Robert A Hughes

List of Publications by Year
in descending order

80 papers	2,250 citations	218677 26 h-index	243625 44 g-index
80 all docs	80 docs citations	80 times ranked	2893 citing authors

#	Article	IF	Citations
1	Catalytic Reduction of 4-Nitrophenol: A Quantitative Assessment of the Role of Dissolved Oxygen in Determining the Induction Time. Nano Letters, 2016, 16, 7791-7797.	9.1	150
2	Disorder and superconducting-state conductivity of single crystals ofYBa2Cu3O6.95. Physical Review B, 1994, 49, 12165-12169.	3.2	122
3	Intrinsic picosecond response times of Yâ€"Baâ€"Cuâ€"O superconducting photodetectors. Applied Physics Letters, 1999, 74, 853-855.	3.3	98
4	When lithography meets self-assembly: a review of recent advances in the directed assembly of complex metal nanostructures on planar and textured surfaces. Nanotechnology, 2017, 28, 282002.	2.6	98
5	Effect of Nanoparticle Ligands on 4-Nitrophenol Reduction: Reaction Rate, Induction Time, and Ligand Desorption. ACS Catalysis, 2020, 10, 10040-10050.	11.2	78
6	Sacrificial Templates for Galvanic Replacement Reactions: Design Criteria for the Synthesis of Pure Pt Nanoshells with a Smooth Surface Morphology. Chemistry of Materials, 2014, 26, 3340-3347.	6.7	72
7	Photocatalytic Enhancements to the Reduction of 4-Nitrophenol by Resonantly Excited Triangular Goldâ€"Copper Nanostructures. Journal of Physical Chemistry C, 2015, 119, 17308-17315.	3.1	71
8	Catalytic Reduction of 4-Nitrophenol by Gold Catalysts: The Influence of Borohydride Concentration on the Induction Time. Journal of Physical Chemistry C, 2019, 123, 12894-12901.	3.1	70
9	Altering the dewetting characteristics of ultrathin gold and silver films using a sacrificial antimony layer. Nanotechnology, 2012, 23, 495604.	2.6	69
10	Vertically aligned wurtzite CdTe nanowires derived from a catalytically driven growth mode. Nanotechnology, 2007, 18, 275301.	2.6	67
11	Electroâ€optic sampling of 1.5â€ps photoresponse signal from YBa2Cu3O7â^'Î´ thin films. Applied Physics Letters, 1995, 67, 285-287.	3.3	63
12	Kinetically Controlled Nucleation of Silver on Surfactant-Free Gold Seeds. Journal of the American Chemical Society, 2014, 136, 15337-15345.	13.7	62
13	Plasmon Field Effects on the Nonradiative Relaxation of Hot Electrons in an Electronically Quantized System: CdTeâ^'Au Coreâ^'Shell Nanowires. Nano Letters, 2008, 8, 2410-2418.	9.1	50
14	A Wulff in a Cage: The Confinement of Substrate-Based Structures in Plasmonic Nanoshells, Nanocages, and Nanoframes Using Galvanic Replacement. ACS Nano, 2016, 10, 6354-6362.	14.6	50
15	Plasmon-Mediated Synthesis of Periodic Arrays of Gold Nanoplates Using Substrate-Immobilized Seeds Lined with Planar Defects. Nano Letters, 2019, 19, 5653-5660.	9.1	50
16	Ultrafast photoresponse in microbridges and pulse propagation in transmission lines made from high-T/sub c/ superconducting Y-Ba-Cu-O thin films. IEEE Journal of Selected Topics in Quantum Electronics, 1996, 2, 668-678.	2.9	47
17	Noble Metal Nanostructure Synthesis at the Liquidâ€"Substrate Interface: New Structures, New Insights, and New Possibilities. Accounts of Chemical Research, 2016, 49, 2243-2250.	15.6	46
18	Dynamic templating: a large area processing route for the assembly of periodic arrays of sub-micrometer and nanoscale structures. Nanoscale, 2013, 5, 1929.	5.6	45

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19	Identifying the True Catalyst in the Reduction of 4-Nitrophenol: A Case Study Showing the Effect of Leaching and Oxidative Etching Using Ag Catalysts. ACS Catalysis, 2018, 8, 8879-8888.	11.2	43
20	Infrared Hall Effect in High-TcSuperconductors: Evidence for Non-Fermi-Liquid Hall Scattering. Physical Review Letters, 2000, 84, 3418-3421.	7.8	35
21	Mechanistic study of substrate-based galvanic replacement reactions. Nano Research, 2014, 7, 365-379.	10.4	32
22	One-step catalytic reduction of 4-nitrophenol through the direct injection of metal salts into oxygen-depleted reactants. Catalysis Science and Technology, 2017, 7, 1460-1464.	4.1	32
23	Arrays of highly complex noble metal nanostructures using nanoimprint lithography in combination with liquid-phase epitaxy. Nanoscale, 2018, 10, 18186-18194.	5.6	30
24	The role of lattice mismatch in the deposition of CdTe thin films. Journal of Electronic Materials, 2006, 35, 1224-1230.	2.2	28
25	Transformation of truncated gold octahedrons into triangular nanoprisms through the heterogeneous nucleation of silver. Nanoscale, 2015, 7, 6827-6835.	5.6	27
26	Citrateâ€Induced Nanocubes: A Reâ€Examination of the Role of Citrate as a Shapeâ€Directing Capping Agent for Agâ€Based Nanostructures. Small, 2016, 12, 3444-3452.	10.0	27
27	The role of substrate surface alteration in the fabrication of vertically aligned CdTe nanowires. Nanotechnology, 2008, 19, 185601.	2.6	26
28	Substrate-based galvanic replacement reactions carried out on heteroepitaxially formed silver templates. Nano Research, 2013, 6, 418-428.	10.4	26
29	Sensing Hydrogen Gas from Atmospheric Pressure to a Hundred Parts per Million with Nanogaps Fabricated Using a Single-Step Bending Deformation. ACS Sensors, 2016, 1, 73-80.	7.8	26
30	Light-Mediated Growth of Noble Metal Nanostructures (Au, Ag, Cu, Pt, Pd, Ru, Ir, Rh) From Micro- and Nanoscale ZnO Tetrapodal Backbones. Frontiers in Chemistry, 2018, 6, 411.	3.6	26
31	Picosecond photoresponse of epitaxial YBa2Cu3O7âˆ’Î´ thin films. Applied Physics Letters, 1994, 64, 3172-3174.	3.3	24
32	Low-Cost Nanostructures from Nanoparticle-Assisted Large-Scale Lithography Significantly Enhance Thermal Energy Transport across Solid Interfaces. ACS Applied Materials & Interfaces, 2018, 10, 34690-34698.	8.0	23
33	Dewetted nanostructures of gold, silver, copper, and palladium with enhanced faceting. Acta Materialia, 2019, 165, 15-25.	7.9	23
34	Large-area periodic arrays of gold nanostars derived from HEPES-, DMF-, and ascorbic-acid-driven syntheses. Nanoscale, 2020, 12, 16489-16500.	5.6	23
35	Evaluation of LaSrGaO4 as a substrate for YBa2Cu3O7âˆ’Î´. Physica C: Superconductivity and Its Applications, 1994, 225, 7-12.	1.2	22
36	Magneto-optical Evidence for a Gapped Fermi Surface in UnderdopedYBa2Cu3O6+x. Physical Review Letters, 2004, 93, 137002.	7.8	22

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37	Structural and transport properties of epitaxial niobium-doped BaTiO3 films. Applied Physics Letters, 2008, 93, 192114.	3.3	21
38	The role of vicinal silicon surfaces in the formation of epitaxial twins during the growth of III-V thin films. Journal of Applied Physics, 2011, 110, .	2.5	21
39	Sequential Symmetry-Breaking Events as a Synthetic Pathway for Chiral Gold Nanostructures with Spiral Geometries. Nano Letters, 2021, 21, 2919-2925.	9.1	21
40	Epitaxially Driven Formation of Intricate Supported Gold Nanostructures on a Lattice-Matched Oxide Substrate. Nano Letters, 2009, 9, 4258-4263.	9.1	20
41	Highly efficient visible light phenyl modified carbon nitride/TiO2 photocatalyst for environmental applications. Applied Surface Science, 2020, 531, 147394.	6.1	19
42	Insitugrowth of PbSrYCaCuO films by laser ablation. Applied Physics Letters, 1991, 58, 762-764.	3.3	18
43	Normal-state optical properties ofNd1.85Ce0.15CuO4+Î´. Physical Review B, 1993, 47, 985-990.	3.2	17
44	The Dependence of the Plasmon Field Induced Nonradiative Electronic Relaxation Mechanisms on the Gold Shell Thickness in Vertically Aligned CdTeâ˜Au Coreâ˜Shell Nanorods. Nano Letters, 2009, 9, 3772-3779.	9.1	17
45	Far-infrared transmission ofBi2Sr2CaCu2O8films. Physical Review B, 1989, 40, 5162-5164.	3.2	16
46	Atypical grain growth for (211) CdTe films deposited on surface reconstructed (100) SrTiO3 substrates. Applied Surface Science, 2009, 255, 5674-5681.	6.1	16
47	Plasmonics under Attack: Protecting Copper Nanostructures from Harsh Environments. Chemistry of Materials, 2020, 32, 6788-6799.	6.7	16
48	The role of substrate surface termination in the deposition ofÂ(111)ÂCdTe onÂ(0001) sapphire. Applied Physics A: Materials Science and Processing, 2009, 96, 429-433.	2.3	15
49	Exciton Lifetime Tuning by Changing the Plasmon Field Orientation with Respect to the Exciton Transition Moment Direction: CdTe-Au Coreâ˜Shell Nanorods. Nano Letters, 2009, 9, 1242-1248.	9.1	15
50	Plastically deformed Cu-based alloys as high-performance catalysts for the reduction of 4-nitrophenol. Catalysis Science and Technology, 2016, 6, 5737-5745.	4.1	15
51	Evolution of wurtzite CdTe through the formation of cluster assembled films. Applied Physics Letters, 2006, 89, 133101.	3.3	14
52	Plasmonic Enhancement of Nonradiative Charge Carrier Relaxation and Proposed Effects from Enhanced Radiative Electronic Processes in Semiconductorâ˜Gold Coreâ˜Shell Nanorod Arrays. Journal of Physical Chemistry C, 2011, 115, 5578-5583.	3.1	14
53	Eutectic Combinations as a Pathway to the Formation of Substrateâ€Based Auâ€Ge Heterodimers and Hollowed Au Nanocrescents with Tunable Optical Properties. Small, 2014, 10, 3379-3388.	10.0	13
54	Substrate-immobilized noble metal nanoplates: a review of their synthesis, assembly, and application. Journal of Materials Chemistry C, 2021, 9, 12974-13012.	5.5	13

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55	Organized Surfaces of Highly Faceted Single-Crystal Palladium Structures Seeded by Sacrificial Templates. Crystal Growth and Design, 2013, 13, 3847-3851.	3.0	11
56	Periodic Arrays of Dewetted Silver Nanostructures on Sapphire and Quartz: Effect of Substrate Truncation on the Localized Surface Plasmon Resonance and Near-Field Enhancement. Journal of Physical Chemistry C, 2019, 123, 19879-19886.	3.1	11
57	Epitaxially aligned single-crystal gold nanoplates formed in large-area arrays at high yield. Nano Research, 2022, 15, 296-303.	10.4	11
58	Plasmonic Gold Trimers and Dimers with Air-Filled Nanogaps. ACS Applied Materials & Interfaces, 2022, 14, 28186-28198.	8.0	11
59	Growth of (Pb0.75Cu0.25)Sr2(Y1â^'yCay)Cu2O7thin films by laser ablation. Applied Physics Letters, 1991, 59, 2597-2599.	3.3	10
60	Stabilization of Plasmonic Silver Nanostructures with Ultrathin Oxide Coatings Formed Using Atomic Layer Deposition. Journal of Physical Chemistry C, 2021, 125, 17212-17220.	3.1	10
61	YBa/sub 2/Cu/sub 3/O/sub 7-x/ thin-film picosecond photoresponse in the resistive state. IEEE Transactions on Applied Superconductivity, 1997, 7, 3422-3425.	1.7	9
62	(100) MgAl2O4 as a lattice-matched substrate for the epitaxial thin film deposition of the relaxor ferroelectric PMN-PT. Applied Physics A: Materials Science and Processing, 2010, 98, 187-194.	2.3	9
63	Copper Template Design for the Synthesis of Bimetallic Copperâ€"Rhodium Nanoshells through Galvanic Replacement. Particle and Particle Systems Characterization, 2018, 35, 1700420.	2.3	9
64	Quantum fluctuations in current-carrying thin films ofYBa2Cu3O7â^'Î´. Physical Review B, 1997, 55, R14741-R14744.	3.2	8
65	Growth of Nd1.85Ce0.15CuO4+Î´ thin films by laser ablation. Physica C: Superconductivity and Its Applications, 1992, 197, 75-78.	1.2	7
66	Switching speed for controlled damping using thin film YBa2Cu3O7-Î´. Cryogenics, 1997, 37, 113-116.	1.7	6
67	The templated assembly of highly faceted three-dimensional gold microstructures into periodic arrays. Materials Letters, 2012, 76, 155-158.	2.6	6
68	Synergistic roles of vapor- and liquid-phase epitaxy in the seed-mediated synthesis of substrate-based noble metal nanostructures. Nanoscale, 2021, 13, 20225-20233.	5.6	5
69	Local characterization of Y-Ba-Cu-O thin films. IEEE Transactions on Applied Superconductivity, 2001, 11, 3226-3229.	1.7	4
70	Detwinning YBa2Cu3O7â^'Î´ thin films. Applied Physics Letters, 2003, 82, 3728-3730.	3.3	4
71	Microstructure and current transport properties of single-layer YBa2Cu3O7â^'x and multiple-layer YBa2Cu3O7â^'x/(Ba0.05, Sr0.95)TiO3 superconductor films. Thin Solid Films, 2005, 488, 217-222.	1.8	4
72	The origin of preferential twinning in YBa2Cu3O7â^'Î´ thin films deposited on the (0 0 1) NdGaO3 substrate. Journal of Applied Physics, 2005, 97, 123906.	2.5	4

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73	Correlations between critical current density and penetration depth in ion irradiated YBa/sub 2/Cu/sub 3/O/sub 7/ thin films. IEEE Transactions on Applied Superconductivity, 1997, 7, 2005-2008.	1.7	3
74	The Infrared Hall Effect in YBCO: Temperature and Frequency Dependence of Hall Scattering. Journal of Low Temperature Physics, 1999, 117, 1055-1058.	1.4	2
75	Picosecond photoresponse of YBa2Cu3O7â^'x thin films. European Physical Journal D, 1996, 46, 1111-1112.	0.4	1
76	The role of lattice misfit strains in the deposition of epitaxial (Ba1â^'ySry)Ti0.5Nb0.5O3 films. Journal of Crystal Growth, 2009, 311, 2753-2758.	1.5	1
77	Optical study of localization in theab-plane conductivity of single crystals of YBa2Cu3O6.95 induced by ion damage. Journal of Superconductivity and Novel Magnetism, 1994, 7, 497-499.	0.5	0
78	Terahertz pump-probe spectroscopy in YBCO thin films. , 2004, , .		0
79	Laser Scanning Microscopy Studies on Detwinned<tex>$rm YBa_2rm Cu_3rm O_7-delta$</tex>Thin Films. IEEE Transactions on Applied Superconductivity, 2005, 15, 3082-3085.	1.7	0
80	Light-Assisted Growth of Hexagonal Au Nanostructures on Sapphire Substrates. Microscopy and Microanalysis, 2018, 24, 1678-1679.	0.4	0