

# Jacob M Lamanna

## List of Publications by Year in descending order

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54  
papers

1,353  
citations

361296  
20  
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345118  
36  
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all docs

55  
docs citations

55  
times ranked

1763  
citing authors

#	ARTICLE	IF	CITATIONS
1	Water Imbibition and Oil Recovery in Shale: Dynamics and Mechanisms Using Integrated Centimeter-to-Nanometer-Scale Imaging. SPE Reservoir Evaluation and Engineering, 2023, 26, 51-63.	1.1	5
2	Fabrication of Black Body Grids by Thick Film Printing for Quantitative Neutron Imaging. Journal of Imaging, 2022, 8, 164.	1.7	0
3	Effect of Membrane Properties on the Carbonation of Anion Exchange Membrane Fuel Cells. Membranes, 2021, 11, 102.	1.4	13
4	Study of converging-diverging channel induced convective mass transport in a proton exchange membrane fuel cell. Energy Conversion and Management, 2021, 237, 114095.	4.4	25
5	Water Migration and Swelling in Engineered Barrier Materials for Radioactive Waste Disposal. Nuclear Technology, 2021, 207, 1237-1256.	0.7	2
6	Effect of Fluid Properties on Contact Angles in the Eagle Ford Shale Measured with Spontaneous Imbibition. ACS Omega, 2021, 6, 32618-32630.	1.6	0
7	Using operando techniques to understand and design high performance and stable alkaline membrane fuel cells. Nature Communications, 2020, 11, 3561.	5.8	113
8	Boosting Membrane Hydration for High Current Densities in Membrane Electrode Assembly CO <sub>2</sub> Electrolysis. ACS Applied Materials & Interfaces, 2020, 12, 54585-54595.	4.0	22
9	Accelerating Bubble Detachment in Porous Transport Layers with Patterned Through-Pores. ACS Applied Energy Materials, 2020, 3, 9676-9684.	2.5	37
10	Architecture-Based Control of Temperature Gradient-Driven Water Transport in Polymer Electrolyte Fuel Cells. Journal of the Electrochemical Society, 2020, 167, 104504.	1.3	5
11	Reconciling temperature-dependent factors affecting mass transport losses in polymer electrolyte membrane electrolyzers. Energy Conversion and Management, 2020, 213, 112797.	4.4	20
12	NIST NeXT: a system for truly simultaneous neutron and X-ray tomography. , 2020, , .		8
13	Contamination Mechanisms of Proton Exchange Membrane Fuel Cells - Mass Transfer Overpotential Origin. ECS Meeting Abstracts, 2020, MA2020-02, 2195-2195.	0.0	0
14	Lithium Plating Detection in Extremely Fast-Charged Lithium-Ion Batteries Using Simultaneous Neutron and X-Ray Imaging. ECS Meeting Abstracts, 2020, MA2020-02, 591-591.	0.0	0
15	Improved Water Management of Electrospun Nanofiber Membrane Electrode Assemblies at High Current Densities Measured in Operando Using Neutron Radiography. ECS Transactions, 2019, 92, 125-134.	0.3	2
16	Imaging and Modeling of Passive Water Management in a Miniature Fuel Cell. ECS Transactions, 2019, 92, 395-409.	0.3	0
17	Improved Water Management of Electrospun Nanofiber Membrane Electrode Assemblies at High Current Densities Measured in Operando Using Neutron Radiography. ECS Meeting Abstracts, 2019, MA2019-02, 1403-1403.	0.0	2
18	Improved Methods for Simultaneous Neutron and X-Ray Tomography of Operating Fuel Cells. ECS Meeting Abstracts, 2019, , .	0.0	0

#	ARTICLE	IF	CITATIONS
19	High Resolution Neutron Imaging Developments for PEMFC, AEMFC, and Electrolyzers. ECS Meeting Abstracts, 2019, , .	0.0	0
20	Improving the Long-Term Operational Stability (>1000h) of AEMFCS By Understanding Water Dynamics through in-Situ Neutron Imaging and X-Ray Computed Tomography. ECS Meeting Abstracts, 2019, , .	0.0	1
21	Neutron Dark-Field Analysis of Commercial Lithium-Ion Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0
22	Imaging and Modeling of Passive Water Management in a Miniature Fuel Cell. ECS Meeting Abstracts, 2019, , .	0.0	0
23	Simultaneous Neutron and X-Ray Tomography for Non-Destructive Characterization of Rechargeable Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0
24	Plant Growthâ€Promoting Rhizobacteria (PGPR) Reduce Evaporation and Increase Soil Water Retention. Water Resources Research, 2018, 54, 3673-3687.	1.7	110
25	Beyond catalysis and membranes: visualizing and solving the challenge of electrode water accumulation and flooding in AEMFCs. Energy and Environmental Science, 2018, 11, 551-558.	15.6	229
26	Studying water and solute transport through desalination membranes via neutron radiography. Journal of Membrane Science, 2018, 548, 667-675.	4.1	2
27	Neutron interferometry detection of early crack formation caused by bending fatigue in additively manufactured SS316 dogbones. Materials and Design, 2018, 140, 420-430.	3.3	21
28	Influence of substrate moisture state and roughness on interface microstructure and bond strength: Slant shear vs. pull-off testing. Cement and Concrete Composites, 2018, 87, 63-72.	4.6	67
29	Investigation of a simulated Chinese jade and bronze dagger-axe by neutron radiography and prompt gamma activation analysis. Journal of Archaeological Science: Reports, 2018, 21, 99-106.	0.2	2
30	Demonstration of Focusing Wolter Mirrors for Neutron Phase and Magnetic Imaging. Journal of Imaging, 2018, 4, 50.	1.7	10
31	The effect of cathode nitrogen purging on cell performance and in operando neutron imaging of a polymer electrolyte membrane electrolyzer. Electrochimica Acta, 2018, 279, 91-98.	2.6	30
32	Simultaneous Neutron and X-Ray Imaging of 3D Structure of Organic Matter and Fracture in Shales. Petrophysics, 2018, 59, 153-161.	0.2	7
33	Far-field interference of a neutron white beam and the applications to noninvasive phase-contrast imaging. Physical Review A, 2017, 95, .	1.0	32
34	Neutron and X-ray Tomography (NeXT) system for simultaneous, dual modality tomography. Review of Scientific Instruments, 2017, 88, 113702.	0.6	45
35	Spontaneous imbibition of water and determination of effective contact angles in the Eagle Ford Shale Formation using neutron imaging. Journal of Earth Science (Wuhan, China), 2017, 28, 874-887.	1.1	32
36	Neutron imaging detector with $2 \times 2$ spatial resolution based on event reconstruction of neutron capture in gadolinium oxysulfide scintillators. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 866, 9-12.	0.7	51

#	ARTICLE	IF	CITATIONS
37	Improving material identification by combining x-ray and neutron tomography. , 2017, , .		3
38	VISUALIZATION OF THE EVAPORATION AND CONDENSATION PHENOMENA IN CRYOGENIC PROPELLANTS. Journal of Flow Visualization and Image Processing, 2016, 23, 137-156.	0.3	5
39	Neutron Imaging Detector with Scintillation Light Magnification and Amplification. ECS Transactions, 2016, 75, 245-250.	0.3	6
40	A pseudo-3D model to investigate heat and water transport in large area PEM fuel cells “ Part 2: Application on an automotive driving cycle. International Journal of Hydrogen Energy, 2016, 41, 15573-15584.	3.8	13
41	(Invited) Engineering Net Water Balance in Polymer Electrolyte Fuel Cells. ECS Transactions, 2014, 64, 451-458.	0.3	2
42	Neutron imaging of hydrogen-rich fluids in geomaterials and engineered porous media: A review. Earth-Science Reviews, 2014, 129, 120-135.	4.0	128
43	Direct measurement of through-plane thermal conductivity of partially saturated fuel cell diffusion media. Journal of Power Sources, 2014, 256, 212-219.	4.0	53
44	Isolation of transport mechanisms in PEFCs using high resolution neutron imaging. International Journal of Hydrogen Energy, 2014, 39, 3387-3396.	3.8	45
45	Measurement of capillary pressure in fuel cell diffusion media, micro-porous layers, catalyst layers, and interfaces. Journal of Power Sources, 2014, 271, 180-186.	4.0	31
46	Alternative analytical analysis for improved Loschmidt diffusion cell. International Journal of Heat and Mass Transfer, 2013, 65, 883-892.	2.5	4
47	Diffusivity and Sorptivity of Berea Sandstone Determined using Neutron Radiography. Vadose Zone Journal, 2013, 12, 1-8.	1.3	26
48	Through-Plane Water Transport Visualization in a PEMFC by Visible and Infrared Imaging. Electrochemical and Solid-State Letters, 2011, 14, B51.	2.2	19
49	Determination of effective water vapor diffusion coefficient in pemfc gas diffusion layers. International Journal of Hydrogen Energy, 2011, 36, 5021-5029.	3.8	112
50	Isolation of Transport Mechanisms in PEFCs with High Resolution Neutron Imaging. ECS Transactions, 2011, 41, 329-336.	0.3	3
51	Through-Plane Water Transport Visualization in an Operating PEM Fuel Cell by Visible and Infrared Imaging. ECS Transactions, 2010, 33, 1423-1433.	0.3	5
52	Investigation of Water Vapor Diffusivity Through GDL of a PEMFC. , 2009, , .		1
53	A Critical Review of Water Transport Models in Gas Diffusion Media of PEM Fuel Cell. , 2008, , .		2
54	Feasibility of Thermoelectric Waste Heat Recovery in Large Scale Systems. , 2008, , .		1