

Leslie G Butler

List of Publications by Year in descending order

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102
papers

2,068
citations

279798

23
h-index

276875

41
g-index

104
all docs

104
docs citations

104
times ranked

1912
citing authors

#	ARTICLE	IF	CITATIONS
1	Intact, Commercial Lithium-Polymer Batteries: Spatially Resolved Grating-Based Interferometry Imaging, Bragg Edge Imaging, and Neutron Diffraction. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 1281.	2.5	3
2	Strengthening spatial reasoning: elucidating the attentional and neural mechanisms associated with mental rotation skill development. <i>Cognitive Research: Principles and Implications</i> , 2020, 5, 20.	2.0	10
3	Wavepy - python package for x-ray grating interferometry with applications in imaging and wavefront characterization. <i>AIP Conference Proceedings</i> , 2019, , .	0.4	3
4	Non-destructive evaluation of additively manufactured polymer objects using X-ray interferometry. <i>Additive Manufacturing</i> , 2018, 24, 364-372.	3.0	2
5	Neutron interferometry detection of early crack formation caused by bending fatigue in additively manufactured SS316 dogbones. <i>Materials and Design</i> , 2018, 140, 420-430.	7.0	21
6	Early detection of fracture failure in SLM AM tension testing with Talbot-Lau neutron interferometry. <i>Additive Manufacturing</i> , 2018, 22, 658-664.	3.0	8
7	Recent applications of X-ray grating interferometry imaging to evaluate flame retardancy performance of brominated flame retardant. <i>Polymer Degradation and Stability</i> , 2017, 138, 1-11.	5.8	1
8	Porosity detection in electron beam-melted Ti-6Al-4V using high-resolution neutron imaging and grating-based interferometry. <i>Progress in Additive Manufacturing</i> , 2017, 2, 125-132.	4.8	36
9	Neutron Imaging of Laser Melted SS316 Test Objects with Spatially Resolved Small Angle Neutron Scattering. <i>Journal of Imaging</i> , 2017, 3, 58.	3.0	10
10	Analysis of Flame Retardancy in Polymer Blends by Synchrotron X-ray K-edge Tomography and Interferometric Phase Contrast Movies. <i>Journal of Physical Chemistry B</i> , 2016, 120, 2612-2624.	2.6	8
11	Improved algorithm for processing grating-based phase contrast interferometry image sets. <i>Review of Scientific Instruments</i> , 2014, 85, 013704.	1.3	31
12	Real-time observation of hydrogen absorption by LaNi5 with quasi-dynamic neutron tomography. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014, 324, 95-101.	1.4	3
13	Neutron Radiography, Tomography, and Diffraction of Commercial Lithium-ion Polymer Batteries. <i>Physics Procedia</i> , 2013, 43, 331-336.	1.2	10
14	Edge Enhancement in Cold Neutron Imaging: A Comparison of Experiments at Edges and Interfaces with Ray-tracing based on Refraction and Reflection. <i>Physics Procedia</i> , 2013, 43, 149-160.	1.2	5
15	Study of Morphological Changes in MgH2 Destabilized LiBH4 Systems Using Computed X-ray Microtomography. <i>Materials</i> , 2012, 5, 1740-1751.	2.9	2
16	Development of grating-based x-ray Talbot interferometry at the advanced photon source. <i>AIP Conference Proceedings</i> , 2012, , .	0.4	5
17	Improving the workflow of tomography studies for the polymer additives industry. , 2012, , .		0
18	High-resolution neutron microtomography with noiseless neutron counting detector. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 652, 400-403.	1.6	42

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19	Neutron imaging of a commercial Li-ion battery during discharge: Application of monochromatic imaging and polychromatic dynamic tomography. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 651, 320-328.	1.6	38
20	Synchrotron X-ray Tomography for 3D Chemical Distribution Measurement of a Flame Retardant and Synergist in a Fiberglass-Reinforced Polymer Blend. Journal of Physical Chemistry B, 2010, 114, 2-9.	2.6	7
21	The structure of the cornified claw sheath in the domesticated cat (<i>Felis catus</i>): implications for the claw-shedding mechanism and the evolution of cornified digital end organs. Journal of Anatomy, 2009, 214, 620-643.	1.5	40
22	Burning Issues in Tomography Analysis. Computing in Science and Engineering, 2008, 10, 78-81.	1.2	4
23	A New Tomography Beamline at a Wiggler Port at the Center for Advanced Microstructures and Devices (CAMD) Storage Ring. AIP Conference Proceedings, 2007, , .	0.4	0
24	Structural Characterization of Al ₁₀ O ₆ iBu ₁₆ ($\frac{1}{4}$ -H) ₂ , a High Aluminum Content Cluster: Further Studies of Methylaluminoxane (MAO) and Related Aluminum Complexes. Inorganic Chemistry, 2007, 46, 44-47.	4.0	21
25	Algorithms for three-dimensional chemical analysis via multi-energy synchrotron X-ray tomography. Nuclear Instruments & Methods in Physics Research B, 2007, 262, 117-127.	1.4	8
26	Synchrotron X-ray tomography for 3D chemical diffusion measurement of a flame retardant in polystyrene. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 582, 202-204.	1.6	6
27	Methylaluminoxane (MAO) Polymerization Mechanism and Kinetic Model from Ab Initio Molecular Dynamics and Electronic Structure Calculations. Journal of the American Chemical Society, 2006, 128, 16816-16826.	13.7	51
28	The 3D chemical distribution of a flame retardant in a fiberglass-reinforced polymer blend as measured with synchrotron x-ray tomography. , 2006, , .		1
29	Imaging tissue structures: assessment of absorption and phase-contrast x-ray tomography imaging at 2nd and 3rd generation synchrotrons. , 2006, 6318, 629.		3
30	Tools and strategies for processing diffusion-ordered 2D NMR spectroscopy (DOSY) of a broad, featureless resonance: an application to methylaluminoxane (MAO). Analytical and Bioanalytical Chemistry, 2004, 378, 1574-1578.	3.7	10
31	High-field 19.6T ²⁷ Al solid-state MAS NMR of in vitro aluminated brain tissue. Journal of Magnetic Resonance, 2004, 170, 257-262.	2.1	11
32	Three-Dimensional Chemical Analysis with Synchrotron Tomography at Multiple X-ray Energies: Brominated Aromatic Flame Retardant and Antimony Oxide in Polystyrene. Chemistry of Materials, 2004, 16, 4032-4042.	6.7	23
33	Algorithms for three-dimensional chemical analysis with multi-energy tomographic data. , 2004, , .		0
34	A microtomography beamline at the Louisiana State University Center for Advanced Microstructures and Devices synchrotron. Review of Scientific Instruments, 2002, 73, 1521-1523.	1.3	8
35	High resolution three-dimensional visualization and characterization of coronary atherosclerosis in vitro by synchrotron radiation x-ray microtomography and highly localized x-ray diffraction. Physics in Medicine and Biology, 2002, 47, 4345-4356.	3.0	19
36	Tomography at the Louisiana State University CAMD synchrotron: applications to polymer blends. , 2002, 4503, 54.		0

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37	Petrographic and spectroscopic characterization of phosphate-stabilized mine tailings from Leadville, Colorado. <i>Waste Management</i> , 2002, 22, 117-135.	7.4	39
38	Automated, Web-Based, Second-Chance Homework. <i>Journal of Chemical Education</i> , 2001, 78, 1704.	2.3	9
39	Structural Characterization of MAO and Related Aluminum Complexes. 1. Solid-State ²⁷ Al NMR with Comparison to EFG Tensors from ab Initio Molecular Orbital Calculations. <i>Journal of the American Chemical Society</i> , 2001, 123, 12009-12017.	13.7	69
40	Solid-State ² H MAS NMR Studies of TNT Absorption in Soil and Clays. <i>Environmental Science & Technology</i> , 2001, 35, 2973-2978.	10.0	15
41	Synchrotron X-ray microtomography, X-ray absorption near edge structure, extended X-ray absorption fine structure, and voxel imaging of a cobalt-zeolite-Y complex. <i>Materials Research Bulletin</i> , 2001, 36, 1595-1602.	5.2	12
42	²⁷ Al field-swept and frequency-stepped NMR for sites with large quadrupole coupling constants. <i>Solid State Nuclear Magnetic Resonance</i> , 2000, 16, 63-67.	2.3	16
43	Synchrotron X-ray Microtomography, Electron Probe Microanalysis, and NMR of Toluene Waste in Cement. <i>Environmental Science & Technology</i> , 2000, 34, 3269-3275.	10.0	13
44	Single-Crystal ²⁷ Al NMR of Andalusite and Calculated Electric Field Gradients: the First Complete NMR Assignment for a 5-Coordinate Aluminum Site. <i>Journal of Physical Chemistry A</i> , 1999, 103, 5246-5252.	2.5	48
45	Ab Initio Calculation of ⁸¹ Br Nuclear Quadrupole Resonance Transition Frequencies for Brominated Aromatics (Flame Retardants). <i>Journal of Physical Chemistry A</i> , 1999, 103, 8088-8092.	2.5	5
46	<title>Synchrotron x-ray microtomography and solid state NMR of environmental wastes in cement</title>., 1999,, .		1
47	Proton-poor, gallium- and indium-loaded zeolite dehydrogenation catalysts. <i>Catalysis Letters</i> , 1998, 53, 111-118.	2.6	27
48	Some aspects of data processing for an optical absorption experiment in a pulsed 1000-Tesla magnet. <i>International Journal of Quantum Chemistry</i> , 1998, 70, 797-804.	2.0	1
49	Characterization and phosphate stabilization of dusts from the vitrification of MSW combustion residues. <i>Waste Management</i> , 1998, 18, 513-524.	7.4	46
50	Quantum jumps in magneto-optical effects and magnetization of rare-earth compounds in ultrahigh magnetic fields. <i>Physica B: Condensed Matter</i> , 1998, 246-247, 315-318.	2.7	0
51	The Faraday effect in Cd _{0.57} Mn _{0.43} Te in high magnetic field. <i>Physica B: Condensed Matter</i> , 1998, 246-247, 319-322.	2.7	3
52	Pulsed ⁸¹ Br Nuclear Quadrupole Resonance Spectroscopy of Brominated Flame Retardants and Associated Polymer Blends. <i>Chemistry of Materials</i> , 1998, 10, 1291-1300.	6.7	16
53	Heavy Metal Stabilization in Municipal Solid Waste Combustion Dry Scrubber Residue Using Soluble Phosphate. <i>Environmental Science & Technology</i> , 1997, 31, 3330-3338.	10.0	162
54	Chemical systems for exploration of high magnetic field effects. <i>International Journal of Quantum Chemistry</i> , 1997, 64, 607-611.	2.0	2

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55	Zeeman-effect studies of the electronic absorption spectrum of octachlorodirhenate($2\hat{a}''$) ($\text{Re}^{\text{I}}-\frac{1}{2}\text{Re}$) in pulsed 50-Tesla magnetic fields. <i>Inorganica Chimica Acta</i> , 1996, 243, 309-316.	2.4	4
56	Field-Cycling ^{14}N NQR Imaging with Spatial and Frequency Resolution. <i>Journal of Magnetic Resonance Series A</i> , 1995, 112, 92-95.	1.6	9
57	Low-temperature (4.2 K) ^{23}Na and ^{27}Al swept-field nuclear magnetic resonance spectroscopy of zeolites: observation of framework and non-framework aluminum sites. <i>Microporous Materials</i> , 1995, 4, 265-271.	1.6	4
58	Learning the Student Names in Large Classes: An Application of Multimedia Technology. <i>Journal of Chemical Education</i> , 1995, 72, 610.	2.3	2
59	15 T, 4.2 K field-swept ^{27}Al NMR spectroscopy. <i>Chemical Physics Letters</i> , 1994, 221, 65-67.	2.6	14
60	^{29}Si and ^{27}Al MAS-NMR of NaOH-Activated Blast-Furnace Slag. <i>Journal of the American Ceramic Society</i> , 1994, 77, 2363-2368.	3.8	96
61	Bond Breaking in the Chemical Vapor Deposition Precursor (1,1,1,5,5,5-Hexafluoro-2,4-pentanedionato)(.eta.2-1,5-cyclooctadiene)copper(I) Studied by Variable-Temperature X-ray Crystallography and Solid-State NMR Spectroscopy. <i>Chemistry of Materials</i> , 1994, 6, 587-595.	6.7	15
62	Olefin Rotation in the Solid State: A ^{13}C , ^1H , and ^2H NMR Study of $\text{Rh}(\text{acac})(\text{C}_2\text{H}_4)_2$. <i>Journal of the American Chemical Society</i> , 1994, 116, 7445-7446.	13.7	21
63	Structure of LiNO_3 : Point Charge Model and Sign of the ^7Li Quadrupole Coupling Constant. <i>Inorganic Chemistry</i> , 1994, 33, 1363-1365.	4.0	32
64	INTERPRETATION OF ELECTRIC FIELD GRADIENTS AT DEUTERIUM AS MEASURED BY SOLID-STATE NMR SPECTROSCOPY. <i>Journal of Coordination Chemistry</i> , 1994, 32, 121-134.	2.2	21
65	^{11}B imaging with field-cycling NMR as a line narrowing technique. <i>Chemical Physics Letters</i> , 1993, 206, 464-466.	2.6	9
66	A broadband nuclear magnetic resonance spectrometer: Digital phase shifting and flexible pulse programmer. <i>Review of Scientific Instruments</i> , 1993, 64, 1235-1238.	1.3	24
67	Solid-state carbon-13 NMR chemical shift tensors in square-planar tetracyanometalates ($\text{M} = \text{nickel}$), $T_j \text{ ETQq}1 \ 1 \ 0.784314 \ \text{rgBT} / \text{Over}$ 4.0 10	4.0	10
68	Solid-state deuterium NMR spectroscopy of d_5 -phenol in white portland cement: a new method for assessing solidification/stabilization. <i>Environmental Science & Technology</i> , 1993, 27, 1426-1433.	10.0	17
69	NMR imaging of anisotropic solid-state chemical reactions using multiple-pulse line-narrowing techniques and proton T_1 weighting. <i>Journal of the American Chemical Society</i> , 1992, 114, 125-135.	13.7	24
70	Data translation from instrument specific to ASCII. <i>Computers & Chemistry</i> , 1992, 16, 71-72.	1.2	1
71	Multiple pulse NMR imaging of polymers and chemistry. <i>Magnetic Resonance Imaging</i> , 1992, 10, 789-791.	1.8	9
72	Resolving two inequivalent sites with deuterium MAS NMR. <i>Journal of Magnetic Resonance</i> , 1992, 99, 292-300.	0.5	1

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73	Structure of a new polymorph of cis-[(η^4 -CH ₂)(η^1 -CO){Fe(η^5 -C ₅ H ₅)CO} ₂]. Acta Crystallographica Section C: Crystal Structure Communications, 1992, 48, 644-650.	0.4	4
74	Nonlinear least-squares fitting procedure for solid-state NMR powder patterns. Concepts in Magnetic Resonance, 1992, 4, 205-226.	1.3	11
75	Deuterium quadrupole coupling constants and asymmetry parameters in bridging metal hydride complexes. Journal of the American Chemical Society, 1991, 113, 9090-9096.	13.7	16
76	Carbon-13 NMR chemical shielding tensor of the bridging methylene unit in cis-(μ -CH ₂)(μ -CO)[FeCp(CO)] ₂ . Journal of the American Chemical Society, 1991, 113, 4831-4838.	13.7	11
77	Displaying the results from NMR pulse sequence simulations as stereo diagrams. Journal of Magnetic Resonance, 1991, 91, 396-399.	0.5	1
78	Structures of three related biphenyl compounds: 4,4'-biphenyldiol, 3,3',5,5'-tetra-tert-butyl-4,4'-biphenyldiol, and 3,3',5,5'-tetra-tert-butyl-1,1'-bicyclohexa-2,5-dienylidene-4,4'-dione. Acta Crystallographica Section C: Crystal Structure Communications, 1990, 46, 919-922.	0.4	9
79	Immobilization of As, Cd, Cr and Pb-containing soils by using cement or pozzolanic fixing agents. Journal of Hazardous Materials, 1990, 24, 145-155.	12.4	60
80	Rotation of the cyclopentadienyl ligand in bis(μ -carbonyl)bis(carbonylcyclopentadienyliron)(Fe-Fe) in the solid state as determined from solid-state deuterium NMR spectroscopy. Inorganic Chemistry, 1990, 29, 741-747.	4.0	18
81	Immobilization mechanisms in solidification/stabilization of cadmium and lead salts using portland cement fixing agents. Environmental Science & Technology, 1990, 24, 867-873.	10.0	129
82	Structure of 4-nitrobenzaldehyde. Acta Crystallographica Section C: Crystal Structure Communications, 1989, 45, 2016-2018.	0.4	7
83	A Karplus-type relationship for deuterium quadrupole coupling constants. II. Inequivalent C α - β H sites in substituted acetic acids. Journal of Magnetic Resonance, 1989, 82, 76-85.	0.5	3
84	Karplus-type relationship for quadrupole coupling constants and asymmetry parameters for substituted acetic acids. Journal of the American Chemical Society, 1988, 110, 343-347.	13.7	15
85	Translational symmetries in the linear-chain semiconductors K ₄ [Pt ₂ (P ₂ O ₅ H ₂) ₄ X] \cdot nH ₂ O (X = Cl, Tl) ETQq1 1 0,784314.rgBT /C 13.7 82	13.7	82
86	Determination of the charge on carbon in a bridging methylene iron dimer with solid-state deuterium NMR spectroscopy. Journal of the American Chemical Society, 1987, 109, 5529-5531.	13.7	10
87	Unusual asymmetry of methyl deuterium EFG in thymine: a solid state deuterium NMR and ab initio MO study. Journal of the American Chemical Society, 1987, 109, 2525-2526.	13.7	23
88	Observation of bridging and terminal metal hydrides by solid-state deuterium NMR spectroscopy: application to bis(cyclopentadienyl)zirconium dideuteride. Inorganic Chemistry, 1987, 26, 1381-1383.	4.0	20
89	Deuterium quadrupole coupling constants and asymmetry parameters in metal hydrides: calculations of model systems representing three modes of metal-hydrogen bonding. Inorganic Chemistry, 1987, 26, 3001-3004.	4.0	18
90	Structure of the tetrahedral cobalt cluster [Co ₄ (η^5 -C ₅ H ₅) ₂ (CO) ₇]. Acta Crystallographica Section C: Crystal Structure Communications, 1987, 43, 2283-2285.	0.4	0

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91	Transient spectroscopy of the lowest excited states of binuclear rhodium(I) isocyanides. <i>The Journal of Physical Chemistry</i> , 1986, 90, 5567-5570.	2.9	9
92	Boron-10 and boron-11 nuclear quadrupole resonance spectrum of decaborane[14]. <i>Journal of Magnetic Resonance</i> , 1985, 65, 472-480.	0.5	3
93	Chemistry and spectroscopy of binuclear platinum diphosphite complexes. <i>Inorganic Chemistry</i> , 1985, 24, 4662-4665.	4.0	50
94	Generation of binuclear (d8.d8)p.sigma. platinum and rhodium complexes by pulse radiolysis. <i>Journal of the American Chemical Society</i> , 1984, 106, 5143-5145.	13.7	19
95	Metal-metal interactions in binuclear platinum(II) diphosphite complexes. Resonance Raman spectra of the 1A1g(d.sigma.*)2 and 3A2u(d.sigma.*p.sigma.) electronic states of tetrakis(diphosphonato)diplatinatate(4-) ion (Pt2(P2O5H2)44-). <i>Journal of the American Chemical Society</i> , 1983, 105, 5492-5494.	13.7	60
96	High-power radio frequency irradiation system with automatic tuning. <i>Review of Scientific Instruments</i> , 1982, 53, 984-988.	1.3	4
97	Deuterium nuclear quadrupole resonance spectra of nonlinear hydrogen bonds. <i>Journal of the American Chemical Society</i> , 1982, 104, 1172-1177.	13.7	43
98	Nuclear quadrupole coupling constants and hydrogen bonding. Molecular orbital study of oxygen-17 and deuterium field gradients in formaldehyde-water hydrogen bonding. <i>Journal of the American Chemical Society</i> , 1981, 103, 6541-6549.	13.7	78
99	Spectroscopic properties and redox chemistry of the phosphorescent excited state of octahydrotetrakis(phosphorus pentoxide)diplatinatate(4-) ion (Pt2(P2O5)4H84-). <i>Journal of the American Chemical Society</i> , 1981, 103, 7796-7797.	13.7	77
100	Oxygen-17 nuclear quadrupole double resonance. 6. Effects of hydrogen bonding. <i>The Journal of Physical Chemistry</i> , 1981, 85, 2738-2740.	2.9	26
101	The 10B and 11B nuclear quadrupole resonance spectra of boric acid. <i>Journal of Magnetic Resonance</i> , 1981, 42, 120-131.	0.5	14
102	14N nuclear quadrupole resonance study of the nucleotide base pair 1-methylcytosine hemihydroiodide hemihydrate. <i>Journal of Magnetic Resonance</i> , 1981, 44, 483-487.	0.5	1