Elizabeth J Kautz

List of Publications by Year
in descending order

37 papers	897 citations	471509 17 h-index	477307 29 g-index
38 all docs	38 docs citations	38 times ranked	690 citing authors

#	Article	IF	Citations
1	Image driven machine learning methods for microstructure recognition. Computational Materials Science, 2016, 123, 176-187.	3.0	239
2	Aqueous passivation of multi-principal element alloy Ni38Fe20Cr22Mn10Co10: Unexpected high Cr enrichment within the passive film. Acta Materialia, 2020, 198, 121-133.	7.9	64
3	Grain boundary engineering to control the discontinuous precipitation in multicomponent U10Mo alloy. Acta Materialia, 2018, 151, 181-190.	7.9	43
4	Image-driven discriminative and generative machine learning algorithms for establishing microstructureâ€“processing relationships. Journal of Applied Physics, 2020, 128, .	2.5	37
5	Rapid and flexible segmentation of electron microscopy data using few-shot machine learning. Npj Computational Materials, 2021, 7, .	8.7	37
6	Physical conditions for UO formation in laser-produced uranium plumes. Physical Chemistry Chemical Physics, 2019, 21, 16161-16169.	2.8	30
7	Extreme shear-deformation-induced modification of defect structures and hierarchical microstructure in an Alâ€“Si alloy. Communications Materials, 2020, 1, .	6.9	29
8	Optical spectroscopy and modeling of uranium gas-phase oxidation: Progress and perspectives. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2021, 185, 106283.	2.9	26
9	Time-resolved imaging of atoms and molecules in laser-produced uranium plasmas. Journal of Analytical Atomic Spectrometry, 2019, 34, 2236-2243.	3.0	25
10	Phase transformation of metastable discontinuous precipitation products to equilibrium phases in U10Mo alloys. Scripta Materialia, 2018, 156, 70-74.	5.2	24
11	A machine learning approach to thermal conductivity modeling: A case study on irradiated uranium-molybdenum nuclear fuels. Computational Materials Science, 2019, 161, 107-118.	3.0	23
12	The role of ambient gas confinement, plasma chemistry, and focusing conditions on emission features of femtosecond laser-produced plasmas. Journal of Analytical Atomic Spectrometry, 2020, 35, 1574-1586.	3.0	23
13	Time-resolved absorption spectroscopic characterization of ultrafast laser-produced plasmas under varying background pressures. Physical Review E, 2021, 103, 013213.	2.1	21
14	Expansion dynamics and chemistry evolution in ultrafast laser filament produced plasmas. Physical Chemistry Chemical Physics, 2020, 22, 8304-8314.	2.8	20
15	An image-driven machine learning approach to kinetic modeling of a discontinuous precipitation reaction. Materials Characterization, 2020, 166, 110379.	4.4	20
16	Hydrogen isotopic analysis of nuclear reactor materials using ultrafast laser-induced breakdown spectroscopy. Optics Express, 2021, 29, 4936.	3.4	18
17	Unraveling Spatio-Temporal Chemistry Evolution in Laser Ablation Plumes and Its Relation to Initial Plasma Conditions. Analytical Chemistry, 2020, 92, 13839-13846.	6.5	17
18	Nanoscale Spatially Resolved Mapping of Uranium Enrichment. Scientific Reports, 2019, 9, 12302.	3.3	16

#	Article	IF	Citations
19	Element redistributions during early stages of oxidation in a Ni38Cr22Fe20Mn10Co10 multi-principal element alloy. Scripta Materialia, 2021, 194, 113609.	5.2	16
20	Nanoscale Perspectives of Metal Degradation via In Situ Atom Probe Tomography. Topics in Catalysis, 2020, 63, 1606-1622.	2.8	15
21	Spectro-temporal comparisons of optical emission, absorption, and laser-induced fluorescence for characterizing ns and fs laser-produced plasmas. Plasma Sources Science and Technology, 2021, 30, 045007.	3.1	15
22	Rapid assessment of structural and compositional changes during early stages of zirconium alloy oxidation. Npj Materials Degradation, 2020, 4, .	5.8	14
23	Spatiotemporal evolution of emission and absorption signatures in a laser-produced plasma. Journal of Applied Physics, 2022, 131, .	2.5	14
24	Oxidation in laser-generated metal plumes. Physics of Plasmas, 2022, 29, .	1.9	14
25	Spectral dynamics and gas-phase oxidation of laser-produced plutonium plasmas. Journal of Analytical Atomic Spectrometry, 2021, 36, 150-156.	3.0	13
26	Detection of hydrogen isotopes in Zircaloy-4 via femtosecond LIBS. Journal of Analytical Atomic Spectrometry, 2021, 36, 1217-1227.	3.0	12
27	Laser-induced fluorescence of filament-produced plasmas. Journal of Applied Physics, 2021, 130, .	2.5	11
28	Evaluating the microstructure and origin of nonmetallic inclusions in as-cast U-10Mo fuel. Journal of Nuclear Materials, 2021, 554, 152949.	2.7	10
29	Correlating nanoscale secondary ion mass spectrometry and atom probe tomography analysis of uranium enrichment in metallic nuclear fuel. Analyst, The, 2021, 146, 69-74.	3.5	10
30	Predicting material microstructure evolution via data-driven machine learning. Patterns, 2021, 2, 100285.	5.9	9
31	The interplay between laser focusing conditions, expansion dynamics, ablation mechanisms, and emission intensity in ultrafast laser-produced plasmas. Journal of Applied Physics, 2021, 130, .	2.5	8
32	Mechanistic insights into selective oxidation and corrosion of multi-principal element alloys from high resolution and in situ microscopy. Materialia, 2021, 18, 101148.	2.7	6
33	Adoption of Image-Driven Machine Learning for Microstructure Characterization and Materials Design: A Perspective. Jom, 2021, 73, 3639-3657.	1.9	6
34	Compositional partitioning during early stages of oxidation of a uranium-molybdenum alloy. Scripta Materialia, 2022, 212, 114528.	5.2	5
35	Revealing the complexity of high temperature oxide formation in a 38Ni-21Cr-20Fe-13Ru-6Mo-2W (at. %) multi-principal element alloy. Scripta Materialia, 2022, 210, 114419.	5.2	4
36	Image-driven discriminative and generative methods for establishing microstructure-processing relationships relevant to nuclear fuel processing pipelines. Microscopy and Microanalysis, 2021, 27, 2128-2130.	0.4	1

#	Article	IF	Citations
37	Gas-Phase Molecular Formation in Actinide Laser-Produced Plasmas. , 2020, , .		0