Hassina Bilheux

List of Publications by Year
in descending order

115	2,039	257357	265120
papers	citations	24 h-index	42 g-index

119	119	119	2515
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Fabrication of Black Body Grids by Thick Film Printing for Quantitative Neutron Imaging. Journal of Imaging, 2022, 8, 164.	1.7	0
2	Quantification of Sub-Pixel Dynamics in High-Speed Neutron Imaging. Journal of Imaging, 2022, 8, 201.	1.7	1
3	Improved Acquisition and Reconstruction for Wavelength-Resolved Neutron Tomography. Journal of Imaging, 2021, 7, 10.	1.7	3
4	Biocatalytic Yarn for Peroxide Decomposition with Controlled Liquid Transport. Advanced Materials Interfaces, 2021, 8, 2002104.	1.9	5
5	Convolutional neural network based non-iterative reconstruction for accelerating neutron tomography [*]. Machine Learning: Science and Technology, 2021, 2, 025031.	2.4	2
6	Neutron Radiography and Computed Tomography of Biological Systems at the Oak Ridge National Laboratory's High Flux Isotope Reactor. Journal of Visualized Experiments, 2021, , .	0.2	1
7	Dynamics of hydrogen loss and structural changes in pyrolyzing biomass utilizing neutron imaging. Carbon, 2021, 176, 511-529.	5.4	5
8	Monitoring residual strain relaxation and preferred grain orientation of additively manufactured Inconel 625 by in-situ neutron imaging. Additive Manufacturing, 2021, 46, 102130.	1.7	7
9	Water Migration and Swelling in Engineered Barrier Materials for Radioactive Waste Disposal. Nuclear Technology, 2021, 207, 1237-1256.	0.7	2
10	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
11	Fabrication and experimental evaluation of microstructured 6Li silicate fiber arrays for high spatial resolution neutron imaging. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 954, 161695.	0.7	2
12	Neutron imaging of lithium concentration in LiNi0.33Mn0.33Co0.33O2 cathode. Journal of Neutron Research, 2020, 22, 43-48.	0.4	2
13	Onset dynamics of air-water menisci on rock fracture surfaces. Advances in Water Resources, 2020, 146, 103754.	1.7	3
14	Nonuniform Oxidation Behavior of Loaded Gasoline Particulate Filters. Emission Control Science and Technology, 2020, 6, 301-314.	0.8	5
15	Multi-Modal Imaging of Plant-Microbe Interactions in the Pine Rhizosphere. , 2020, , .		0
16	Neutron Imaging of Soil Rhizosphere & Root Water Dynamics. , 2020, , .		0
17	Software Framework for Federated Science Instruments. Communications in Computer and Information Science, 2020, , 189-203.	0.4	8
18	Neutron imaging analysis using jupyter Python notebook. Journal of Physics Communications, 2019, 3, 083001.	0.5	3

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19	Design and characterization of zero magnetic field chambers for high efficiency neutron polarization transport. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 940, 174-180.	0.7	4
20	LiF/CsI:Tl Scintillator for High-Resolution Neutron Imaging. IEEE Transactions on Nuclear Science, 2019, 66, 2261-2264.	1.2	5
21	Dynamic Lithium Distribution upon Dendrite Growth and Shorting Revealed by Operando Neutron Imaging. ACS Energy Letters, 2019, 4, 2402-2408.	8.8	65
22	Neutron transmission simulation of texture in polycrystalline materials. Nuclear Instruments & Methods in Physics Research B, 2019, 459, 166-178.	0.6	11
23	Simultaneous Neutron Radiography of Metal Nozzle Geometry and Near-Field Spray. , 2019, , .		0
24	SPONTANEOUS IMBIBITION OF A WETTING FLUID INTO A FRACTURE WITH OPPOSING FRACTAL SURFACES: THEORY AND EXPERIMENTAL VALIDATION. Fractals, 2019, 27, 1940001.	1.8	10
25	Potential limits of capacitive deionization and membrane capacitive deionization for water electrolysis. Separation Science and Technology, 2019, 54, 2112-2125.	1.3	16
26	Simultaneous Neutron Radiography of Metal Nozzle Geometry and Near-Field Spray. Journal of Propulsion and Power, 2019, 35, 419-423.	1.3	1
27	Probing lithiation and delithiation of thick sintered lithium-ion battery electrodes with neutron imaging. Journal of Power Sources, 2019, 419, 127-136.	4.0	46
28	Rock Fracture Sorptivity as Related to Aperture Width and Surface Roughness. Vadose Zone Journal, 2019, 18, 1-10.	1.3	7
29	Imbibition of Mixed-Charge Surfactant Fluids in Shale Fractures. Energy & Fuels, 2019, 33, 2839-2847.	2.5	21
30	Improving polarized neutron imaging for visualization of the Meissner effect in superconductors. Review of Scientific Instruments, 2019, 90, 033705.	0.6	6
31	An interactive web-based tool to guide the preparation of neutron imaging experiments at oak ridge national laboratory. Journal of Physics Communications, 2019, 3, 103003.	0.5	6
32	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
33	Applying neutron transmission physics and 3D statistical full-field model to understand 2D Bragg-edge imaging. Journal of Applied Physics, 2018, 123, .	1.1	10
34	Imaging of the Li spatial distribution within V2O5 cathode in a coin cell by neutron computed tomography. Journal of Power Sources, 2018, 376, 125-130.	4.0	30
35	Evaluation of segregation in Roman sestertius coins. Journal of Materials Science, 2018, 53, 2161-2170.	1.7	11
36	Quantifying root water extraction after drought recovery using sub-mm in situ empirical data. Plant and Soil, 2018, 424, 73-89.	1.8	16

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37	Neutron Imaging and Electrochemical Characterization of a Glucose Oxidase-Based Enzymatic Electrochemical Cell. Journal of Electrochemical Energy Conversion and Storage, 2018, 15, .	1.1	3
38	Neutron scattering in the biological sciences: progress and prospects. Acta Crystallographica Section D: Structural Biology, 2018, 74, 1129-1168.	1.1	47
39	Total variation-based neutron computed tomography. Review of Scientific Instruments, 2018, 89, 053704.	0.6	6
40	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
41	Identification of lithium hydride and its hydrolysis products with neutron imaging. Journal of Nuclear Materials, 2017, 485, 147-153.	1.3	10
42	An investigation of a multi-layered oscillating heat pipe additively manufactured from Ti-6Al-4V powder. International Journal of Heat and Mass Transfer, 2017, 108, 1036-1047.	2.5	54
43	The Nature of Electrochemical Delithiation of Li-Mg Alloy Electrodes: Neutron Computed Tomography and Analytical Modeling of Li Diffusion and Delithiation Phenomenon. Journal of the Electrochemical Society, 2017, 164, A28-A38.	1.3	24
44	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
45	Azimuthally anisotropic hydride lens structures in Zircaloy 4 nuclear fuel cladding: High-resolution neutron radiography imaging and BISON finite element analysis. Journal of Nuclear Materials, 2017, 496, 129-139.	1.3	10
46	Setup for polarized neutron imaging using in situâ€ˆ3He cells at the Oak Ridge National Laboratory High Flux Isotope Reactor CG-1D beamline. Review of Scientific Instruments, 2017, 88, 095103.	0.6	12
47	Porosity detection in electron beam-melted Ti-6Al-4V using high-resolution neutron imaging and grating-based interferometry. Progress in Additive Manufacturing, 2017, 2, 125-132.	2.5	36
48	Neutron imaging and tomography with MCPS. Journal of Instrumentation, 2017, 12, C12006-C12006.	0.5	6
49	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
50	Characterization of Crystallographic Structures Using Bragg-Edge Neutron Imaging at the Spallation Neutron Source. Journal of Imaging, 2017, 3, 65.	1.7	31
51	INVERSE ESTIMATION OF SURFACE FRACTAL DIMENSION AND APERTURE WIDTH FOR ROCK FRACTURES FROM SPONTANEOUS IMBIBITION MEASUREMENTS. , 2017, , .		0
52	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
53	Lithium indium diselenide: A new scintillator for neutron imaging. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 830, 140-149.	0.7	13
54	Anisotropic storage medium development in a full-scale, sodium alanate-based, hydrogen storage system. International Journal of Hydrogen Energy, 2016, 41, 13557-13574.	3.8	4

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55	Ex Situ and In Situ Neutron Imaging of Enzymatic Electrochemical Cells. Electrochimica Acta, 2016, 213, 244-251.	2.6	4
56	Probing Multiscale Transport and Inhomogeneity in a Lithium-Ion Pouch Cell Using In Situ Neutron Methods. ACS Energy Letters, 2016, 1, 981-986.	8.8	43
57	Analysis and simulation of a blue energy cycle. Renewable Energy, 2016, 91, 249-260.	4.3	14
58	EFFECT OF SURFACTANTS ON THE RATE OF WATER IMBIBITION IN FRACTURED SHALES. , 2016, , .		0
59	Flexible sample environment for high resolution neutron imaging at high temperatures in controlled atmosphere. Review of Scientific Instruments, 2015, 86, 125109.	0.6	13
60	Neutron Radiography of Fluid Flow for Geothermal Energy Research. Physics Procedia, 2015, 69, 464-471.	1.2	4
61	Overview of the Conceptual Design of the Future VENUS Neutron Imaging Beam Line at the Spallation Neutron Source. Physics Procedia, 2015, 69, 55-59.	1.2	24
62	Magnified Neutron Radiography with Coded Sources. Physics Procedia, 2015, 69, 218-226.	1.2	5
63	iMARS (iMaging Analysis Research Software). Physics Procedia, 2015, 69, 343-348.	1.2	12
64	The CG-1D Neutron Imaging Beamline at the Oak Ridge National Laboratory High Flux Isotope Reactor. Physics Procedia, 2015, 69, 104-108.	1.2	46
65	Quantification of Water Absorption and Transport in Parchment. Physics Procedia, 2015, 69, 524-529.	1.2	2
66	Transport of Ions in Mesoporous Carbon Electrodes during Capacitive Deionization of High-Salinity Solutions. Langmuir, 2015, 31, 1038-1047.	1.6	56
67	Rapid imbibition of water in fractures within unsaturated sedimentary rock. Advances in Water Resources, 2015, 77, 82-89.	1.7	59
68	Site specific control of crystallographic grain orientation through electron beam additive manufacturing. Materials Science and Technology, 2015, 31, 931-938.	0.8	424
69	A novel approach to determine post mortem interval using neutron radiography. Forensic Science International, 2015, 251, 11-21.	1.3	12
70	Progression of Soot Cake Layer Properties During the Systematic Regeneration of Diesel Particulate Filters Measured with Neutron Tomography. Emission Control Science and Technology, 2015, 1, 24-31.	0.8	11
71	High Resolution Neutron Radiography and Tomography of Hydrided Zircaloy-4 Cladding Materials. Physics Procedia, 2015, 69, 478-482.	1.2	13
72	Neutron Tomography of Lithium (Li) Coolant inside a Niobium (Nb) Heat Pipe. Journal of Heat Transfer, 2014, 136, .	1.2	1

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73	The Use and Refinement of Neutron Imaging Techniques for Archaeological Artifacts. Advances in Archaeological Practice, 2014, 2, 91-103.	0.5	0
74	Magnified neutron radiography with coded sources. Proceedings of SPIE, 2014, , .	0.8	3
75	Multi-scale applications of neutron scattering and imaging. , 2014, , .		0
76	Investigation of a Lithium Indium Diselenide detector for neutron transmission imaging. Proceedings of SPIE, 2014, , .	0.8	0
77	Ductility Evaluation of As-Hydrided and Hydride Reoriented Zircaloy-4 Cladding under Simulated Dry-Storage Condition. Materials Research Society Symposia Proceedings, 2014, 1645, 1.	0.1	1
78	Neutron imaging of hydrogen-rich fluids in geomaterials and engineered porous media: A review. Earth-Science Reviews, 2014, 129, 120-135.	4.0	128
79	Multiple pixel-scale soil water retention curves quantified by neutron radiography. Advances in Water Resources, 2014, 65, 1-8.	1.7	21
80	Enhancement of electrosorption rates using low-amplitude, high-frequency, pulsed electrical potential. Separation and Purification Technology, 2014, 129, 18-24.	3.9	10
81	Neutron imaging at the Oak Ridge National Laboratory: Application to biological research. , 2014, , .		5
82	Neutron imaging: Detection of cancer using animal model. , 2014, , .		1
83	Neutron imaging reveals internal plant water dynamics. Plant and Soil, 2013, 366, 683-693.	1.8	45
84	Neutron imaging of ion transport in mesoporous carbon materials. Physical Chemistry Chemical Physics, 2013, 15, 11740.	1.3	17
85	Neutron Imaging of Archaeological Bronzes at the Oak Ridge National Laboratory. Physics Procedia, 2013, 43, 343-351.	1.2	19
86	Water calibration measurements for neutron radiography: Application to water content quantification in porous media. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 708, 24-31.	0.7	72
87	Neutron Imaging of Alkali Metal Heat Pipes. Physics Procedia, 2013, 43, 323-330.	1.2	11
88	Neutron tomography of particulate filters: a non-destructive investigation tool for applied and industrial research. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 729, 581-588.	0.7	8
89	Reply to: Comment on â€˜neutron imaging reveals internal plant water dynamicsâ€™. Plant and Soil, 2013, 371, 15-17.	1.8	6
90	Neutron Tomography of Lithium (Li) Menisci Inside a Molybdenum (Mo) Heat Pipe. Journal of Heat Transfer, 2013, 135, .	1.2	0

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91	Diffusivity and Sorptivity of Berea Sandstone Determined using Neutron Radiography. Vadose Zone Journal, 2013, 12, 1-8.	1.3	26
92	Average Soil Water Retention Curves Measured by Neutron Radiography. Soil Science Society of America Journal, 2012, 76, 1184-1191.	1.2	25
93	A neutron sensitive microchannel plate detector with cross delay line readout. , 2012, , .		1
94	Anomalous Discharge Product Distribution in Lithium-Air Cathodes. Journal of Physical Chemistry C, 2012, 116, 8401-8408.	1.5	79
95	Coded source neutron imaging at the PULSTAR reactor. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 652, 606-609.	0.7	4
96	The CG1 instrument development test station at the high flux isotope reactor. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 634, S71-S74.	0.7	43
97	Transmission Bragg edge spectroscopy measurements at ORNL Spallation Neutron Source. Journal of Physics: Conference Series, 2010, 251, 012069.	0.3	32
98	Investigation of coded source neutron imaging at the north carolina state university PULSTAR reactor. , 2009, , .		3
99	Time-Resolved High Resolution Neutron Imaging Studies at the ORNL Spallation Neutron Source. IEEE Transactions on Nuclear Science, 2009, 56, 2493-2498.	1.2	4
100	Probing the Potential of Neutron Imaging for Biomedical and Biological Applications. Neutron Scattering Applications and Techniques, 2009, , 253-264.	0.2	4
101	Laser ion source tests at the HRIBF on stable Sn, Ge and Ni isotopes. Nuclear Instruments & Methods in Physics Research B, 2006, 243, 442-452.	0.6	42
102	Performance characterization studies of a flat field volume ECR ion source. Nuclear Instruments & Methods in Physics Research B, 2005, 241, 965-970.	0.6	5
103	Performances of Volume Versus Surface ECR Ion Sources. AIP Conference Proceedings, 2005, , .	0.3	0
104	Testing of the â€œFlat-Bâ€•6-Ghz ECR Ion Source Equipped with a RF Polarizer (Abstract). AIP Conference Proceedings, 2005, , .	0.3	0
105	A New Method for Enhancing the Performances of Conventional B-Geometry ECR Ion Sources. AIP Conference Proceedings, 2005, , .	0.3	1
106	Plasma Potential Measurements for a â€œVolumeâ€•Type ECR Ion Source. AIP Conference Proceedings, 2005, , .	0.3	0
107	Extraction of space-charge-dominated ion beams from an ECR ion source: Theory and simulation. Review of Scientific Instruments, 2004, 75, 1431-1435.	0.6	5
108	Initial Testing of the 6 GHz, All-Permanent Magnet, â€œVolume-Typeâ€•ECR ion Source. AIP Conference Proceedings, 2003, , .	0.3	0

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109	Computational design studies for an ion extraction system for a â€œvolume-typeâ€•ECR ion source. Review of Scientific Instruments, 2002, 73, 595-597.	0.6	3
110	Initial performance of a 6 GHz "volume" ECR ion source. , 0, , .		0
111	Characterization of A Tubular Hot-Cavity Surface Ionization Source. , 0, , .		6
112	Laser Ion Source Development for ISOL Systems at RIA. , 0, , .		0
113	Neutron Imaging of Diesel Particulate Filters. , 0, , .		6
114	Neutron Tomography of Exhaust Gas Recirculation Cooler Deposits. , 0, , .		5
115	High-Resolution X-Ray and Neutron Computed Tomography of an Engine Combustion Network Spray G Gasoline Injector. SAE International Journal of Fuels and Lubricants, 0, 10, 328-343.	0.2	13