

# Lou Santodonato

## List of Publications by Year in descending order

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52  
papers

1,627  
citations

623574

14  
h-index

289141

40  
g-index

52  
all docs

52  
docs citations

52  
times ranked

2100  
citing authors

#	ARTICLE	IF	CITATIONS
1	Deviation from high-entropy configurations in the atomic distributions of a multi-principal-element alloy. <i>Nature Communications</i> , 2015, 6, 5964.	5.8	530
2	Tensile ductility of an AlCoCrFeNi multi-phase high-entropy alloy through hot isostatic pressing (HIP) and homogenization. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 647, 229-240.	2.6	199
3	Chemical short-range orders and the induced structural transition in high-entropy alloys. <i>Scripta Materialia</i> , 2018, 144, 64-68.	2.6	115
4	Predictive multiphase evolution in Al-containing high-entropy alloys. <i>Nature Communications</i> , 2018, 9, 4520.	5.8	107
5	Quantum dynamics of interstitial H <sub>2</sub> in solid C <sub>60</sub> . <i>Physical Review B</i> , 1999, 60, 6439-6451.	1.1	79
6	Rapid imbibition of water in fractures within unsaturated sedimentary rock. <i>Advances in Water Resources</i> , 2015, 77, 82-89.	1.7	59
7	Structure of Molten CaSiO <sub>3</sub> : Neutron Diffraction Isotope Substitution with Aerodynamic Levitation and Molecular Dynamics Study. <i>Journal of Physical Chemistry B</i> , 2012, 116, 13439-13447.	1.2	56
8	Neutron Laue Diffraction Study on the Magnetic Phase Diagram of Multiferroic $MnWO_4$ under Pulsed High Magnetic Fields. <i>Physical Review Letters</i> , 2011, 106, 237202.	2.9	49
9	The CG-1D Neutron Imaging Beamline at the Oak Ridge National Laboratory High Flux Isotope Reactor. <i>Physics Procedia</i> , 2015, 69, 104-108.	1.2	46
10	Measurements of liquid and glass structures using aerodynamic levitation and in-situ high energy x-ray and neutron scattering. <i>Journal of Non-Crystalline Solids</i> , 2014, 383, 49-51.	1.5	41
11	Local Structures of High-Entropy Alloys (HEAs) on Atomic Scales: An Overview. <i>Jom</i> , 2015, 67, 2321-2325.	0.9	34
12	Spontaneous imbibition of water and determination of effective contact angles in the Eagle Ford Shale Formation using neutron imaging. <i>Journal of Earth Science (Wuhan, China)</i> , 2017, 28, 874-887.	1.1	32
13	Characterization of Crystallographic Structures Using Bragg-Edge Neutron Imaging at the Spallation Neutron Source. <i>Journal of Imaging</i> , 2017, 3, 65.	1.7	31
14	Quantifying root water extraction after drought recovery using sub-mm in situ empirical data. <i>Plant and Soil</i> , 2018, 424, 73-89.	1.8	16
15	Potential limits of capacitive deionization and membrane capacitive deionization for water electrolysis. <i>Separation Science and Technology</i> , 2019, 54, 2112-2125.	1.3	16
16	Analysis and simulation of a blue energy cycle. <i>Renewable Energy</i> , 2016, 91, 249-260.	4.3	14
17	Flexible sample environment for high resolution neutron imaging at high temperatures in controlled atmosphere. <i>Review of Scientific Instruments</i> , 2015, 86, 125109.	0.6	13
18	Lithium indium diselenide: A new scintillator for neutron imaging. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016, 830, 140-149.	0.7	13

#	ARTICLE	IF	CITATIONS
19	High-Resolution X-Ray and Neutron Computed Tomography of an Engine Combustion Network Spray C Gasoline Injector. SAE International Journal of Fuels and Lubricants, 0, 10, 328-343.	0.2	13
20	Feasibility Study of Making Metallic Hybrid Materials Using Additive Manufacturing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 5035-5041.	1.1	13
21	LiSe pixel detector for neutron imaging. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 833, 142-148.	0.7	12
22	Setup for polarized neutron imaging using <i>in situ</i> $^3\text{He}$ cells at the Oak Ridge National Laboratory High Flux Isotope Reactor CG-1D beamline. Review of Scientific Instruments, 2017, 88, 095103.	0.6	12
23	Effects of aluminum content on thermoelectric performance of Al CoCrFeNi high-entropy alloys. Journal of Alloys and Compounds, 2021, 883, 160811.	2.8	12
24	Identification of lithium hydride and its hydrolysis products with neutron imaging. Journal of Nuclear Materials, 2017, 485, 147-153.	1.3	10
25	SPONTANEOUS IMBIBITION OF A WETTING FLUID INTO A FRACTURE WITH OPPOSING FRACTAL SURFACES: THEORY AND EXPERIMENTAL VALIDATION. Fractals, 2019, 27, 1940001.	1.8	10
26	Structural and magnetic properties of random mixture graphite intercalation compounds. Journal of Materials Research, 1990, 5, 422-434.	1.2	9
27	A new apparatus design for high temperature (up to 950 $^{\circ}\text{C}$ ) quasi-elastic neutron scattering in a controlled gaseous environment. Review of Scientific Instruments, 2015, 86, 095102.	0.6	8
28	In situ monitoring of hydrogen loss during pyrolysis of wood by neutron imaging. Proceedings of the Combustion Institute, 2019, 37, 1273-1280.	2.4	8
29	Automated sample exchange and tracking system for neutron research at cryogenic temperatures. Review of Scientific Instruments, 2007, 78, 013907.	0.6	7
30	In-Situ Imaging of Liquid Phase Separation in Molten Alloys Using Cold Neutrons. Journal of Imaging, 2018, 4, 5.	1.7	7
31	Predicting phase behavior in high entropy and chemically complex alloys. Materials Characterization, 2020, 170, 110719.	1.9	7
32	Structural phase transition of high-stage $\text{MoCl}_5$ graphite intercalation compounds. Physical Review B, 1991, 43, 5805-5814.	1.1	6
33	In-situ neutron imaging of hydrogenous fuels in combustion generated porous carbons under dynamic and steady state pressure conditions. Carbon, 2017, 116, 766-776.	5.4	6
34	Materials Fingerprinting Classification. Computer Physics Communications, 2021, 266, 108019.	3.0	6
35	LiF/CsI:Tl Scintillator for High-Resolution Neutron Imaging. IEEE Transactions on Nuclear Science, 2019, 66, 2261-2264.	1.2	5
36	Dynamics of hydrogen loss and structural changes in pyrolyzing biomass utilizing neutron imaging. Carbon, 2021, 176, 511-529.	5.4	5

#	ARTICLE	IF	CITATIONS
37	Ex Situ and In Situ Neutron Imaging of Enzymatic Electrochemical Cells. <i>Electrochimica Acta</i> , 2016, 213, 244-251.	2.6	4
38	Neutron Imaging and Electrochemical Characterization of a Glucose Oxidase-Based Enzymatic Electrochemical Cell. <i>Journal of Electrochemical Energy Conversion and Storage</i> , 2018, 15, .	1.1	3
39	In-Situ Imaging of Molten High-Entropy Alloys Using Cold Neutrons. <i>Journal of Imaging</i> , 2019, 5, 29.	1.7	3
40	Electrical resistivity and magnetic susceptibility in BiCaSrCu <sub>2</sub> O <sub>y</sub> . <i>Physical Review B</i> , 1988, 38, 2851-2853.	1.1	2
41	Neutron imaging of lithium concentration in LiNi <sub>0.33</sub> Mn <sub>0.33</sub> Co <sub>0.33</sub> O <sub>2</sub> cathode. <i>Journal of Neutron Research</i> , 2020, 22, 43-48.	0.4	2
42	Water Migration and Swelling in Engineered Barrier Materials for Radioactive Waste Disposal. <i>Nuclear Technology</i> , 2021, 207, 1237-1256.	0.7	2
43	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
44	Template Mediated Growth of Rare Earth Carbides. <i>Journal of the American Chemical Society</i> , 1996, 118, 12860-12861.	6.6	1
45	Simultaneous Neutron Radiography of Metal Nozzle Geometry and Near-Field Spray. <i>Journal of Propulsion and Power</i> , 2019, 35, 419-423.	1.3	1
46	Quantification of Sub-Pixel Dynamics in High-Speed Neutron Imaging. <i>Journal of Imaging</i> , 2022, 8, 201.	1.7	1
47	TEMPERATURE CONTROL DIAGNOSTICS FOR SAMPLE ENVIRONMENTS. , 2010, , .		0
48	Investigation of a Lithium Indium Diselenide detector for neutron transmission imaging. <i>Proceedings of SPIE</i> , 2014, , .	0.8	0
49	Advanced Characterization Techniques. , 2016, , 115-150.		0
50	Plasticity Enhancement by Fe-Addition on NiAl Alloy: A Synchrotron X-ray Diffraction Mapping and Molecular Dynamics Simulation Study. <i>Quantum Beam Science</i> , 2018, 2, 18.	0.6	0
51	Simultaneous Neutron Radiography of Metal Nozzle Geometry and Near-Field Spray. , 2019, , .		0
52	Effect of Fluid Properties on Contact Angles in the Eagle Ford Shale Measured with Spontaneous Imbibition. <i>ACS Omega</i> , 2021, 6, 32618-32630.	1.6	0