

# 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  | 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         |
| 2  | Quantification of Sub-Pixel Dynamics in High-Speed Neutron Imaging. <i>Journal of Imaging</i> , 2022, 8, 201.  | 1.7 | 1         |
| 3  | Dynamics of hydrogen loss and structural changes in pyrolyzing biomass utilizing neutron imaging. <i>Carbon</i> , 2021, 176, 511-529.  | 5.4 | 5         |
| 4  | Materials Fingerprinting Classification. <i>Computer Physics Communications</i> , 2021, 266, 108019.   | 3.0 | 6         |
| 5  | Effects of aluminum content on thermoelectric performance of Al CoCrFeNi high-entropy alloys. <i>Journal of Alloys and Compounds</i> , 2021, 883, 160811.                            | 2.8 | 12        |
| 6  | Water Migration and Swelling in Engineered Barrier Materials for Radioactive Waste Disposal. <i>Nuclear Technology</i> , 2021, 207, 1237-1256.                                       | 0.7 | 2         |
| 7  | 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         |
| 8  | 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         |
| 9  | Predicting phase behavior in high entropy and chemically complex alloys. <i>Materials Characterization</i> , 2020, 170, 110719.  | 1.9 | 7         |
| 10 | LiF/CsI:Tl Scintillator for High-Resolution Neutron Imaging. <i>IEEE Transactions on Nuclear Science</i> , 2019, 66, 2261-2264.  | 1.2 | 5         |
| 11 | In-Situ Imaging of Molten High-Entropy Alloys Using Cold Neutrons. <i>Journal of Imaging</i> , 2019, 5, 29.  | 1.7 | 3         |
| 12 | Simultaneous Neutron Radiography of Metal Nozzle Geometry and Near-Field Spray. , 2019, , .  |     | 0         |
| 13 | SPONTANEOUS IMBIBITION OF A WETTING FLUID INTO A FRACTURE WITH OPPOSING FRACTAL SURFACES: THEORY AND EXPERIMENTAL VALIDATION. <i>Fractals</i> , 2019, 27, 1940001.                   | 1.8 | 10        |
| 14 | 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        |
| 15 | 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         |
| 16 | In situ monitoring of hydrogen loss during pyrolysis of wood by neutron imaging. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 1273-1280.                               | 2.4 | 8         |
| 17 | Chemical short-range orders and the induced structural transition in high-entropy alloys. <i>Scripta Materialia</i> , 2018, 144, 64-68.  | 2.6 | 115       |
| 18 | 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        |

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|----|---|-----|-----------|
| 19 | 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         |
| 20 | 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         |
| 21 | Predictive multiphase evolution in Al-containing high-entropy alloys. <i>Nature Communications</i> , 2018, 9, 4520.   | 5.8 | 107       |
| 22 | In-Situ Imaging of Liquid Phase Separation in Molten Alloys Using Cold Neutrons. <i>Journal of Imaging</i> , 2018, 4, 5.  | 1.7 | 7         |
| 23 | Feasibility Study of Making Metallic Hybrid Materials Using Additive Manufacturing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 5035-5041.                         | 1.1 | 13        |
| 24 | Identification of lithium hydride and its hydrolysis products with neutron imaging. <i>Journal of Nuclear Materials</i> , 2017, 485, 147-153.   | 1.3 | 10        |
| 25 | In-situ neutron imaging of hydrogenous fuels in combustion generated porous carbons under dynamic and steady state pressure conditions. <i>Carbon</i> , 2017, 116, 766-776.   | 5.4 | 6         |
| 26 | 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. <i>Review of Scientific Instruments</i> , 2017, 88, 095103.         | 0.6 | 12        |
| 27 | 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        |
| 28 | 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        |
| 29 | Advanced Characterization Techniques. , 2016, , 115-150.  |     | 0         |
| 30 | LiSe pixel detector for neutron imaging. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016, 833, 142-148.                           | 0.7 | 12        |
| 31 | 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        |
| 32 | Ex Situ and In Situ Neutron Imaging of Enzymatic Electrochemical Cells. <i>Electrochimica Acta</i> , 2016, 213, 244-251.  | 2.6 | 4         |
| 33 | Analysis and simulation of a blue energy cycle. <i>Renewable Energy</i> , 2016, 91, 249-260.  | 4.3 | 14        |
| 34 | 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        |
| 35 | A new apparatus design for high temperature (up to 950 $\pm$ 10 $^{\circ}$ C) quasi-elastic neutron scattering in a controlled gaseous environment. <i>Review of Scientific Instruments</i> , 2015, 86, 095102.                 | 0.6 | 8         |
| 36 | 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        |

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|----|--|-----|-----------|
| 37 | Rapid imbibition of water in fractures within unsaturated sedimentary rock. <i>Advances in Water Resources</i> , 2015, 77, 82-89.  | 1.7 | 59        |
| 38 | 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       |
| 39 | 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       |
| 40 | Local Structures of High-Entropy Alloys (HEAs) on Atomic Scales: An Overview. <i>Jom</i> , 2015, 67, 2321-2325.  | 0.9 | 34        |
| 41 | Investigation of a Lithium Indium Diselenide detector for neutron transmission imaging. <i>Proceedings of SPIE</i> , 2014, , .   | 0.8 | 0         |
| 42 | 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        |
| 43 | Structure of Molten $\text{CaSiO}_3$ : 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        |
| 44 | Neutron Laue Diffraction Study on the Magnetic Phase Diagram of Multiferroic $\text{MnWO}_4$ under Pulsed High Magnetic Fields. <i>Physical Review Letters</i> , 2011, 106, 237202.  | 2.9 | 49        |
| 45 | TEMPERATURE CONTROL DIAGNOSTICS FOR SAMPLE ENVIRONMENTS. , 2010, , .   |     | 0         |
| 46 | Automated sample exchange and tracking system for neutron research at cryogenic temperatures. <i>Review of Scientific Instruments</i> , 2007, 78, 013907.  | 0.6 | 7         |
| 47 | Quantum dynamics of interstitial $\text{H}_2$ in solid $\text{C}_60$ . <i>Physical Review B</i> , 1999, 60, 6439-6451.   | 1.1 | 79        |
| 48 | Template Mediated Growth of Rare Earth Carbides. <i>Journal of the American Chemical Society</i> , 1996, 118, 12860-12861.   | 6.6 | 1         |
| 49 | Structural phase transition of high-stage $\text{MoCl}_5$ graphite intercalation compounds. <i>Physical Review B</i> , 1991, 43, 5805-5814.  | 1.1 | 6         |
| 50 | Structural and magnetic properties of random mixture graphite intercalation compounds. <i>Journal of Materials Research</i> , 1990, 5, 422-434.  | 1.2 | 9         |
| 51 | Electrical resistivity and magnetic susceptibility in $\text{BiCaSrCu}_2\text{O}_y$ . <i>Physical Review B</i> , 1988, 38, 2851-2853.  | 1.1 | 2         |
| 52 | High-Resolution X-Ray and Neutron Computed Tomography of an Engine Combustion Network Spray G Gasoline Injector. <i>SAE International Journal of Fuels and Lubricants</i> , 0, 10, 328-343.  | 0.2 | 13        |