David J Sprouster

List of Publications by Year
in descending order

93	1,890	304602 22	276775 41
papers	citations	h-index	g-index

97	97	97	1973
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ending Aging in Super Glassy Polymer Membranes. Angewandte Chemie - International Edition, 2014, 53, 5322-5326.	7.2	275
2	Fine Structure in Swift Heavy Ion Tracks in Amorphous<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>SiO</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review Letters, 2008, 101, 175503.	2.9	242
3	Role of Thermodynamics in the Shape Transformation of Embedded Metal Nanoparticles Induced by Swift Heavy-Ion Irradiation. Physical Review Letters, 2011, 106, 095505.	2.9	100
4	Shape transformation of Pt nanoparticles induced by swift heavy-ion irradiation. Physical Review B, 2008, 78, .	1.1	82
5	Structural characterization of nanoscale intermetallic precipitates in highly neutron irradiated reactor pressure vessel steels. Scripta Materialia, 2016, 113, 18-22.	2.6	66
6	Changes in metal nanoparticle shape and size induced by swift heavy-ion irradiation. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 931-935.	0.6	51
7	Size-dependent characterization of embedded Ge nanocrystals: Structural and thermal properties. Physical Review B, 2008, 78, .	1.1	48
8	Energy dependent saturation width of swift heavy ion shaped embedded Au nanoparticles. Applied Physics Letters, 2009, 94, .	1.5	46
9	Measurement of latent tracks in amorphous SiO2 using small angle X-ray scattering. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 2994-2997.	0.6	45
10	Ion-irradiation-induced amorphization of cobalt nanoparticles. Physical Review B, 2010, 81, .	1.1	44
11	Anisotropic vibrations in crystalline and amorphous InP. Physical Review B, 2009, 79, .	1.1	39
12	Structural and vibrational properties of Co nanoparticles formed by ion implantation. Journal of Applied Physics, 2010, 107, .	1.1	37
13	fcc-hcp phase transformation in Co nanoparticles induced by swift heavy-ion irradiation. Physical Review B, 2009, 80, .	1.1	35
14	Structural modification of swift heavy ion irradiated amorphous Ge layers. Journal Physics D: Applied Physics, 2009, 42, 115402.	1.3	32
15	Disorder in Ho₂Ti_{2â”x}Zr_xO₇: pyrochlore to defect fluorite solid solution series. RSC Advances, 2020, 10, 34632-34650.	1.7	31
16	Influence of electronic energy deposition on the structural modification of swift heavy-ion-irradiated amorphous germanium layers. Physical Review B, 2011, 83, .	1.1	28
17	Disordered interfaces enable high temperature thermal stability and strength in a nanocrystalline aluminum alloy. Acta Materialia, 2021, 215, 116973.	3.8	27
18	Ion Beam Formation and Modification of Cobalt Nanoparticles. Applied Sciences (Switzerland), 2012, 2, 396-442.	1.3	26

#	Article	IF	Citations
19	Shape transformation of Sn nanocrystals induced by swift heavy-ion irradiation and the necessity of a molten ion track. Physical Review B, 2010, 82, .	1.1	24
20	Tensile properties and microstructure of additively manufactured Grade 91 steel for nuclear applications. Journal of Nuclear Materials, 2021, 544, 152723.	1.3	23
21	Atomic-scale structure of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Ga</mml:mtext></mml:mrow><mml:mrow><mml:mn>1</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>measured with extended x-ray absorption fine structure spectroscopy. Physical Review B, 2008, 78, .	1.1	22
22	Swift heavy-ion irradiation-induced shape and structural transformation in cobalt nanoparticles. Journal of Applied Physics, 2011, 109, .	1.1	22
23	Swift heavy ion irradiation of Pt nanocrystals embedded in SiO2. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 3158-3161.	0.6	21
24	Irradiation-Dependent Helium Gas Bubble Superlattice in Tungsten. Scientific Reports, 2019, 9, 2277.	1.6	21
25	Temperature-dependent EXAFS analysis of embedded Pt nanocrystals. Journal of Physics Condensed Matter, 2009, 21, 155302.	0.7	19
26	Formation and structural characterization of Ni nanoparticles embedded in SiO2. Journal of Applied Physics, 2011, 109, .	1.1	19
27	Enhanced Magnetization of Cobalt Defect Clusters Embedded in TiO_{2â^Î´} Films. ACS Applied Materials & Interfaces, 2017, 9, 8783-8795.	4.0	19
28	Microstructural evolution of neutron irradiated 3C-SiC. Scripta Materialia, 2017, 137, 132-136.	2.6	18
29	The influence of annealing conditions on the growth and structure of embedded Pt nanocrystals. Journal of Applied Physics, 2009, 105, 044303.	1.1	17
30	Structural properties of embedded Ge nanoparticles modified by swift heavy-ion irradiation. Physical Review B, 2012, 85, .	1.1	17
31	Amorphization of Cu nanoparticles: Effects on surface plasmon resonance. Applied Physics Letters, 2011, 99, .	1.5	16
32	Leaching behaviour of and Cs disposition in a UMo powellite glassâ€“ceramic. Journal of Nuclear Materials, 2014, 448, 325-329.	1.3	16
33	Contrasting roles of Laves_Cr2Nb precipitates on the creep properties of novel CuCrNbZr alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 779, 139110.	2.6	16
34	Quantitative electromechanical characterization of materials using conductive ceramic tips. Acta Materialia, 2014, 71, 153-163.	3.8	15
35	Dislocation microstructure and its influence on corrosion behavior in laser additively manufactured 316L stainless steel. Additive Manufacturing, 2021, 47, 102263.	1.7	15
36	120ÂGeV neutrino physics graphite target damage assessment using electron microscopy and high-energy x-ray diffraction. Physical Review Accelerators and Beams, 2019, 22, .	0.6	15

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37	New insight into pressure-induced phase transitions of amorphous silicon: the role of impurities. Journal of Applied Crystallography, 2013, 46, 758-768.	1.9	14
38	In situ X-ray characterization of uranium dioxide during flash sintering. Materialia, 2018, 2, 176-182.	1.3	14
39	Complex Structure of Molten NaClâ€“CrCl₃ Salt: Crâ€“Cl Octahedral Network and Intermediate-Range Order. ACS Applied Energy Materials, 2021, 4, 3044-3056.	2.5	14
40	Infrastructure development for radioactive materials at the NSLS-II. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 880, 40-45.	0.7	13
41	Lift-off protocols for thin films for use in EXAFS experiments. Journal of Synchrotron Radiation, 2013, 20, 426-432.	1.0	12
42	Formation of tetragonal gas bubble superlattice in bulk molybdenum under helium ion implantation. Scripta Materialia, 2018, 149, 26-30.	2.6	12
43	Low-temperature proton irradiation damage of isotropic nuclear grade IG-430 graphite. Journal of Nuclear Materials, 2020, 542, 152438.	1.3	12
44	Defect complexes in fluorine-implanted germanium. Journal Physics D: Applied Physics, 2013, 46, 505310.	1.3	11
45	Reprint of: Microstructural evolution of neutron irradiated 3C-SiC. Scripta Materialia, 2018, 143, 176-180.	2.6	10
46	Development and potential of composite moderators for elevated temperature nuclear applications. Journal of Asian Ceramic Societies, 2022, 10, 9-32.	1.0	10
47	Cation and vacancy disorder in U_{1â^'y}Nd_yO_{2.00â^'x}alloys. Journal of Materials Research, 2015, 30, 3026-3040.	1.2	9
48	Advanced synchrotron characterization techniques for fusion materials science. Journal of Nuclear Materials, 2021, 543, 152574.	1.3	9
49	200â€¯MeV proton irradiation of the oxide-dispersion-strengthened copper alloy (GlidCop-Al15). Journal of Nuclear Materials, 2019, 516, 360-372.	1.3	8
50	Tailoring microstructure in sintered Cu-Cr-Nb-Zr alloys for fusion components. Journal of Nuclear Materials, 2021, 551, 152956.	1.3	8
51	Structural characterization of B-doped diamond nanoindentation tips. Journal of Materials Research, 2011, 26, 3051-3057.	1.2	7
52	Structural and electrical properties of In-implanted Ge. Journal of Applied Physics, 2015, 118, .	1.1	7
53	Effect of stoichiometry on the evolution of thermally annealed long-range ordering in Niâ€“Cr alloys. Materialia, 2019, 8, 100453.	1.3	7
54	Ceramic composite moderators as replacements for graphite in high temperature microreactors. Journal of Nuclear Materials, 2022, 563, 153591.	1.3	7

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55	Formation of Ge nanoparticles in SiOxNy by ion implantation and thermal annealing. Journal of Applied Physics, 2015, 118, .	1.1	6
56	Disordering of helium gas bubble superlattices in molybdenum under ion irradiation and thermal annealing. Journal of Nuclear Materials, 2020, 539, 152315.	1.3	6
57	X-ray characterization of anisotropic defect formation in SiC under irradiation with applied stress. Scripta Materialia, 2021, 197, 113785.	2.6	6
58	Swift heavy ion irradiation of Pt nanocrystals: I. shape transformation and dissolution. Journal Physics D: Applied Physics, 2011, 44, 155401.	1.3	5
59	Radiation damage of a two-dimensional carbon fiber composite (CFC). Carbon Trends, 2021, 3, 100028.	1.4	5
60	Microstructural Transitions during Powder Metallurgical Processing of Solute Stabilized Nanostructured Tungsten Alloys. Metals, 2022, 12, 159.	1.0	5
61	X-ray absorption spectroscopy characterization of embedded and extracted nano-oxides. Journal of Alloys and Compounds, 2017, 699, 1030-1035.	2.8	4
62	Pair distribution function analysis of neutron-irradiated silicon carbide. Journal of Nuclear Materials, 2019, 527, 151798.	1.3	4
63	In-pile tensile creep of chemical vapor deposited silicon carbide at 300â€Â°C. Journal of Nuclear Materials, 2019, 521, 63-70.	1.3	4
64	Hexagonal boron nitride (h-BN) irradiated with 140ÂMeV protons. Nuclear Instruments & Methods in Physics Research B, 2020, 479, 110-119.	0.6	4
65	Compatibility of FeCrAlMo in Flowing Pb-Li at 600Â°C to 700Â°C. Fusion Science and Technology, 2021, 77, 761-765.	0.6	4
66	Formation window of gas bubble superlattice in molybdenum under ion implantation. Physical Review Materials, 2019, 3, .	0.9	4
67	Molecular Structure and Phase Equilibria of Molten Fluoride Salt with and without Dissolved Cesium: FLiNaKâ€“CsF (5 mol %). ACS Applied Energy Materials, 2022, 5, 8067-8074.	2.5	4
68	Swift heavy ion irradiation of Pt nanocrystals: II. Structural changes and H desorption. Journal Physics D: Applied Physics, 2011, 44, 155402.	1.3	3
69	Enhanced electrical activation in In-implanted Ge by C co-doping. Applied Physics Letters, 2015, 107, .	1.5	3
70	Electrical and structural properties of In-implanted Si1â^'xGex alloys. Journal of Applied Physics, 2016, 119, .	1.1	2
71	Radiation damage from energetic particles at GRad-level of SiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e277" altimg="si47.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:math> fibers of the Large Hadron Collider ATLAS Zero-Degree Calorimeter (ZDC). Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 980, 1644	0.7	2
72	Atomic and microstructural origins of stored energy release in neutron-irradiated silicon carbide. Physical Review Materials, 2021, 5, .	0.9	2

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73	ANGLE-DEPENDENT MEASUREMENTS OF ELONGATED PLATINUM NANOCRYSTALS USING SMALL ANGLE X-RAY SCATTERING. Advances in Synchrotron Radiation, 2008, 01, 159-167.	0.0	1
74	Enhanced Electrical Activation in In-Implanted Si_{0.35}Ge_{0.65} by C Co-Doping. Materials Research Letters, 2017, 5, 29-34.	4.1	1
75	Evidence for the formation of SiGe nanoparticles in Ge-implanted Si3N4. Journal of Applied Physics, 2017, 121, .	1.1	1
76	Nuclear Material Characterization Using High-Energy X-rays at BNL Synchrotrons: From Reactor Steels and Molten Salts to Large Hadron Collider Novel Materials. Synchrotron Radiation News, 2019, 32, 50-54.	0.2	1
77	Temperature-dependent EXAFS measurements of InP. , 2009, , .		0
78	TEM study of Amorphous Phase Formation in Cobalt Nanoparticles. Microscopy and Microanalysis, 2009, 15, 1378-1379.	0.2	0
79	SAXS Analysis of Embedded Pt Nanocrystals Irradiated with Swift Heavy Ions. , 2009, , .		0
80	Swift Heavy Ion Irradiation of Cobalt Nanoparticles. , 2009, , .		0
81	Characterizing structural and vibrational properties of nanoparticles embedded in silica with XAS, SAXS and auxiliary techniques. , 2009, , .		0
82	Automated Synchrotron X-Ray Diffraction of Irradiated Reactor Pressure Vessel Steels. , 2014, , .		0
83	Electrical and Structural Properties of In and In + C Doped Ge. Microscopy and Microanalysis, 2016, 22, 1444-1445.	0.2	0
84	EXAFS study of the structural properties of In and In + C implanted Ge. Journal of Physics: Conference Series, 2016, 712, 012102.	0.3	0
85	Automated X-ray diffraction of irradiated materials. , 2017, , .		0
86	Proton irradiation effects in Molybdenum-Carbide-Graphite composites. Journal of Nuclear Materials, 2021, 553, 153049.	1.3	0
87	X-Ray Diffraction-Computed Tomography (XRD-CT) Facility at NSLS-II for Nuclear Materials. , 2019, , .		0
88	Fabrication of Two-Phase Composite Moderators as Potential Lifetime Reactor Components. , 2019, , .		0
89	A Pathway for Fully Ceramic Microencapsulated (FCM) Fuels in Nuclear Thermal Propulsion (NTP). , 2019, , .		0
90	X-Ray Characterization of Atomistic Defects Causing Irradiation Creep of SiC. , 2020, , .		0

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91	Atomic Origins of Stored Energy Release in Neutron-Irradiated Silicon Carbide. , 2020, , .		0
92	Synchrotron Characterization of Transmutation Products in Neutron Irradiated Tungsten. , 2020, , .		0
93	Improving the Pitting Corrosion Performance of Additively Manufactured 316L Steel Via Optimized Selective Laser Melting Processing Parameters. Jom, 2022, 74, 1719-1729.	0.9	0