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	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
2	Solid state proton spin-lattice relaxation in polycrystalline methylphenanthrenes. IV. 1,4-dimethylphenanthrene. Journal of Chemical Physics, 2019, 150, 124508.	3.0	0
3	Note: Methyl and t-butyl group rotation in van der Waals solids. Journal of Chemical Physics, 2018, 148, 106101.	3.0	0
4	Proton Spinâ€Lattice Relaxation in Organic Molecular Solids: Polymorphism and the Dependence on Sample Preparation. ChemPhysChem, 2018, 19, 2423-2436.	2.1	3
5	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
6	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
7	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
8	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
9	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
10	Nonexponential 1H spinâ€“lattice relaxation and methyl group rotation in molecular solids. Solid State Nuclear Magnetic Resonance, 2015, 71, 91-95.	2.3	12
11	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
12	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
13	Distributions of methyl group rotational barriers in polycrystalline organic solids. Journal of Chemical Physics, 2013, 139, 204501.	3.0	14
14	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
15	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
16	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
17	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
18	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

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19	S119nspin-lattice relaxation inÎ±-SnF2. Physical Review B, 2009, 79, .	3.2	10
20	Methyl and t-butyl reorientation in an organic molecular solid. Solid State Nuclear Magnetic Resonance, 2009, 36, 86-91.	2.3	8
21	The relationship between crystal structure and NMR relaxation in molecular solids with tert-butyl groups. Chemical Physics, 2008, 345, 116-118.	1.9	7
22	The quenching of isopropyl group rotation in van der Waals molecular solids. Journal of Chemical Physics, 2008, 128, 124502.	3.0	13
23	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
24	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
25	Pb207spin-lattice relaxation in solidPbMoO4andPbCl2. Physical Review B, 2006, 74, .	3.2	8
26	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
27	Cd111andCd113spin-lattice relaxation inCdMoO4by paramagnetic centers in the absence of spin diffusion. Physical Review B, 2005, 71, .	3.2	16
28	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
29	Solid state proton spinâ€“lattice relaxation in four structurally related organic molecules. Chemical Physics, 2003, 290, 241-250.	1.9	10
30	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
31	Methyl Group Rotation and 1H and 2H Zeeman Relaxation in Organic Solids. Journal of Physical Chemistry A, 2001, 105, 7350-7355.	2.5	6
32	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
33	A Thermometer for Nonspinning Solid-State NMR Spectroscopy. Journal of Magnetic Resonance, 2000, 146, 379-380.	2.1	140
34	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
35	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
36	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

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37	Methyl reorientation in solid 3-ethylchrysene and 3-isopropylchrysene. Solid State Nuclear Magnetic Resonance, 1998, 12, 251-256.	2.3	17
38	Solid-State Proton Spin Relaxation and Methyl Reorientation in Isopropylbenzene. The Journal of Physical Chemistry, 1995, 99, 391-394.	2.9	7
39	Solid state proton spin relaxation and methyl and tâ€butyl reorientation. Journal of Chemical Physics, 1994, 100, 752-753.	3.0	17
40	Dipole-dipole spin relaxation in solids. Physica B: Condensed Matter, 1993, 190, 267-284.	2.7	12
41	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
42	Physics in Elementary School. MRS Bulletin, 1992, 17, 47-48.	3.5	2
43	Proton Spin Relaxation and Thermal History Effects in Organic Molecular Solids. , 1992, , 357-362.		3
44	Solid state proton spin relaxation in ethylbenzenes: Methyl reorientation barriers and molecular structure. Journal of Chemical Physics, 1991, 95, 828-835.	3.0	25
45	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
46	Spectral densities and nuclear spin relaxation in solids. Physics Reports, 1988, 171, 85-128.	25.6	242
47	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
48	More on g?. American Journal of Physics, 1987, 55, 969-969.	0.7	0
49	Proton spin-lattice relaxation and intramolecular reorientation in solids. Journal of Magnetic Resonance, 1984, 59, 63-70.	0.5	5
50	Superpositions of intramolecular reorientations and nuclear spin relaxation. Molecular Physics, 1980, 41, 1227-1238.	1.7	17
51	Proton spin-lattice relaxation in MBDBP. Molecular Physics, 1980, 41, 1239-1258.	1.7	8
52	Solid state phase transitions and molecular reorientation inorthoâ€•andparaâ€carborane: An isomer effect. Journal of Chemical Physics, 1980, 72, 4600-4607.	3.0	28
53	Proton spinâ€“lattice relaxation in metaâ€carborane. Journal of Chemical Physics, 1980, 73, 3514-3515.	3.0	16
54	The electron-methyl group spin-spin interaction. Molecular Physics, 1977, 34, 665-680.	1.7	11