Elizabeth J Kautz

List of Publications by Year
in descending order

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

#	Article	IF	Citations
1	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
2	Spatiotemporal evolution of emission and absorption signatures in a laser-produced plasma. Journal of Applied Physics, 2022, 131, .	2.5	14
3	Compositional partitioning during early stages of oxidation of a uranium-molybdenum alloy. Scripta Materialia, 2022, 212, 114528.	5.2	5
4	Oxidation in laser-generated metal plumes. Physics of Plasmas, 2022, 29, .	1.9	14
5	Element redistributions during early stages of oxidation in a Ni38Cr22Fe20Mn10Co10 multi-principal element alloy. Scripta Materialia, 2021, 194, 113609.	5.2	16
6	Spectral dynamics and gas-phase oxidation of laser-produced plutonium plasmas. Journal of Analytical Atomic Spectrometry, 2021, 36, 150-156.	3.0	13
7	Time-resolved absorption spectroscopic characterization of ultrafast laser-produced plasmas under varying background pressures. Physical Review E, 2021, 103, 013213.	2.1	21
8	Hydrogen isotopic analysis of nuclear reactor materials using ultrafast laser-induced breakdown spectroscopy. Optics Express, 2021, 29, 4936.	3.4	18
9	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
10	Predicting material microstructure evolution via data-driven machine learning. Patterns, 2021, 2, 100285.	5.9	9
11	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
12	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
13	Adoption of Image-Driven Machine Learning for Microstructure Characterization and Materials Design: A Perspective. Jom, 2021, 73, 3639-3657.	1.9	6
14	Optical spectroscopy and modeling of uranium gas-phase oxidation: Progress and perspectives. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2021, 185, 106283.	2.9	26
15	Evaluating the microstructure and origin of nonmetallic inclusions in as-cast U-10Mo fuel. Journal of Nuclear Materials, 2021, 554, 152949.	2.7	10
16	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
17	Detection of hydrogen isotopes in Zircaloy-4 <i>via</i> femtosecond LIBS. Journal of Analytical Atomic Spectrometry, 2021, 36, 1217-1227.	3.0	12
18	Laser-induced fluorescence of filament-produced plasmas. Journal of Applied Physics, 2021, 130, .	2.5	11

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19	Rapid and flexible segmentation of electron microscopy data using few-shot machine learning. Npj Computational Materials, 2021, 7, .	8.7	37
20	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
21	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
22	Extreme shear-deformation-induced modification of defect structures and hierarchical microstructure in an Alâ€"Si alloy. Communications Materials, 2020, 1, .	6.9	29
23	Nanoscale Perspectives of Metal Degradation via In Situ Atom Probe Tomography. Topics in Catalysis, 2020, 63, 1606-1622.	2.8	15
24	Rapid assessment of structural and compositional changes during early stages of zirconium alloy oxidation. Npj Materials Degradation, 2020, 4, .	5.8	14
25	Image-driven discriminative and generative machine learning algorithms for establishing microstructureâ€"processing relationships. Journal of Applied Physics, 2020, 128, .	2.5	37
26	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
27	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
28	Expansion dynamics and chemistry evolution in ultrafast laser filament produced plasmas. Physical Chemistry Chemical Physics, 2020, 22, 8304-8314.	2.8	20
29	An image-driven machine learning approach to kinetic modeling of a discontinuous precipitation reaction. Materials Characterization, 2020, 166, 110379.	4.4	20
30	Gas-Phase Molecular Formation in Actinide Laser-Produced Plasmas. , 2020, , .		0
31	Physical conditions for UO formation in laser-produced uranium plumes. Physical Chemistry Chemical Physics, 2019, 21, 16161-16169.	2.8	30
32	Nanoscale Spatially Resolved Mapping of Uranium Enrichment. Scientific Reports, 2019, 9, 12302.	3.3	16
33	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
34	Time-resolved imaging of atoms and molecules in laser-produced uranium plasmas. Journal of Analytical Atomic Spectrometry, 2019, 34, 2236-2243.	3.0	25
35	Grain boundary engineering to control the discontinuous precipitation in multicomponent U10Mo alloy. Acta Materialia, 2018, 151, 181-190.	7.9	43
36	Phase transformation of metastable discontinuous precipitation products to equilibrium phases in U10Mo alloys. Scripta Materialia, 2018, 156, 70-74.	5.2	24

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37	Image driven machine learning methods for microstructure recognition. Computational Materials Science, 2016, 123, 176-187.	3.0	239