Arthur R Smith

List of Publications by Year
in descending order

79 papers	1,837 citations	304743 22 h-index	276875 41 g-index
80 all docs	80 docs citations	80 times ranked	1341 citing authors

#	Article	IF	Citations
1	Noncollinear magnetic configurations and substrate-mediated interactions in Mn trimers on the GaN(0001Â¯) surface. Physical Review B, 2021, 103, .	3.2	0
2	Surface structures of magnetostrictive D03-Fe3Ga(0Â0Â1). Applied Surface Science, 2021, 553, 149488.	6.1	5
3	Investigating the magnetic and atomic interface configuration for a model Fe/CrN bilayer system. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, 063209.	2.1	3
4	Exchange bias and exchange spring effects in Fe/CrN bilayers. Journal Physics D: Applied Physics, 2020, 53, 125001.	2.8	13
5	Local strain-dependent electronic structure and perpendicular magnetic anisotropy of a MnGaN 2D magnetic monolayer. Physical Review Materials, 2020, 4, .	2.4	4
6	Nitrogen-induced reconstructions on the Cr(001) surface. Applied Surface Science, 2019, 484, 578-586.	6.1	0
7	A Two-Dimensional Manganese Gallium Nitride Surface Structure Showing Ferromagnetism at Room Temperature. Nano Letters, 2018, 18, 158-166.	9.1	13
8	Structural, electronic, and magnetic properties of the CrN (0â€¯0â€¯1) surface: First-principles studies. Applied Surface Science, 2018, 454, 350-357.	6.1	21
9	Applying a difference ratio method in spin-polarized scanning tunneling microscopy to determine crystalline anisotropies and antiferromagnetic spin alignment in Cr(0 0 1) c(2â€¯Ã—â€¯2). Journal of Magnetism and Magnetic Materials, 2018, 465, 626-633.	2.3	5
10	Structural, electronic and magnetic properties of the MnGa(111)-1 Ã— 2 and 2 Ã— 2 reconstructions: Spin polarized first principles total energy calculations. Applied Surface Science, 2017, 419, 286-293.	6.1	3
11	Contribution from Ising domains overlapping out-of-plane to perpendicular magnetic anisotropy in Mn4N thin films on MgO(001). Journal of Magnetism and Magnetic Materials, 2017, 439, 236-244.	2.3	12
12	Structural and magnetic phase transitions in chromium nitride thin films grown by rf nitrogen plasma molecular beam epitaxy. Physical Review B, 2017, 96, .	3.2	28
13	Surface structures of L10-MnGa (001) by scanning tunneling microscopy and first-principles theory. Applied Surface Science, 2017, 422, 985-989.	6.1	9
14	Magnetostrictive iron gallium thin films grown onto antiferromagnetic manganese nitride: Structure and magnetism. Applied Physics Letters, 2016, 109, 142402.	3.3	6
15	Structural and magnetic properties of ferrimagnetic Îµ-phase Mn4N and antiferromagnetic Î¶-phase Mn10N thin films on MgO(001). Journal of Crystal Growth, 2016, 446, 60-67.	1.5	11
16	Understanding the stability of Fe incorporation within Mn3N2(001) surfaces: An ab-initio study. Applied Surface Science, 2016, 363, 651-658.	6.1	3
17	Structure and magnetism in Ga-rich MnGa/GaN thin films and unexpected giant perpendicular anisotropy in the ultra-thin film limit. Applied Surface Science, 2016, 367, 312-319.	6.1	13
18	Surface structure of manganese gallium quantum height islands on wurtzite $${mathbf {GaN}}{mathbf{(000)}}{ar{mathbf{1}}}$$ studied by scanning tunneling microscopy. Applied Physics A: Materials Science and Processing, 2015, 120, 1027-1032.	2.3	2

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19	Native Gallium Adatoms Discovered on Atomically-Smooth Gallium Nitride Surfaces at Low Temperature. Nano Letters, 2015, 15, 2079-2085.	9.1	8
20	Structural, electronic and magnetic properties of Mn3N2(0 0 1) surfaces. Applied Surface Science, 2015, 355, 623-630.	6.1	17
21	Interface formation for a ferromagnetic/antiferromagnetic bilayer system studied by scanning tunneling microscopy and first-principles theory. Physical Review B, 2015, 91, .	3.2	13
22	Molecular beam epitaxial growth and scanning tunneling microscopy studies of the gallium rich trench line structure on N-polar w-GaN(000 1 Â¯). Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, 061404.	2.1	1
23	Iron on GaN(0001) pseudo-1â€‰Ã—â€‰1 (1+112) investigated by scanning tunneling microscopy and first-principles theory. Applied Physics Letters, 2014, 104, 171607.	3.3	3
24	Facility for low-temperature spin-polarized-scanning tunneling microscopy studies of magnetic/spintronic materials prepared in situ by nitride molecular beam epitaxy. Review of Scientific Instruments, 2014, 85, 043702.	1.3	10
25	display="inline"><mml:mo>Ã—</mml:mo></mml:math>3 and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msqrt><mml:mn>3</mml:mn></mml:msqrt><mml:mo>Ã—</mml:mo><mml:msqrt><mml:mn>3	3.2	7
26	display="inline"><mml:mrow><mml:mi>R</mml:mi><mml:msup><mml:mn>30</mml:mn><mml:mo>â¯</mml:mo></mml:msup></mml: Heteroepitaxial growth and surface structure of L1-MnGa(111) ultra-thin films on GaN(0001). Applied Physics Letters, 2013, 103, .	3.3	15
27	Formation of manganese Î´-doped atomic layer in wurtzite GaN. Journal of Applied Physics, 2012, 112, 053517.	2.5	8
28	Spontaneous formation of quantum height manganese gallium islands and atomic chains on N-polar gallium nitride(0001Â¯). Applied Physics Letters, 2012, 100, 061602.	3.3	7
29	Three-Dimensional Spin Mapping of Antiferromagnetic Nanopyramids Having Spatially Alternating Surface Anisotropy at Room Temperature. Nano Letters, 2012, 12, 5443-5447.	9.1	12
30	Two-dimensional Mn structure on the GaN growth surface and evidence for room-temperature spin ordering. Physical Review B, 2011, 83, .	3.2	21
31	The effect of growth parameters on CrN thin films grown by molecular beam epitaxy. Thin Solid Films, 2011, 520, 90-94.	1.8	13
32	Efficient kinematical simulation of reflection high-energy electron diffraction streak patterns for crystal surfaces. Computer Physics Communications, 2011, 182, 2208-2212.	7.5	15
33	Structural controlled magnetic anisotropy in Heusler L1â‚‚MnGa epitaxial thin films. Applied Physics Letters, 2011, 98, .	3.3	48
34	A modular designed ultra-high-vacuum spin-polarized scanning tunneling microscope with controllable magnetic fields for investigating epitaxial thin films. Review of Scientific Instruments, 2011, 82, 053703.	1.3	3
35	Reflection High Energy Electron Diffraction and Atomic Force Microscopy Studies of Mn_xSc_(1-x)Alloys Grown on MgO(001) Substrates by Molecular Beam Epitaxy. Materials Research Society Symposia Proceedings, 2011, 1295, 261.	0.1	0
36	Structural, Magnetic and Electronic Properties of Dilute MnScN(001) Grown by RF Nitrogen Plasma Molecular Beam Epitaxy. Materials Research Society Symposia Proceedings, 2011, 1290, 1.	0.1	0

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37	Magnetic and Electronic Properties of Fe_{0.1}Sc_{0.9}N/ScN(001)/MgO(001) Films Grown by Radio-Frequency Molecular Beam Epitaxy. Materials Research Society Symposia Proceedings, 2009, 1198, 42.	0.1	1
38	Lattice Parameter Variation in ScGaN Alloy Thin Films on MgO(001) Grown by RF Plasma Molecular Beam Epitaxy. Materials Research Society Symposia Proceedings, 2009, 1202, 132.	0.1	1
39	Epitaxial growth of ferromagnetic -phase manganese gallium on semiconducting scandium nitride (001). Journal of Crystal Growth, 2009, 311, 2265-2268.	1.5	18
40	Molecular beam epitaxial growth of zinc-blende FeN(111) on wurtzite GaN(0001). Journal of Alloys and Compounds, 2008, 463, 257-262.	5.5	25
41	Delta-phase manganese gallium on gallium nitride: a magnetically tunable spintronic system. Materials Research Society Symposia Proceedings, 2008, 1118, 6.	0.1	0
42	Atomic layer structure of manganese atoms on wurtzite gallium nitride (0001Â¯). Applied Physics Letters, 2008, 93, 181908.	3.3	9
43	Atomic-resolution study of Mn tetramer clusters using scanning tunneling microscopy. Applied Physics Letters, 2006, 88, 173101.	3.3	5
44	Energy-dependent contrast in atomic-scale spin-polarized scanning tunneling microscopy ofMn3N2(010): Experiment and first-principles theory. Physical Review B, 2006, 74, .	3.2	38
45	Surface reconstructions of cubic gallium nitride (001) grown by radio frequency nitrogen plasma molecular beam epitaxy under gallium-rich conditions. Journal of Applied Physics, 2006, 100, 083516.	2.5	3
46	Reconstruction Control of Magnetic Properties during Epitaxial Growth of FerromagneticMn3âˆ’ÎґGaon Wurtzite GaN(0001). Physical Review Letters, 2006, 97, 146101.	7.8	57
47	Atomic-Scale Spin-Polarized Scanning Tunneling Microscopy and Atomic Force Microscopy: A Review. Journal of Scanning Probe Microscopy, 2006, 1, 3-20.	0.0	10
48	Room temperature ferromagnetism in CrGaN: Dependence on growth conditions in rf N-plasma molecular beam epitaxy. Journal of Crystal Growth, 2005, 285, 300-311.	1.5	11
49	Recent advances in atomic-scale spin-polarized scanning tunneling microscopy. Microscopy Research and Technique, 2005, 66, 72-84.	2.2	7
50	Scanning tunneling microscopy study of the structural phase transformation in manganese nitride: Î¸-MnN âˆ’ Î·-Mn 3 N 2. Applied Physics A: Materials Science and Processing, 2005, 81, 695-700.	2.3	14
51	Dependence of magnetic properties on the growth conditions of MnGaN grown by rf N plasma molecular beam epitaxy. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 1135-1144.	1.8	8
52	Scanning Tunneling Microscopy Study of Cr-doped GaN Surface Grown by RF Plasma Molecular Beam Epitaxy. Materials Research Society Symposia Proceedings, 2005, 892, 40.	0.1	0
53	Composition-dependent structural properties in ScGaN alloy films: A combined experimental and theoretical study. Journal of Applied Physics, 2005, 98, 123501.	2.5	36
54	Scanning Tunneling Microscopy and Surface Simulation of Zinc-Blende GaN(001) Intrinsic4Ã—Reconstruction: Linear Gallium Tetramers?. Physical Review Letters, 2005, 95, 146102.	7.8	15

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55	Surface and bulk electronic structure ofScN(001)investigated by scanning tunneling microscopy/spectroscopy and optical absorption spectroscopy. Physical Review B, 2004, 70, .	3.2	118
56	ScGaNalloy growth by molecular beam epitaxy: Evidence for a metastable layered hexagonal phase. Physical Review B, 2004, 70, .	3.2	74
57	Incorporation of manganese into semiconducting ScN using radio frequency molecular beam epitaxy. Journal of Applied Physics, 2004, 96, 3787-3792.	2.5	34
58	Publisher's Note: ScGaN alloy growth by molecular beam epitaxy: Evidence for a metastable layered hexagonal phase [Phys. Rev. B70, 193309 (2004)]. Physical Review B, 2004, 70, .	3.2	1
59	Metal/semiconductor phase transition in chromium nitride(001) grown by rf-plasma-assisted molecular-beam epitaxy. Applied Physics Letters, 2004, 85, 6371-6373.	3.3	108
60	Aspects of spin-polarized scanning tunneling microscopy at the atomic scale: experiment, theory, and simulation. Surface Science, 2004, 561, 154-170.	1.9	19
61	Atomic-scale structure of Î·-phase Mn3N2(010) studied by scanning tunneling microscopy and first-principles theory. Surface Science, 2004, 548, 117-128.	1.9	10
62	Mixing Rocksalt and Wurtzite Structure Binary Nitrides to Form Novel Ternary Alloys: ScGaN and MnGaN. Materials Research Society Symposia Proceedings, 2003, 799, 339.	0.1	1
63	Bias-Voltage Dependence in Atomic-Scale Spin Polarized Scanning Tunneling Microscopy of Mn3N2 (010). Materials Research Society Symposia Proceedings, 2003, 803, 30.	0.1	0
64	Ga/N flux ratio influence on Mn incorporation, surface morphology, and lattice polarity during radio frequency molecular beam epitaxy of (Ga,Mn)N. Journal of Applied Physics, 2003, 93, 5274-5281.	2.5	41
65	Atomic-Scale Spin-Polarized Scanning Tunneling Microscopy Applied toMn3N2(010). Physical Review Letters, 2002, 89, 226101.	7.8	100
66	Crystalline phase and orientation control of manganese nitride grown on MgO(001) by molecular beam epitaxy. Journal of Applied Physics, 2002, 91, 1053-1059.	2.5	88
67	Phase stability, nitrogen vacancies, growth mode, and surface structure of ScN(001) under Sc-rich conditions. Journal of Crystal Growth, 2002, 242, 345-354.	1.5	42
68	Structural and magnetic properties of Î·-phase manganese nitride films grown by molecular-beam epitaxy. Applied Physics Letters, 2001, 78, 3860-3862.	3.3	72
69	Molecular beam epitaxy control of the structural, optical, and electronic properties of ScN(001). Journal of Applied Physics, 2001, 90, 1809-1816.	2.5	105
70	Structure of clean and arsenic-covered GaN(0001) surfaces. Journal of Crystal Growth, 2000, 209, 355-363.	1.5	47
71	Reconstructions of GaN and InGaN surfaces. Applied Surface Science, 2000, 166, 165-172.	6.1	20
72	Molecular beam epitaxial growth of atomically smooth scandium nitride films. Applied Physics Letters, 2000, 77, 2485-2487.	3.3	79

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73	GaN(0001) surface structures studied using scanning tunneling microscopy and first-principles total energy calculations. Surface Science, 1999, 423, 70-84.	1.9	118
74	Scanning tunneling microscopy of the GaN(000 $ar{1}$]]) surface. Applied Physics A: Materials Science and Processing, 1998, 66, S947-S951.	2.3	30
75	Two-dimensional pn-junction delineation and individual dopant identification using scanning tunneling microscopy/spectroscopy. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 453.	1.6	15
76	Scanning tunneling microscopy observation of surface reconstruction of GaN on sapphire and 6H-SiC. Materials Research Society Symposia Proceedings, 1997, 482, 428.	0.1	1
77	Direct determination of exact charge states of surface point defects using scanning tunneling microscopy: As vacancies on GaAs (110). Physical Review B, 1996, 53, 6935-6938.	3.2	49
78	Identification of first and second layer aluminum atoms in dilute AlGaAs using crossâ€sectional scanning tunneling microscopy. Applied Physics Letters, 1996, 69, 1214-1216.	3.3	8
79	Dimer-vacancyâ€“dimer-vacancy interaction on the Si(001) surface: The nature of the 2Ã—nstructure. Physical Review B, 1995, 52, R8650-R8653.	3.2	47