.	3.5	2
51	More on g?. American Journal of Physics, 1987, 55, 969-969.	0.7	0
52	Monitoring a simple hydrolysis process in an organic solid by observing methyl group rotation. Solid State Nuclear Magnetic Resonance, 2017, 85-86, 1-11.	2.3	0
53	Note: Methyl and t-butyl group rotation in van der Waals solids. Journal of Chemical Physics, 2018, 148, 106101.	3.0	0
54	Solid state proton spin-lattice relaxation in polycrystalline methylphenanthrenes. IV. 1,4-dimethylphenanthrene. Journal of Chemical Physics, 2019, 150, 124508.	3.0	0