Anna Palau

List of Publications by Year
in descending order

103 papers	2,716 citations	185998 28 h-index	205818 48 g-index
106 all docs	106 docs citations	106 times ranked	1757 citing authors

#	Article	IF	Citations
1	Nanoscale strain-induced pair suppression asÂaÂvortex-pinning mechanism in high-temperature superconductors. Nature Materials, 2012, 11, 329-336.	13.3	298
2	Progress towards all-chemical superconducting YBa2Cu3O7-coated conductors. Superconductor Science and Technology, 2006, 19, S13-S26.	1.8	205
3	Growth, nanostructure and vortex pinning in superconducting YBa₂Cu₃O₇thin films based on trifluoroacetate solutions. Superconductor Science and Technology, 2012, 25, 123001.	1.8	155
4	Chemical solution deposition: a path towards low cost coated conductors. Superconductor Science and Technology, 2004, 17, 1055-1064.	1.8	121
5	Evolution of Metal-Trifluoroacetate Precursors in the Thermal Decomposition toward High-Performance YBa₂Cu₃O₇ Superconducting Films. Chemistry of Materials, 2010, 22, 1686-1694.	3.2	74
6	Simultaneous inductive determination of grain and intergrain critical current densities of YBa2Cu3O7â˜x coated conductors. Applied Physics Letters, 2004, 84, 230-232.	1.5	69
7	High quality YBa2Cu3O7thin films grown by trifluoroacetates metalorganic deposition. Superconductor Science and Technology, 2003, 16, 45-53.	1.8	56
8	Superconducting YBa₂Cu₃O_{7â€“Î´} Nanocomposites Using Preformed ZrO₂ Nanocrystals: Growth Mechanisms and Vortex Pinning Properties. Advanced Electronic Materials, 2016, 2, 1600161.	2.6	55
9	Epitaxial YBa₂Cu₃O_{7â˜x}nanocomposite thin films from colloidal solutions. Superconductor Science and Technology, 2015, 28, 124007.	1.8	49
10	Nucleation and mesostrain influence on percolating critical currents of solution derived YBa2Cu3O7 superconducting thin films. Physica C: Superconductivity and Its Applications, 2012, 482, 58-67.	0.6	47
11	Size-controlled spontaneously segregated Ba₂YTaO₆nanoparticles in YBa₂Cu₃O₇nanocomposites obtained by chemical solution deposition. Superconductor Science and Technology, 2014, 27, 044008.	1.8	46
12	Crossover between Channeling and Pinning at Twin Boundaries inYBa2Cu3O7Thin Films. Physical Review Letters, 2006, 97, 257002.	2.9	45
13	Hysteretic Vortex Pinning in Superconductor-Ferromagnet Nanocomposites. Physical Review Letters, 2007, 98, 117003.	2.9	45
14	Control of nanostructure and pinning properties in solution deposited YBa2Cu3O7â˜x nanocomposites with preformed perovskite nanoparticles. Scientific Reports, 2019, 9, 5828.	1.6	43
15	Solution-derived YBa₂Cu₃O₇nanocomposite films with a Ba₂YTaO₆secondary phase for improved superconducting properties. Superconductor Science and Technology, 2013, 26, 015001.	1.8	42
16	Disentangling vortex pinning landscape in chemical solution deposited superconducting YBa₂Cu₃O_{7â˜x}films and nanocomposites. Superconductor Science and Technology, 2018, 31, 034004.	1.8	42
17	Intermediate phase evolution in YBCO thin films grown by the TFA process. Superconductor Science and Technology, 2010, 23, 014012.	1.8	41
18	Emerging Diluted Ferromagnetism in Highâ€T_c Superconductors Driven by Point Defect Clusters. Advanced Science, 2016, 3, 1500295.	5.6	41

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19	Low Temperature Epitaxial Oxide Ultrathin Films and Nanostructures by Atomic Layer Deposition. Chemistry of Materials, 2012, 24, 3732-3737.	3.2	40
20	Solution design for low-fluorine trifluoroacetate route to YBa₂Cu₃O₇films. Superconductor Science and Technology, 2016, 29, 024002.	1.8	40
21	Strain-driven broken twin boundary coherence in YBa2Cu3O7âˆ'Î´ nanocomposite thin films. Applied Physics Letters, 2013, 102, .	1.5	39
22	Influence of porosity on the critical currents of trifluoroacetate-MOD YBa/sub 2/Cu/sub 3/O/sub 7/ films. IEEE Transactions on Applied Superconductivity, 2003, 13, 2504-2507.	1.1	38
23	Guided vortex motion in YBa<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>Cu<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>O<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow />	1.1	38
24	Simultaneous determination of grain and grain-boundary critical currents inYBa2Cu3O7-coated conductors by magnetic measurements. Physical Review B, 2007, 75, .	1.1	31
25	Isotropic and anisotropic pinning in TFA-grown YBa₂Cu₃O_{7 âˆ'x}films with BaZrO₃nanoparticles. Superconductor Science and Technology, 2011, 24, 125010.	1.8	31
26	Interaction between solution derived BaZrO3 nanodot interfacial templates and YBa2Cu3O7 films leading to enhanced critical currents. Acta Materialia, 2011, 59, 2075-2082.	3.8	30
27	Resistive switching in CeO2/La0.8Sr0.2MnO3 bilayer for non-volatile memory applications. Microelectronic Engineering, 2015, 147, 37-40.	1.1	30
28	Role of twin boundaries on vortex pinning of CSD YBCO nanocomposites. Superconductor Science and Technology, 2014, 27, 125009.	1.8	29
29	Flexible manufacturing of functional ceramic coatings by inkjet printing. Thin Solid Films, 2013, 548, 489-497.	0.8	28
30	Epitaxial superconducting GdBa₂Cu₃O_{7âˆ'Î´}/Gd₂O₃ nanocomposite thin films from advanced low-fluorine solutions. Superconductor Science and Technology, 2017, 30, 125010.	1.8	27
31	Epitaxial YBa₂Cu₃O_{7âˆ'x}nanocomposite films and coated conductors from BaMO₃(M= Zr, Hf) colloidal solutions. Superconductor Science and Technology, 2018, 31, 044001.	1.8	27
32	Volume Resistive Switching in metallic perovskite oxides driven by the Metal-Insulator Transition. Journal of Electroceramics, 2017, 39, 185-196.	0.8	26
33	Pinning regimes of grain boundary vortices inYBa2Cu3O7âˆ'xcoated conductors. Physical Review B, 2006, 73, .	1.1	24
34	Nanostructured Superconductors with Efficient Vortex Pinning. , 2011, , 303-349.		24
35	Ultra-high critical current densities of superconducting YBa2Cu3O7-Î´ thin films in the overdoped state. Scientific Reports, 2021, 11, 8176.	1.6	24
36	Characterization of superconducting rings using an in-field hall probe magnetic mapping system. IEEE Transactions on Applied Superconductivity, 2003, 13, 3667-3670.	1.1	23

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37	First Observation of Flux Avalanches in a-MoSi Superconducting Thin Films. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-4.	1.1	23
38	All-chemical YBa2Cu3O7coated conductors on IBAD-YSZ stainless steel substrates. Superconductor Science and Technology, 2006, 19, L1-L4.	1.8	22
39	Integration of atomic layer deposition CeO2 thin films with functional complex oxides and 3D patterns. Thin Solid Films, 2014, 553, 7-12.	0.8	21
40	Competition between Superconductor â€“ Ferromagnetic stray magnetic fields in YBa2Cu3O7â^'x films pierced with Co nano-rods. Scientific Reports, 2017, 7, 5663.	1.6	21
41	Unusual magneto-transport of YBa₂Cu₃O_{7â^'Î´}films due to the interplay of anisotropy, random disorder and nanoscale periodic pinning. New Journal of Physics, 2013, 15, 103022.	1.2	20
42	Nanoscale Correlations between Metalâ€“Insulator Transition and Resistive Switching Effect in Metallic Perovskite Oxides. Small, 2020, 16, e2001307.	5.2	20
43	Comparison of ac susceptibility of YBa2Cu3O7 coated conductors and single crystals. Applied Physics Letters, 2004, 85, 5646-5648.	1.5	19
44	Vortex dynamics at high ac amplitudes of trifluoracetate route grown<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>YBa</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:ms Physical Review B, 2010, 81, .	1.1	19
45	Porosity induced magnetic granularity in epitaxialYBa2Cu3O7thin films. Physical Review B, 2006, 73, .	1.1	18
46	Engineering Oxygen Migration for Homogeneous Volume Resistive Switching in 3â€Terminal Devices. Advanced Electronic Materials, 2019, 5, 1800629.	2.6	18
47	Correlation between grain and grain-boundary critical current densities in ex situ coated conductors with variable YBa2Cu3O7â^'Î´ layer thickness. Applied Physics Letters, 2006, 88, 122502.	1.5	17
48	Magnetic and structural characterization of inkjet-printed^{TFA}YBa₂Cu₃O_{7â^'x}/^{MOD}CZO/^{ABAD} coated conductors. Superconductor Science and Technology, 2013, 26, 125004.	1.2	17
49	Untangling surface oxygen exchange effects in YBa₂Cu₃O_{6+x} thin films by electrical conductivity relaxation. Physical Chemistry Chemical Physics, 2017, 19, 14129-14140.	1.3	17
50	Electrochemical Tuning of Metal Insulator Transition and Nonvolatile Resistive Switching in Superconducting Films. ACS Applied Materials & Interfaces, 2018, 10, 30522-30531.	4.0	17
51	Accelerated growth by flash heating of high critical current trifluoroacetate solution derived epitaxial superconducting YBa₂Cu₃O₇ films. Journal of Materials Chemistry C, 2019, 7, 4748-4759.	2.7	16
52	Vortex creep in TFAâ€“YBCO nanocomposite films. Superconductor Science and Technology, 2014, 27, 115008.	1.8	15
53	Chemical solution techniques for epitaxial growth of oxide buffer and YBa2Cu3O7 films. Journal of the European Ceramic Society, 2004, 24, 1831-1835.	2.8	14
54	Growth of Chemical Solution Deposited $^{m TFA}{m YBCO}/^{m MOD}({m Ce},{m Zr}){m O}_{2}/^{m ABAD}{m YSZ/SS}$Coated Conductors. IEEE Transactions on Applied Superconductivity, 2009, 19, 3212-3215.	1.1	14

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55	Direct Visualization of Current-Stimulated Oxygen Migration in YBa₂Cu₃O_{7â˜Î´} Thin Films. ACS Nano, 2020, 14, 11765-11774.	7.3	14
56	Intrinsic anisotropy and pinning anisotropy in nanostructured YBa₂Cu₃O_{7â˜Î´} from microwave measurements. Superconductor Science and Technology, 2020, 33, 044017.	1.8	14
57	Magnetization and critical current of finite superconductingYBa2Cu3O7rings. Physical Review B, 2005, 72, .	1.1	13
58	Vortex Breaking and Cutting in Type II Superconductors. Physical Review Letters, 2008, 101, 097002.	2.9	13
59	Angular flux creep contributions in YBa2Cu3O7â˜Î´ nanocomposites from electrical transport measurements. Scientific Reports, 2018, 8, 5924.	1.6	13
60	The identification of grain boundary networks of distinct critical current density in YBa2Cu3O7Âxcoated conductors. Superconductor Science and Technology, 2004, 17, 1283-1288.	1.8	12
61	Enhanced Vortex Pinning in YBCO Coated Conductors With BZO Nanoparticles From Chemical Solution Deposition. IEEE Transactions on Applied Superconductivity, 2009, 19, 3258-3261.	1.1	12
62	Encoding Magnetic States in Monopoleâ€Like Configurations Using Superconducting Dots. Advanced Science, 2016, 3, 1600207.	5.6	12
63	Vortex Lattice Instabilities in YBa2Cu3O7-x Nanowires. Materials, 2018, 11, 211.	1.3	12
64	Grain and grain boundary vortex dynamics in YBa2Cu3O7â€Îˊ coated conductor by ac susceptibility. Journal of Applied Physics, 2007, 102, 073911.	1.1	11
65	Pinning Landscape Analysis in YBCO Films With Epitaxial and/or Non-Coherent BZO Nanoparticles. IEEE Transactions on Applied Superconductivity, 2011, 21, 3243-3246.	1.1	11
66	Intrinsic anisotropy versus effective pinning anisotropy in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>YB</mml:mi><mml:msub><mml:mi mathvariant="normal">a</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="normal">C</mml:mi><mml:msub><mml:mi mathvariant="normal">u</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>7</mml:mn></mml:msub></mml:mrow></mml:math> thin f	1.1	11
67	Determination of the inter- and intra-granular critical currents in superconducting YBa2Cu3O7welds. Superconductor Science and Technology, 2005, 18, 1227-1232.	1.8	10
68	Vortex dynamics in thin films of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>YBa</mml:mtext></mml:mrow><mml:mn>2</mml:mn>	1.1	10
69	Nanostrain induced pinning in YBa₂Cu₃O_{7â˜x}nanocomposites even close to the irreversibility line. Superconductor Science and Technology, 2012, 25, 122001.	1.8	10
70	Nanowall pinning for enhanced pinning force in YBCO films with nanofabricated structures. Physica C: Superconductivity and Its Applications, 2014, 506, 178-183.	0.6	10
71	Geometrically controlled ratchet effect with collective vortex motion. New Journal of Physics, 2015, 17, 073022.	1.2	10
72	Depairing Current at High Magnetic Fields in Vortex-Free High-Temperature Superconducting Nanowires. Nano Letters, 2019, 19, 4174-4179.	4.5	10

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73	Epitaxial nucleation and growth of buffer layers and Y123 coated conductors deposited by metal-organic decomposition. Physica C: Superconductivity and Its Applications, 2002, 372-376, 806-809.	0.6	9
74	Grain and grain-boundary critical currents in coated conductors with noncorrelating YBa2Cu3O7 and substrate grain-boundary networks. Applied Physics Letters, 2006, 88, 132508.	1.5	9
75	Magnetic vortex pinning in superconductor/ferromagnet nanocomposites. Superconductor Science and Technology, 2007, 20, S136-S140.	1.8	9
76	Growth and microstructure of MTG REBa2Cu3O7/REBaCuO5 with heavy rare earth elements. Physica C: Superconductivity and Its Applications, 2002, 372-376, 1119-1122.	0.6	8
77	Inductive analysis of magnetic granularity effects in YBCO IBAD and RABiTS coated conductors. IEEE Transactions on Applied Superconductivity, 2003, 13, 2599-2602.	1.1	8
78	Artificial magnetic granularity effects on patterned epitaxial<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">Y</mml:mi><mml:msub><mml:mi mathvariant="normal">Ba</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">Cu</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mrow><mml:mn>7</mml:mn><mml:mo>â^’</mml:mo><mml:mi>x</mml:mi></mml:mrow></	1.1	8
79	Pyrolysis study of solution-derived superconducting YBa₂Cu₃O₇films: disentangling the physico-chemical transformations. Journal of Materials Chemistry C, 2020, 8, 10266-10282.	2.7	8
80	High Performance of Superconducting YBa₂Cu₃O₇ Thick Films Prepared by Single-Deposition Inkjet Printing. ACS Applied Electronic Materials, 2021, 3, 3948-3961.	2.0	8
81	Probing the lattice anharmonicity of superconducting <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>YBa</mml:mi><mml:mn>2</mml:mn></mml:m mathvariant="normal">O</mml:mi><mml:mrow><mml:mn>7</mml:mn><mml:mo>â^’</mml:mo><mml:mi>Î´</mml:mi></mml:mrow>< via phonon harmonics. Physical Review B, 2019, 100, .	1.1	
82	Vortex pinning properties at dc and microwave frequencies of YBa2Cu3O7-x films with nanorods and nanoparticles. Superconductor Science and Technology, 2020, 33, 074006.	1.8	7
83	Optimizing vortex pinning in YBa2Cu3O7-x superconducting films up to high magnetic fields. Communications Materials, 2022, 3, .	2.9	7
84	Melt growth and microstructure development of high critical current REBa2Cu3O7superconductors with a natural mixture of rare earths. Superconductor Science and Technology, 2002, 15, 60-66.	1.8	6
85	Effect of Strain on Grain and Grain-Boundary Critical Currents of YBCO Coated Conductors. IEEE Transactions on Applied Superconductivity, 2005, 15, 2790-2793.	1.1	6
86	Vortex oscillations in TFA-grown YBCO thin-films with BZO nanoparticles. Physica C: Superconductivity and Its Applications, 2010, 470, 2033-2039.	0.6	6
87	Trapping Flux Avalanches in Nb Films by Circular Stop-Holes of Different Size. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-4.	1.1	6
88	Electromigration in the dissipative state of high-temperature superconducting bridges. Applied Physics Letters, 2019, 114, .	1.5	6
89	Suppression of superconductivity at the nanoscale in chemical solution derived YBa₂Cu₃O_{7â^’Î´}thin films with defective Y₂Ba₄Cu₈O₁₆intergrowths. Nanoscale Advances, 2020, 2, 3384-3393.	2.2	6
90	Luminescent and Magnetic Tb-MOF Flakes Deposited on Silicon. Molecules, 2021, 26, 5503.	1.7	6

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91	Chemical solution growth of superconductors: a new path towards high critical current coated conductors. Physica C: Superconductivity and Its Applications, 2004, 408-410, 913-914.	0.6	4
92	Inkjet-Printed Chemical Solution Y2O3 Layers for Planarization of Technical Substrates. Coatings, 2017, 7, 227.	1.2	4
93	Magnetic granularity analysis of YBCO coated conductors. Physica C: Superconductivity and Its Applications, 2004, 408-410, 866-868.	0.6	3
94	Perpendicular ac susceptibility and critical current density of distant superconducting twin films. Superconductor Science and Technology, 2011, 24, 075004.	1.8	3
95	Multi-Terminal Transistor-Like Devices Based on Strongly Correlated Metallic Oxides for Neuromorphic Applications. Materials, 2020, 13, 281.	1.3	3
96	Low-Fluorine Ba-Deficient Solutions for High-Performance Superconducting YBCO Films. Coatings, 2021, 11, 199.	1.2	3
97	Vortex Dynamics in Nanostructured TFA-Grown YBCO Films Studied by Ac Susceptibility. IEEE Transactions on Applied Superconductivity, 2011, 21, 3189-3191.	1.1	2
98	Electricallyâ€Driven Oxygen Vacancy Aggregation and Displacement in YBa₂Cu₃O_{7â^'Î´} Films. Advanced Electronic Materials, 2022, 8, .	2.6	2
99	6. Vortex dynamics in nanofabricated chemical solution deposition high-temperature superconducting films. , 2017, , 195-220.		1
100	Potential of Copper Oxide High-Temperature Superconductors for Tailoring Ferromagnetic Spin Textures. , 2021, , 167-182.		1
101	Investigation of diethanolamine (DEA) as a chelating agent in the fabrication of fluorine-free propionate route YBa₂Cu₃O₇ (YBCO) thin films. Superconductor Science and Technology, 2022, 35, 054010.	1.8	1
102	New Microcrack Network Generation in TSMTG YBCO. Journal of Physics: Conference Series, 2006, 43, 397-400.	0.3	0
103	Volume Resistive Switching in Metallic Perovskite Oxides Driven by the Metal-Insulator Transition. Kluwer International Series in Electronic Materials: Science and Technology, 2022, , 289-310.	0.3	0