Martin R Castell

List of Publications by Year
in descending order

109 papers	4,513 citations	81900 39 h-index	110387 64 g-index
109 all docs	109 docs citations	109 times ranked	4739 citing authors

#	Article	IF	Citations
1	Encapsulated Pd crystals on anatase supports: High precision determination of the titanate overlayer moirÃ© structure. Surface Science, 2022, 715, 121941.	1.9	0
2	Influence of soil type on chemiresistive detection of buried ANFO. Forensic Chemistry, 2022, 27, 100401.	2.8	1
3	Epitaxially Constrained Grain Boundary Structures in an Oxide Honeycomb Monolayer. Advanced Materials Interfaces, 2022, 9, .	3.7	2
4	Polypyrrole Percolation Network Gas Sensors: Improved Reproducibility through Conductance Monitoring during Polymer Growth. ACS Applied Polymer Materials, 2022, 4, 2536-2543.	4.4	2
5	PEDOT percolation networks for reversible chemiresistive sensing of NO₂. RSC Advances, 2021, 11, 22789-22797.	3.6	8
6	Electrohydrodynamic jet printed conducting polymer for enhanced chemiresistive gas sensors. Journal of Materials Chemistry C, 2021, 9, 4591-4596.	5.5	31
7	ANFO vapour detection with conducting polymer percolation network sensors and GC/MS. Analyst, The, 2021, 146, 2186-2193.	3.5	11
8	Ammonium Nitrate/Fuel Oil Vapour Detection with Conducting Polymer Percolation Network Sensors. ECS Meeting Abstracts, 2021, MA2021-01, 1446-1446.	0.0	0
9	Metal-Organic Framework and Silver Nanowire Composites As Chemiresistive Gas Sensors Operating at the Percolation Threshold. ECS Meeting Abstracts, 2021, MA2021-01, 1464-1464.	0.0	0
10	In Situ Electrochemical Approach to Reproducible Percolation Networks for Chemiresistors. ECS Meeting Abstracts, 2021, MA2021-01, 1691-1691.	0.0	0
11	Thermodynamics driving the strong metalâ€“support interaction: Titanate encapsulation of supported Pd nanocrystals. Physical Review Materials, 2021, 5, .	2.4	3
12	Conducting polymer percolation gas sensor on a flexible substrate. Journal of Materials Chemistry C, 2020, 8, 12669-12676.	5.5	35
13	Experimental determination of the {111}/{001} surface energy ratio for Pd crystals. Applied Physics Letters, 2020, 117, .	3.3	6
14	Shapes of epitaxial gold nanocrystals on SrTiO₃ substrates. Physical Chemistry Chemical Physics, 2020, 22, 4416-4428.	2.8	14
15	2020 roadmap on solid-state batteries. JPhys Energy, 2020, 2, 032008.	5.3	74
16	Atomic and electronic structure of an epitaxial <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">N</mml:mi><mml:msub><mml:mi mathvariant="normal">b</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> honeycomb monolayer on Au(111). Physical Review B, 2019, 100, .	3.2	14
17	Influence of the support on stabilizing local defects in strained monolayer oxide films. Nanoscale, 2019, 11, 2412-2422.	5.6	10
18	Thermal Degradation of Monolayer MoS2 on SrTiO3 Supports. Journal of Physical Chemistry C, 2019, 123, 3876-3885.	3.1	17

#	Article	IF	Citations
19	Bridging electrode gaps with conducting polymers around the electrical percolation threshold. Electrochemistry Communications, 2018, 87, 40-43.	4.7	25
20	Single-layer TiOx reconstructions on SrTiO3 (111): (âˆš7â€¯Ã—â€¯âˆš7)R19.1Â°, (âˆš13â€¯Ã—â€¯âˆš13)R13.9Â°, and related structures. Surface Science, 2018, 675, 36-41.	1.9	8
21	Magnetic Iron Oxide Nanowires Formed by Reactive Dewetting. Nano Letters, 2018, 18, 2365-2372.	9.1	7
22	Maximising the resolving power of the scanning tunneling microscope. Advanced Structural and Chemical Imaging, 2018, 4, 7.	4.0	17
23	Epitaxial Growth of Monolayer MoS₂ on SrTiO₃ Single Crystal Substrates for Applications in Nanoelectronics. ACS Applied Nano Materials, 2018, 1, 6976-6988.	5.0	34
24	Electrical percolation through a discontinuous Au nanoparticle film. Applied Physics Letters, 2018, 112, 251602.	3.3	9
25	Transition from Reconstruction toward Thin Film on the (110) Surface of Strontium Titanate. Nano Letters, 2016, 16, 2407-2412.	9.1	28
26	Ultrathin Oxide Films on Au(111) Substrates. Springer Series in Materials Science, 2016, , 149-168.	0.6	2
27	Metal-free chemical vapor deposition growth of graphitic tubular structures on engineered perovskite oxide substrates. Carbon, 2016, 99, 591-598.	10.3	4
28	Stoichiometry engineering of ternary oxide ultrathin films:<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">Ba</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:msub><mml:mi mathvariant="normal">Ti</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>on Au(111). Physical Review B, 2015, 91, .	3.2	27
29	Transition from Order to Configurational Disorder for Surface Reconstructions on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>SrTiO</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>. Physical Review Letters, 2015, 114, 226101.	7.8	34
30	Smart Alignâ€”a new tool for robust non-rigid registration of scanning microscope data. Advanced Structural and Chemical Imaging, 2015, 1, .	4.0	290
31	Vapour sensing of explosive materials. Analytical Methods, 2015, 7, 9005-9017.	2.7	35
32	Defects on Strontium Titanate. Springer Series in Surface Sciences, 2015, , 327-349.	0.3	11
33	The effect of the size of surface Pd island ensembles on electron transfer of adsorbed perchlorate ions on Au(111). Chemical Communications, 2014, 50, 1198-1201.	4.1	2
34	Out- versus in-plane magnetic anisotropy of free Fe and Co nanocrystals: Tight-binding and first-principles studies. Physical Review B, 2014, 90, .	3.2	55
35	Scanning tunnelling microscopy of epitaxial nanostructures. Chemical Society Reviews, 2014, 43, 2226.	38.1	15
36	Controlled growth of Ni nanocrystals on SrTiO3 and their application in the catalytic synthesis of carbon nanotubes. Chemical Communications, 2013, 49, 3748.	4.1	18

#	Article	IF	Citations
37	Initial growth stages of titanium and barium oxide films on SrTiO3(001). Surface Science, 2013, 618, 94-100.	1.9	9
38	Synthesis of carbon nanocoil forests on BaSrTiO3 substrates with the aid of a Sn catalyst. Carbon, 2013, 60, 5-15.	10.3	12
39	Structure and composition of linear TiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mi>x</mml:mi></mml:msub></mml:math>nanostructures on SrTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>(001). Physical Review B, 2013, 88, .	3.2	18
40	c(4â€‰Ã—â€‰2) and related structural units on the SrTiO3(001) surface: Scanning tunneling microscopy, density functional theory, and atomic structure. Journal of Chemical Physics, 2012, 136, 214701.	3.0	23
41	Ba and BaOx surface structures on Au(111). Surface Science, 2012, 606, 181-185.	1.9	6
42	Water adsorption on SrTiO3(001): I. Experimental and simulated STM. Surface Science, 2012, 606, 762-765.	1.9	35
43	Formation Mechanism for a Hybrid Supramolecular Network Involving Cooperative Interactions. Physical Review Letters, 2012, 108, 176103.	7.8	34
44	Surface Structures of Ultrathin TiOx Films on Au(111). Journal of Physical Chemistry C, 2011, 115, 8643-8652.	3.1	58
45	Surface and Defect Structure of Oxide Nanowires on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>SrTiO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review Letters, 2011, 107, 086102.	7.8	32
46	The (2Ã—2) reconstructions on the SrTiO3 (001) surface: A combined scanning tunneling microscopy and density functional theory study. Surface Science, 2011, 605, L51-L55.	1.9	41
47	Atomic and electronic surface structures of dopants in oxides: STM and XPS of Nb- and La-doped SrTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi /><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>(001). Physical Review B, 2011, 83, .	3.2	89
48	Publisherâ€™s Note: Surface and Defect Structure of Oxide Nanowires onSrTiO3[Phys. Rev. Lett.107, 086102 (2011)]. Physical Review Letters, 2011, 107, .	7.8	0
49	A homologous series of structures on the surface of SrTiO3(110). Nature Materials, 2010, 9, 245-248.	27.5	145
50	Intricate Hydrogen-Bonded Networks: Binary and Ternary Combinations of Uracil, PTCDI, and Melamine. Journal of Physical Chemistry C, 2010, 114, 5859-5866.	3.1	42
51	Synthesis of Epitaxial Metal Oxide Nanocrystals via a Phase Separation Approach. ACS Nano, 2010, 4, 5139-5146.	14.6	32
52	Endohedral metallofullerenes in self-assembled monolayers. Physical Chemistry Chemical Physics, 2010, 12, 123-131.	2.8	20
53	Shape Transitions of Epitaxial Islands during Strained Layer Growth: Anatase<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>TiO</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mo stretchy="false">(</mml:mo><mml:mn>001</mml:mn><mml:mo) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 97.3 Td (stretchy="false" xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>SrTiO</mml:mi>	7.8	35
54	H-Bonding Supramolecular Assemblies of PTCDI Molecules on the Au(111) Surface. Journal of Physical Chemistry C, 2009, 113, 21840-21848.	3.1	56

#	Article	IF	Citations
55	Temperature-Dependent Stability of Supported Five-Fold Twinned Copper Nanocrystals. ACS Nano, 2009, 3, 901-906.	14.6	28
56	Scanning tunneling microscopy studies of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mtext>C</mml:mtext><mml:mrow><mml:mn>60</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> on Au(111). Physical Review B, 2009, 80, .	3.2	81
57	Melamine Structures on the Au(111) Surface. Journal of Physical Chemistry C, 2008, 112, 11476-11480.	3.1	122
58	Grating of single Lu@C82 molecules using supramolecular network. Chemical Communications, 2008, , 4616.	4.1	19
59	A chiral pinwheel supramolecular network driven by the assembly of PTCDI and melamine. Chemical Communications, 2008, , 1907.	4.1	58
60	Surface of Sputtered and Annealed Polar SrTiO₃(111):â€‰ TiO_x-Rich (n Ã— n) Reconstructions. Journal of Physical Chemistry C, 2008, 112, 6538-6545.	3.1	53
61	Reconstructions on the polar<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">Sr</mml:mi><mml:mi mathvariant="normal">Ti</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>(110) surface: Analysis using STM, LEED, and AES. Physical Review B, 2008, 77, .	3.2	51
62	Epitaxial ordering of a perylenetetracarboxylic diimide-melamine supramolecular network driven by the Au(111)-(22Ã—3) reconstruction. Applied Physics Letters, 2008, 92, 023102.	3.3	40
63	Deriving molecular bonding from a macromolecular self-assembly using kinetic Monte Carlo simulations. Physical Review B, 2008, 77, .	3.2	46
64	Controlled surface ordering of endohedral fullerenes with a SrTiO3template. Nanotechnology, 2007, 18, 075301.	2.6	34
65	(13Ã—13)R13.9Â°and(7Ã—7)R19.1Â°reconstructions of the polarSrTiO3(111)surface. Physical Review B, 2007, 75, .	3.2	37
66	SrTiO3(001)â˜’(5Ã—5)â˜’R26.6Â°reconstruction: A surface resulting from phase separation in a reducing environment. Physical Review B, 2007, 75, .	3.2	52
67	Pairs and heptamers of C70 molecules ordered via PTCDI-melamine supramolecular networks. Applied Physics Letters, 2007, 91, 253109.	3.3	50
68	C70 ordering on nanostructured SrTiO3(001). Chemical Communications, 2007, , 2941.	4.1	11
69	Atomic-scale studies on the growth of palladium and titanium on GaN(0001). Surface Science, 2007, 601, 4438-4443.	1.9	7
70	Template Ordered Open-Grid Arrays of Paired Endohedral Fullerenes. Journal of the American Chemical Society, 2006, 128, 13976-13977.	13.7	44
71	Structure of vapour deposited adenine on a nanostructured perovskite surface studied by STM. Faraday Discussions, 2006, 133, 303.	3.2	6
72	Ordering of TiO2-Based Nanostructures on SrTiO3(001) Surfaces. Journal of Physical Chemistry B, 2006, 110, 9246-9251.	2.6	59

#	Article	IF	Citations
73	SrTiO3(001) reconstructions: the (2Ã—2) to c(4Ã—4) transition. Surface Science, 2006, 600, 219-223.	1.9	54
74	Hot STM of nanostructure dynamics on SrTiO3(001). Nanotechnology, 2006, 17, 3543-3548.	2.6	21
75	Bimodal Growth of Au onSrTiO3(001). Physical Review Letters, 2006, 96, 086104.	7.8	67
76	Self-assembled supported Co nanocrystals: The adhesion energy of face-centered-cubic Co on SrTiO3(001)-(2Ã—2). Applied Physics Letters, 2005, 87, 053106.	3.3	29
77	Growth shapes of supported Pd nanocrystals onSrTiO3(001). Physical Review B, 2005, 72, .	3.2	23
78	Fe nanocrystal growth on SrTiO3(001). Applied Physics Letters, 2005, 87, 063106.	3.3	28
79	Selecting the Shape of Supported Metal Nanocrystals: Pd Huts, Hexagons, or Pyramids onSrTiO3(001). Physical Review Letters, 2005, 94, 046103.	7.8	106
80	Growth of Ag icosahedral nanocrystals on a SrTiO3(001) support. Applied Physics Letters, 2005, 87, 213107.	3.3	41
81	Encapsulated Pd Nanocrystals Supported by Nanoline-Structured SrTiO3(001). Journal of Physical Chemistry B, 2005, 109, 12316-12319.	2.6	47
82	SrTiO3(001)(2Ã—1)reconstructions:â€ƒFirst-principles calculations of surface energy and atomic structure compared with scanning tunneling microscopy images. Physical Review B, 2004, 70, .	3.2	154
83	Formation of single-domain anatase TiO2(001)â€(1Ã—4) islands on SrTiO3(001) after thermal annealing. Applied Physics Letters, 2004, 85, 3223-3225.	3.3	40
84	Gallium nitride surface preparation optimised using in situ scanning tunnelling microscopy. Applied Surface Science, 2003, 214, 1-10.	6.1	17
85	Dopant mapping for the nanotechnology age. Nature Materials, 2003, 2, 129-131.	27.5	56
86	Wulff shape of microscopic voids inUO2crystals. Physical Review B, 2003, 68, .	3.2	44
87	Heteroepitaxial growth of InN islands studied by STM and AFM. Journal Physics D: Applied Physics, 2002, 35, 615-619.	2.8	11
88	Scanning tunneling microscopy of reconstructions on the SrTiO3() surface. Surface Science, 2002, 505, 1-13.	1.9	201
89	Stranski-Krastanov Growth of InN Nanostructures on GaN Studied by RHEED, STM and AFM. Physica Status Solidi A, 2002, 194, 536-540.	1.7	21
90	Nanostructures on the SrTiO3() surface studied by STM. Surface Science, 2002, 516, 33-42.	1.9	107

#	Article	IF	Citations
91	The evolution of Ni nanoislands on the rutile TiO2(110) surface with coverage, heating and oxygen treatment. Surface Science, 2001, 486, 167-184.	1.9	56
92	Mechanism for secondary electron dopant contrast in the SEM. Journal of Electron Microscopy, 2000, 49, 311-321.	0.9	165
93	Microscopy of Metal Oxide Surfaces. Microscopy and Microanalysis, 2000, 6, 324-328.	0.4	2
94	Mapping surface elastic properties of stiff and compliant materials on the nanoscale using ultrasonic force microscopy. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2000, 80, 2299-2323.	0.6	62
95	Unexpected differences in the surface electronic structure of NiO and CoO observed by STM and explained by first-principles theory. Physical Review B, 1999, 59, 7342-7345.	3.2	62
96	Deactivation and diffusion of boron in ion-implanted silicon studied by secondary electron imaging. Applied Physics Letters, 1999, 74, 2304-2306.	3.3	21
97	An STM study of the UO2(001) surface. Applied Surface Science, 1999, 142, 124-128.	6.1	35
98	Imaging insulating oxides by elevated-temperature STM. Applied Physics A: Materials Science and Processing, 1998, 66, S963-S967.	2.3	14
99	Fracture properties of GaAsâ€“AlAs superlattices studied by atomic force microscopy and scanning electron microscopy. Acta Materialia, 1998, 46, 579-584.	7.9	5
100	Imaging the Elastic Nanostructure of Ge Islands by Ultrasonic Force Microscopy. Physical Review Letters, 1998, 81, 1046-1049.	7.8	139
101	Stress-Induced Shape Transition ofCoSi2Clusters on Si(100). Physical Review Letters, 1998, 80, 3795-3798.	7.8	93
102	Atomic-resolution STM of a system with strongly correlated electrons:NiO(001) surface structure and defect sites. Physical Review B, 1997, 55, 7859-7863.	3.2	83
103	Surface states on NiO (100) and the origin of the contrast reversal in atomically resolved scanning tunneling microscope images. Physical Review B, 1997, 56, 4900-4908.	3.2	129
104	Electronic contribution to secondary electron compositional contrast in the scanning electron microscope. Ultramicroscopy, 1997, 69, 279-287.	1.9	30
105	The indentation response of GaAs[sbnd]AlAs heterostructures. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1996, 74, 1185-1194.	0.6	5
106	Field-emission SEM imaging of compositional and doping layer semiconductor superlattices. Ultramicroscopy, 1995, 58, 104-113.	1.9	174
107	Atomic and electronic Z-contrast effects in high-resolution imaging. Ultramicroscopy, 1994, 54, 107-115.	1.9	17
108	Plastic deformation under microindentations in GaAs/AlAs superlattices. Philosophical Magazine Letters, 1993, 67, 89-93.	1.2	20

#	Article	IF	Citations
109	Scanning Tunneling Microscopy of Nanoindentations. Materials Research Society Symposia Proceedings, 1991, 239, 367.	0.1	0