

# Aiden A Martin

## List of Publications by Year in descending order

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46  
papers

1,623  
citations

430754

18  
h-index

289141

40  
g-index

47  
all docs

47  
docs citations

47  
times ranked

1560  
citing authors

#	ARTICLE	IF	CITATIONS
1	A laser powder bed fusion system for operando synchrotron x-ray imaging and correlative diagnostic experiments at the Stanford Synchrotron Radiation Lightsource. <i>Review of Scientific Instruments</i> , 2022, 93, 043702.	0.6	6
2	Thermal history and high-speed optical imaging of overhang structures during laser powder bed fusion: A computational and experimental analysis. <i>Additive Manufacturing</i> , 2022, 53, 102669.	1.7	9
3	Enhanced mechanical performance via laser induced nanostructure formation in an additively manufactured lightweight aluminum alloy. <i>Applied Materials Today</i> , 2021, 22, 100972.	2.3	10
4	Submicrosecond Aggregation during Detonation Synthesis of Nanodiamond. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 5286-5293.	2.1	21
5	A mesoscopic digital twin that bridges length and time scales for control of additively manufactured metal microstructures. <i>JPhys Materials</i> , 2021, 4, 034012.	1.8	14
6	Laser-induced thermal decomposition of uranium triiodide and ammonium uranium fluoride. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2021, 329, 1427-1437.	0.7	4
7	Microcrack mitigation during laser scanning of tungsten via preheating and alloying strategies. <i>Additive Manufacturing</i> , 2021, 46, 102158.	1.7	11
8	A combined numerical and experimental study to elucidate primary breakup dynamics in liquid metal droplet-on-demand printing. <i>Physics of Fluids</i> , 2020, 32, .	1.6	16
9	Cooling dynamics of two titanium alloys during laser powder bed fusion probed with in situ X-ray imaging and diffraction. <i>Materials and Design</i> , 2020, 195, 108987.	3.3	25
10	Laser-metal interaction dynamics during additive manufacturing resolved by detection of thermally-induced electron emission. <i>Communications Materials</i> , 2020, 1, .	2.9	19
11	Controlling interdependent meso-nanosecond dynamics and defect generation in metal 3D printing. <i>Science</i> , 2020, 368, 660-665.	6.0	291
12	Role of knock-on in electron beam induced etching of diamond. <i>Carbon</i> , 2020, 164, 51-58.	5.4	8
13	Ultra-high aspect ratio pores milled in diamond via laser, ion and electron beam mediated processes. <i>Diamond and Related Materials</i> , 2020, 105, 107806.	1.8	5
14	Subsurface Cooling Rates and Microstructural Response during Laser Based Metal Additive Manufacturing. <i>Scientific Reports</i> , 2020, 10, 1981.	1.6	64
15	Pressure dependence of the laser-metal interaction under laser powder bed fusion conditions probed by in situ X-ray imaging. <i>Additive Manufacturing</i> , 2020, 32, 101084.	1.7	19
16	Formation of high purity uranium via laser induced thermal decomposition of uranium nitride. <i>Materials and Design</i> , 2020, 192, 108706.	3.3	8
17	Laser-Induced Keyhole Defect Dynamics during Metal Additive Manufacturing. <i>Advanced Engineering Materials</i> , 2019, 21, 1900455.	1.6	45
18	Dynamics of pore formation during laser powder bed fusion additive manufacturing. <i>Nature Communications</i> , 2019, 10, 1987.	5.8	408

#	ARTICLE	IF	CITATIONS
19	Ultrafast dynamics of laser-metal interactions in additive manufacturing alloys captured by in situ X-ray imaging. <i>Materials Today Advances</i> , 2019, 1, 100002.	2.5	105
20	The impact of nano-bubbles on the laser performance of hafnia films deposited by oxygen assisted ion beam sputtering method. <i>Applied Physics Letters</i> , 2019, 115, .	1.5	16
21	Rapid feedback of chemical vapor deposition growth mechanisms by operando X-ray diffraction. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2018, 36, 020601.	0.6	4
22	Optical properties of implanted Xe color centers in diamond. <i>Optics Communications</i> , 2018, 411, 182-186.	1.0	16
23	An instrument for <i>in situ</i> time-resolved X-ray imaging and diffraction of laser powder bed fusion additive manufacturing processes. <i>Review of Scientific Instruments</i> , 2018, 89, 055101.	0.6	123
24	Formation mechanisms of boron oxide films fabricated by large-area electron beam-induced deposition of trimethyl borate. <i>Beilstein Journal of Nanotechnology</i> , 2018, 9, 1282-1287.	1.5	1
25	The role of Frenkel defect diffusion in dynamic annealing in ion-irradiated Si. <i>Scientific Reports</i> , 2017, 7, 39754.	1.6	12
26	Fabrication of a single sub-micron pore spanning a single crystal (100) diamond membrane and impact on particle translocation. <i>Carbon</i> , 2017, 122, 319-328.	5.4	9
27	Radiation-Induced Damage and Recovery of Ultra-Nanocrystalline Diamond: Toward Applications in Harsh Environments. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 39790-39794.	4.0	2
28	Formation of Dynamic Topographic Patterns During Electron Beam Induced Etching of Diamond. <i>Microscopy and Microanalysis</i> , 2017, 23, 2264-2265.	0.2	1
29	Exposure and analysis of microparticles embedded in silica aerogel keystones using NF <sub>3</sub> -mediated electron beam-induced etching and energy-dispersive X-ray spectroscopy. <i>Meteoritics and Planetary Science</i> , 2016, 51, 1223-1232.	0.7	0
30	Versatile method for template-free synthesis of single crystalline metal and metal alloy nanowires. <i>Nanoscale</i> , 2016, 8, 2804-2810.	2.8	15
31	Dynamic Pattern Formation in Electron-Beam-Induced Etching. <i>Physical Review Letters</i> , 2015, 115, 255501.	2.9	20
32	Maskless milling of diamond by a focused oxygen ion beam. <i>Scientific Reports</i> , 2015, 5, 8958.	1.6	25
33	Electron beam induced etching of carbon. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	14
34	Direct-write electron beam fabrication of optically active diamond nanostructures. , 2014, , .		0
35	Gas-mediated charged particle beam processing of nanostructured materials. , 2014, , .		1
36	Study of narrowband single photon emitters in polycrystalline diamond films. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	12

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37	Localized chemical switching of the charge state of nitrogen-vacancy luminescence centers in diamond. Applied Physics Letters, 2014, 105, .	1.5	33
38	Cryogenic Electron Beam Induced Chemical Etching. ACS Applied Materials & Interfaces, 2014, 6, 18457-18460.	4.0	18
39	Electron Beam Controlled Restructuring of Luminescence Centers in Polycrystalline Diamond. ACS Applied Materials & Interfaces, 2014, 6, 10367-10372.	4.0	8
40	Gas-Mediated Electron Beam Induced Etching - From Fundamental Physics to Device Fabrication. Microscopy and Microanalysis, 2014, 20, 364-365.	0.2	1
41	Interdisciplinary X-Ray Microanalysis: From Planets and Comets to Artifacts and Fine Art. Microscopy and Microanalysis, 2014, 20, 716-717.	0.2	0
42	Subtractive 3D Printing of Optically Active Diamond Structures. Scientific Reports, 2014, 4, 5022.	1.6	34
43	Dynamic Surface Site Activation: A Rate Limiting Process in Electron Beam Induced Etching. ACS Applied Materials & Interfaces, 2013, 5, 8002-8007.	4.0	21
44	Role of Activated Chemisorption in Gas-Mediated Electron Beam Induced Deposition. Physical Review Letters, 2012, 109, 146103.	2.9	32
45	Electron beam induced chemical dry etching and imaging in gaseous NH <sub>3</sub> environments. Nanotechnology, 2012, 23, 375302.	1.3	28
46	Fluorescent TiO <sub>2</sub> powders prepared using a new perylene diimide dye: Applications in latent fingerprint detection. Forensic Science International, 2007, 173, 154-160.	1.3	85