

Kenneth C Littrell

List of Publications by Year in descending order

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140
papers

4,376
citations

87843

38
h-index

118793

62
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148
all docs

148
docs citations

148
times ranked

5254
citing authors

#	ARTICLE	IF	CITATIONS
1	Self-Assembly and Cross-Linking of Bionanoparticles at Liquid-Liquid Interfaces. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 2420-2426.	7.2	238
2	Radiation tolerance of neutron-irradiated model Fe-Cr-Al alloys. <i>Journal of Nuclear Materials</i> , 2015, 465, 746-755.	1.3	210
3	Syntheses of Amphiphilic Diblock Copolymers Containing a Conjugated Block and Their Self-Assembling Properties. <i>Journal of the American Chemical Society</i> , 2000, 122, 6855-6861.	6.6	196
4	Bifunctional nanoprecipitates strengthen and ductilize a medium-entropy alloy. <i>Nature</i> , 2021, 595, 245-249.	13.7	141
5	Diagenetic changes in macro- to nano-scale porosity in the St. Peter Sandstone: An (ultra) small angle neutron scattering and backscattered electron imaging analysis. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 102, 280-305.	1.6	134
6	Third Phase Formation Revisited: The U(VI), HNO ₃ -TBP, n-Dodecane System. <i>Solvent Extraction and Ion Exchange</i> , 2003, 21, 1-27.	0.8	131
7	A combined APT and SANS investigation of δ phase precipitation in neutron-irradiated model FeCrAl alloys. <i>Acta Materialia</i> , 2017, 129, 217-228.	3.8	131
8	A path for lignin valorization via additive manufacturing of high-performance sustainable composites with enhanced 3D printability. <i>Science Advances</i> , 2018, 4, eaat4967.	4.7	131
9	Film Breakdown and Nano-Porous Mg(OH) ₂ Formation from Corrosion of Magnesium Alloys in Salt Solutions. <i>Journal of the Electrochemical Society</i> , 2015, 162, C140-C149.	1.3	128
10	Mg ²⁺ -Dependent Compaction and Folding of Yeast tRNAPhe and the Catalytic Domain of the B. subtilis RNase P RNA Determined by Small-Angle X-ray Scattering. <i>Biochemistry</i> , 2000, 39, 11107-11113.	1.2	118
11	The suite of small-angle neutron scattering instruments at Oak Ridge National Laboratory. <i>Journal of Applied Crystallography</i> , 2018, 51, 242-248.	1.9	115
12	Two-wavelength-difference measurement of gravitationally induced quantum interference phases. <i>Physical Review A</i> , 1997, 56, 1767-1780.	1.0	103
13	Application of the Baxter Model for Hard Spheres with Surface Adhesion to SANS Data for the U(VI)-HNO ₃ -TBP-n-Dodecane System. <i>Langmuir</i> , 2003, 19, 9592-9599.	1.6	102
14	Pressure-Jump Small-Angle X-Ray Scattering Detected Kinetics of Staphylococcal Nuclease Folding. <i>Biophysical Journal</i> , 2001, 80, 1518-1523.	0.2	98
15	The 40-Å general purpose small-angle neutron scattering instrument at Oak Ridge National Laboratory. <i>Journal of Applied Crystallography</i> , 2012, 45, 990-998.	1.9	89
16	Solution Structure of Copper Ion-Induced Molecular Aggregates of Tyrosine Melanin. <i>Biophysical Journal</i> , 1999, 77, 1135-1142.	0.2	87
17	The Bio-SANS instrument at the High Flux Isotope Reactor of Oak Ridge National Laboratory. <i>Journal of Applied Crystallography</i> , 2014, 47, 1238-1246.	1.9	83
18	The thermodynamic origin of the stability of a thermophilic ribozyme. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001, 98, 4355-4360.	3.3	65

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19	Unrivaled combination of surface area and pore volume in micelle-templated carbon for supercapacitor energy storage. <i>Journal of Materials Chemistry A</i> , 2017, 5, 13511-13525.	5.2	63
20	Interpretation of Third Phase Formation in the Th(IV)-HNO ₃ , TBP-n-Octane System with Baxter's "Sticky Spheres" Model. <i>Solvent Extraction and Ion Exchange</i> , 2004, 22, 325-351.	0.8	61
21	Amphiphilic Bottlebrush Block Copolymers: Analysis of Aqueous Self-Assembly by Small-Angle Neutron Scattering and Surface Tension Measurements. <i>Macromolecules</i> , 2019, 52, 465-476.	2.2	56
22	The <i>Bacillus subtilis</i> RNase P holoenzyme contains two RNase P RNA and two RNase P protein subunits. <i>Rna</i> , 2001, 7, 233-241.	1.6	54
23	Precipitation processes in the Beta-Titanium alloy Ti-5Al-5Mo-3Cr. <i>Journal of Alloys and Compounds</i> , 2015, 646, 946-953.	2.8	54
24	Sans Study Of Third Phase Formation In The Th(iv)-hno3/tbp-n-octane System. <i>Separation Science and Technology</i> , 2003, 38, 3333-3351.	1.3	52
25	Solvent quality-induced nucleation and growth of parallelepiped nanorods in dilute poly(3-hexylthiophene) (P3HT) solution and the impact on the crystalline morphology of solution-cast thin film. <i>CrystEngComm</i> , 2013, 15, 1114-1124.	1.3	51
26	Effect of quartz overgrowth precipitation on the multiscale porosity of sandstone: A (U)SANS and imaging analysis. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 158, 199-222.	1.6	51
27	Precipitation of δ -Fe ₂ O ₃ in neutron irradiated commercial FeCrAl alloys. <i>Scripta Materialia</i> , 2018, 142, 41-45.	2.6	51
28	Nanoprecipitation in a beta-titanium alloy. <i>Journal of Alloys and Compounds</i> , 2015, 623, 146-156.	2.8	50
29	Characterization of silica-polymer aerogel composites by small-angle neutron scattering and transmission electron microscopy. <i>Journal of Non-Crystalline Solids</i> , 2001, 288, 184-190.	1.5	48
30	Structural Studies of Bleached Melanin by Synchrotron Small-angle X-ray Scattering. <i>Photochemistry and Photobiology</i> , 2003, 77, 115.	1.3	47
31	Multiscale investigations of nanoprecipitate nucleation, growth, and coarsening in annealed low-Cr oxide dispersion strengthened FeCrAl powder. <i>Acta Materialia</i> , 2019, 166, 1-17.	3.8	46
32	Sans Study Of Third Phase Formation In The U(vi)-hno3/tbp-n-dodecane System. <i>Separation Science and Technology</i> , 2003, 38, 3313-3331.	1.3	43
33	Formation of Kinetically Trapped Nanoscopic Unilamellar Vesicles from Metastable Nanodiscs. <i>Langmuir</i> , 2011, 27, 14308-14316.	1.6	41
34	From embryos to precipitates: A study of nucleation and growth in a multicomponent ferritic steel. <i>Physical Review B</i> , 2011, 84, .	1.1	40
35	Extraction of organic compounds from representative shales and the effect on porosity. <i>Journal of Natural Gas Science and Engineering</i> , 2016, 35, 646-660.	2.1	40
36	Solvent-pore interactions in the Eagle Ford shale formation. <i>Fuel</i> , 2019, 238, 298-311.	3.4	40

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37	Understanding How Processing Additives Tune the Nanoscale Morphology of High Efficiency Organic Photovoltaic Blends: From Casting Solution to Spun Cast Thin Film. <i>Advanced Functional Materials</i> , 2014, 24, 6647-6657.	7.8	39
38	Characterization of colloidal structures during intestinal lipolysis using small-angle neutron scattering. <i>Journal of Colloid and Interface Science</i> , 2017, 499, 189-201.	5.0	39
39	Effects of maturation on multiscale (nanometer to millimeter) porosity in the Eagle Ford Shale. <i>Interpretation</i> , 2015, 3, SU59-SU70.	0.5	37
40	Structure and property correlations in FeS. <i>Physica C: Superconductivity and Its Applications</i> , 2017, 534, 29-36.	0.6	37
41	Revealing the Effects of the Non-solvent on the Ligand Shell of Nanoparticles and Their Crystallization. <i>Journal of the American Chemical Society</i> , 2019, 141, 16651-16662.	6.6	35
42	Absence of the Density Minimum of Supercooled Water in Hydrophobic Confinement. <i>Journal of Physical Chemistry B</i> , 2009, 113, 5007-5010.	1.2	34
43	drtsans: The data reduction toolkit for small-angle neutron scattering at Oak Ridge National Laboratory. <i>SoftwareX</i> , 2022, 19, 101101.	1.2	32
44	Characterization of Al-Mg Alloy Aged at Low Temperatures. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2017, 48, 2040-2050.	1.1	31
45	SANS Study of Third Phase Formation in the HCl/TPAOctane System. <i>Solvent Extraction and Ion Exchange</i> , 2006, 24, 125-148.	0.8	30
46	Characterization of the effects of different tempers and aging temperatures on the precipitation behavior of Al-Mg (5.25 at.%) -Mn alloys. <i>Materials and Design</i> , 2017, 118, 22-35.	3.3	30
47	Self-Assembly and Cross-Linking of Bionanoparticles at Liquid-Liquid Interfaces. <i>Angewandte Chemie</i> , 2005, 117, 2472-2478.	1.6	29
48	Controlled Structure in Artificial Protein Hydrogels. <i>Macromolecules</i> , 2005, 38, 7470-7475.	2.2	28
49	Growth kinetics of lipid-based nanodiscs to unilamellar vesicles: A time-resolved small angle neutron scattering (SANS) study. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2013, 1828, 1025-1035.	1.4	28
50	Structure of Spontaneously Formed Solid-Electrolyte Interphase on Lithiated Graphite Determined Using Small-Angle Neutron Scattering. <i>Journal of Physical Chemistry C</i> , 2015, 119, 9816-9823.	1.5	28
51	Characterization of the neutron detector upgrade to the GP-SANS and Bio-SANS instruments at HFIR. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2012, 693, 179-185.	0.7	24
52	First tests of a MIEZE (modulated intensity by Zero effort)-type instrument on a pulsed neutron source. <i>Physica B: Condensed Matter</i> , 2006, 371, 297-301.	1.3	22
53	Small-Angle Neutron Scattering Study of Organic-Phase Aggregation in the TALSPEAK Process. <i>Journal of Physical Chemistry B</i> , 2012, 116, 13722-13730.	1.2	22
54	Controlled Assembly of Lignocellulosic Biomass Components and Properties of Reformed Materials. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 8044-8052.	3.2	22

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55	A comparison of different methods for improving flux and resolution on SANS instruments. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 529, 22-27.	0.7	20
56	Self-organization of OPV-PEG diblock copolymers in THF/water. Journal of Applied Crystallography, 2000, 33, 645-649.	1.9	19
57	Time-of-flight implementation of an ultra-small-angle neutron scattering instrument. Journal of Applied Crystallography, 2003, 36, 763-768.	1.9	18
58	Effects of soil particles and convective transport on dispersion and aggregation of nanoplastics via small-angle neutron scattering (SANS) and ultra SANS (USANS). PLoS ONE, 2020, 15, e0235893.	1.1	18
59	Solution structure of a biological bimolecular electron transfer complex: characterization of the photosynthetic reaction center-cytochrome c2protein complex by small angle neutron scattering. Journal of Applied Crystallography, 2000, 33, 560-564.	1.9	17
60	Continuously operating compact He-based neutron spin filter. Physica B: Condensed Matter, 2005, 356, 86-90.	1.3	17
61	Liquid worm-like and proto-micelles: water solubilization in amphiphile oil solutions. Physical Chemistry Chemical Physics, 2018, 20, 12908-12915.	1.3	17
62	The effects of burial diagenesis on multiscale porosity in the St. Peter Sandstone: An imaging, small-angle, and ultra-small-angle neutron scattering analysis. Marine and Petroleum Geology, 2018, 92, 352-371.	1.5	17
63	<title>Multistage position-stabilized vibration isolation system for neutron interferometry</title>. , 1994, 2264, 20.		16
64	Microstructural Analysis of Activated Carbons Prepared from Paper Mill Sludge by SANS and BET. Chemistry of Materials, 2002, 14, 327-333.	3.2	15
65	Development of a high-resolution scintillator-based area detector for neutrons. Journal of Applied Crystallography, 2003, 36, 820-825.	1.9	15
66	MISANS, a method for quasi-elastic small angle neutron scattering experiments. Physica B: Condensed Matter, 2005, 356, 213-217.	1.3	15
67	Small-angle neutron scattering study of shearing effects on drag-reducing surfactant solutions. Journal of Colloid and Interface Science, 2009, 337, 218-226.	5.0	15
68	SANS study on the solvated structure and molecular interactions of a thermo-responsive polymer in a room temperature ionic liquid. Physical Chemistry Chemical Physics, 2016, 18, 17881-17889.	1.3	15
69	Origin of dielectric relaxor behavior in PVDF-based copolymer and terpolymer films. AIP Advances, 2018, 8, .	0.6	15
70	Oxidation and associated pore structure modification during experimental alteration of granite. Geochimica Et Cosmochimica Acta, 2021, 292, 532-556.	1.6	15
71	General Purpose Small-Angle Neutron Scattering Instrument on HFIR Oak Ridge. Neutron News, 2008, 19, 20-21.	0.1	14
72	Advanced characterization of cryogenic 9Ni steel using synchrotron radiation, neutron scattering and 57Fe Mössbauer spectroscopy. Materials and Design, 2018, 146, 219-227.	3.3	14

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73	Influence of microstructure on replacement and porosity generation during experimental dolomitization of limestones. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 303, 137-158.	1.6	14
74	Magnetic compound refractive lens for focusing and polarizing cold neutron beams. <i>Review of Scientific Instruments</i> , 2007, 78, 035101.	0.6	13
75	BaFe_2 via small-angle neutron scattering. <i>Physical Review Letters</i> , 2019, 123, 087201.	1.1	12
76	Nanoscope Structural Investigation of Physically Cross-Linked Nanogels Formed from Self-Associating Polymers. <i>Journal of Physical Chemistry B</i> , 2016, 120, 11996-12002.	1.2	12
77	Cation Molecular Structure Affects Mobility and Transport of Electrolytes in Porous Carbons. <i>Journal of the Electrochemical Society</i> , 2019, 166, A507-A514.	1.3	12
78	Quantifying Fluid-Wettable Effective Pore Space in the Utica and Bakken Oil Shale Formations. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087896.	1.5	12
79	Small-angle neutron scattering study of the wet and dry high-temperature oxidation of alumina- and chromia-forming stainless steels. <i>Corrosion Science</i> , 2012, 58, 121-132.	3.0	11
80	Crystallization Mechanism in Spark Plasma Sintered Bulk Metallic Glass Analyzed using Small Angle Neutron Scattering. <i>Scientific Reports</i> , 2020, 10, 2033.	1.6	11
81	Neutron interferometry instrumentation at MURR. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 1998, 412, 392-419.	0.7	10
82	Kondo behavior, ferromagnetic correlations, and crystal fields in the heavy-fermion compounds Ce_3 .		

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109	Fast, quantitative, and nondestructive evaluation of hydrided LWR fuel cladding by small angle incoherent neutron scattering of hydrogen. <i>Journal of Nuclear Materials</i> , 2015, 460, 114-121.	1.3	4
110	A Unified User-Friendly Instrument Control and Data Acquisition System for the ORNL SANS Instrument Suite. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 1216.	1.3	4
111	Structural characterization of activated carbon adsorbents prepared from paper mill sludge. <i>Applied Physics A: Materials Science and Processing</i> , 2002, 74, s1403-s1405.	1.1	3
112	Development of a compound focusing lens: improvement of signal-to-noise ratio. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2004, 529, 112-115.	0.7	3
113	Detection of plasmonic behavior in colloidal indium tin oxide films by impedance spectroscopy. <i>MRS Communications</i> , 2020, 10, 278-285.	0.8	3
114	Fractionation of Lignin for Selective Shape Memory Effects at Elevated Temperatures. <i>Materials</i> , 2020, 13, 1940.	1.3	3
115	Possible application of compound Fresnel lens for neutron beam focusing. <i>Physica B: Condensed Matter</i> , 2004, 350, E775-E778.	1.3	2
116	Multiscale (nano to mm) Porosity in the Eagle Ford Shale: Changes as a Function of Maturity. , 2014, , .		2
117	In situ examination of engineered local additives in cement paste via neutron based scattering techniques. <i>Construction and Building Materials</i> , 2020, 243, 118175.	3.2	2
118	In-Situ Study of Microstructure Evolution of Spinodal Decomposition in an Al-Rich High-Entropy Alloy. <i>Frontiers in Materials</i> , 2022, 9, .	1.2	2
119	Advances in the measurement of gravity-induced quantum phase shifts. <i>Physica B: Condensed Matter</i> , 1997, 241-243, 1219-1221.	1.3	1
120	Prospects for Solid Ammonia as a Cold Moderator. <i>Journal of Neutron Research</i> , 2003, 11, 41-49.	0.4	1
121	Recent development of position-sensitive neutron detectors employing wavelength-shifting cross-fiber. <i>Physica B: Condensed Matter</i> , 2004, 350, E841-E844.	1.3	1
122	Complementarity of MIEZE-SANS and X-ray photon correlation spectroscopy (XPCS). <i>Physica B: Condensed Matter</i> , 2005, 356, 223-228.	1.3	1
123	Cover Picture: Self-Assembly and Cross-Linking of Bionanoparticles at Liquid-Liquid Interfaces (<i>Angew.</i>) Tj ETQq1 1 0,784314 1gBT /Over	7.2	1
124	Correlating Small Angle Scattering Spectra to Electrical Resistivity Changes in a Nickel-base Superalloy. <i>Materials Research Society Symposia Proceedings</i> , 2010, 1262, 1.	0.1	1
125	Field dependence of the superconducting basal plane anisotropy of $TmNi_2B_2C$. <i>Physical Review B</i> , 2012, 86, .	1.1	1
126	Modeling the Electrical Response of Waspalloy due to the Nucleation, Growth, and Coarsening of β' . <i>Materials Science Forum</i> , 0, 706-709, 2406-2411.	0.3	1

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127	Nondestructive Evaluation on Hydrated LWR Fuel Cladding by Small Angle Incoherent Neutron Scattering of Hydrogen. Materials Research Society Symposia Proceedings, 2014, 1653, 1.	0.1	1
128	Complementary Techniques for Quantification of $\hat{I}\pm'$ Phase Precipitation in Neutron-Irradiated Fe-Cr-Al Model Alloys. Microscopy and Microanalysis, 2016, 22, 1470-1471.	0.2	1
129	Rapid Characterization Methods for Accelerated Innovation for Nuclear Fuel Cladding. Microscopy and Microanalysis, 2020, 26, 868-869.	0.2	1
130	Domain Wall Patterning and Giant Response Functions in Ferrimagnetic Spinel. Advanced Science, 2021, 8, 2101402.	5.6	1
131	Electronic time-focusing of pulsed-source neutron chopper data: binning to minimize effects of proton pulse and chopper opening time variations. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2001, 459, 221-228.	0.7	0
132	Time-of-flight ultrasmall-angle neutron scattering instrument for SNS. , 2002, , .		0
133	Present status and perspectives on neutron scattering instrumentation development at IPNS. Physica B: Condensed Matter, 2002, 311, 112-116.	1.3	0
134	Consequences of dynamical diffraction and the Sagnac effect in LLL perfect single crystal interferometers. Physica B: Condensed Matter, 2006, 385-386, 1371-1373.	1.3	0
135	Anisotropic intermediate valence in Yb ₂ Rh ₃ Ca ₉ . Physica B: Condensed Matter, 2006, 378-380, 752-753.	1.3	0
136	The role of home-built software at user facilities: the ORNL SANS experience. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, a177-a177.	0.0	0
137	The canSAS standard for storing reduced one-dimensional small-angle scattering data in XML files. Acta Crystallographica Section A: Foundations and Advances, 2008, 64, C554-C554.	0.3	0
138	CG2 general-purpose high-flux SANS instrument at HFIR at Oak Ridge National Laboratory. Acta Crystallographica Section A: Foundations and Advances, 2008, 64, C188-C188.	0.3	0
139	Diagenesis and kerogen release in oil- and gas-bearing shales. Acta Crystallographica Section A: Foundations and Advances, 2014, 70, C63-C63.	0.0	0
140	The Effect of Microstructure on Replacement Reactions “ The Example of Limestone Replacement by Fluorite and Dolomite. , 2020, , .		0