

Adrian Porch

List of Publications by Year in descending order

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135
papers

3,115
citations

186265

28
h-index

197818

49
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135
all docs

135
docs citations

135
times ranked

2919
citing authors

#	ARTICLE	IF	CITATIONS
1	Thin-film ferroelectric microwave devices. <i>Superconductor Science and Technology</i> , 1998, 11, 1323-1334.	3.5	216
2	Lumped Element Kinetic Inductance Detectors. <i>Journal of Low Temperature Physics</i> , 2008, 151, 530-536.	1.4	207
3	Design and In Vitro Interference Test of Microwave Noninvasive Blood Glucose Monitoring Sensor. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2015, 63, 3016-3025.	4.6	204
4	Novel Microwave Microfluidic Sensor Using a Microstrip Split-Ring Resonator. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2014, 62, 679-688.	4.6	185
5	Improved Split-Ring Resonator for Microfluidic Sensing. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2014, 62, 689-699.	4.6	93
6	The coplanar resonator technique for determining the surface impedance of YBa/sub 2/Cu/sub 3O/sub 7- δ / thin films. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 1995, 43, 306-314.	4.6	84
7	Temperature dependent magnetic penetration depth of Co and Zn doped YBa ₂ Cu ₃ O ₇ obtained from the AC susceptibility of magnetically aligned powders. <i>Physica C: Superconductivity and Its Applications</i> , 1993, 214, 350-358.	1.2	74
8	Study of the magnetite to maghemite transition using microwave permittivity and permeability measurements. <i>Journal of Physics Condensed Matter</i> , 2016, 28, 106002.	1.8	73
9	Electromagnetic absorption in transparent conducting films. <i>Journal of Applied Physics</i> , 2004, 95, 4734-4737.	2.5	71
10	Miniature superconducting filters. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 1996, 44, 1339-1346.	4.6	55
11	Microwave properties of nanodiamond particles. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	54
12	Microwave properties of Ba _{0.5} Sr _{0.5} TiO ₃ thin film coplanar phase shifters. <i>Journal of Applied Physics</i> , 2006, 99, 104101.	2.5	50
13	Muon studies of Li ⁺ diffusion in LiFePO ₄ nanoparticles of different polymorphs. <i>Journal of Materials Chemistry A</i> , 2014, 2, 6238-6245.	10.3	50
14	Magnetic susceptibilities, critical fields, and critical currents of Co- and Zn-doped YBa ₂ Cu ₃ O ₇ . <i>Physical Review B</i> , 1994, 49, 1417-1426.	3.2	49
15	Dry heat and microwave-generated steam protocols for the rapid decontamination of respiratory personal protective equipment in response to COVID-19-related shortages. <i>Journal of Hospital Infection</i> , 2020, 106, 10-19.	2.9	48
16	A Laboratory Test Setup for in Situ Measurements of the Dielectric Properties of Catalyst Powder Samples under Reaction Conditions by Microwave Cavity Perturbation: Set up and Initial Tests. <i>Sensors</i> , 2014, 14, 16856-16868.	3.8	47
17	Microwave absorption in powders of small conducting particles for heating applications. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 2757.	2.8	42
18	Microwave enhanced reaction of carbohydrates with amino-derivatised labels and glass surfaces. <i>Journal of Materials Chemistry</i> , 2003, 13, 2061.	6.7	41

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19	Dual Mode Microwave Microfluidic Sensor for Temperature Variant Liquid Characterization. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 2572-2582.	4.6	41
20	Split ring resonator with optimised sensitivity for microfluidic sensing. Sensors and Actuators A: Physical, 2018, 276, 1-10.	4.1	40
21	Ammonia storage studies on H-ZSM-5 zeolites by microwave cavity perturbation: correlation of dielectric properties with ammonia storage. Journal of Sensors and Sensor Systems, 2015, 4, 263-269.	0.9	39
22	Microwave treatment in oil refining. Applied Petrochemical Research, 2012, 2, 37-44.	1.3	38
23	Microfluidic device for compositional analysis of solvent systems at microwave frequencies. Sensors and Actuators B: Chemical, 2012, 169, 213-221.	7.8	36
24	A Compact Microwave Microfluidic Sensor Using a Re-Entrant Cavity. Sensors, 2018, 18, 910.	3.8	35
25	Microwave noninvasive blood glucose monitoring sensor: Human clinical trial results. , 2017, , .		35
26	Rapid synthesis of colossal magnetoresistance manganites by microwave dielectric heating. Chemical Communications, 2000, , 159-160.	4.1	34
27	Microwave determination of sp ² carbon fraction in nanodiamond powders. Carbon, 2015, 81, 174-178.	10.3	32
28	Nonlinear microwave properties of high T _c thin films. Superconductor Science and Technology, 2005, 18, R24-R49.	3.5	31
29	Transparent current spreading layers for optoelectronic devices. Journal of Applied Physics, 2004, 96, 4211-4218.	2.5	30
30	Surface impedance measurements of superconducting YBa ₂ Cu ₃ O _{6+x} . Journal of Physics F: Metal Physics, 1987, 17, L179-L183.	1.6	29
31	Structure and Electronic Properties of Potassium-Loaded Zeolite L. Journal of Physical Chemistry B, 1997, 101, 9892-9900.	2.6	29
32	Field, temperature, and frequency dependence of the surface impedance of YBa ₂ Cu ₃ O ₇ thin films. Physical Review B, 1998, 57, 5474-5484.	3.2	28
33	The nonlinear surface impedance of YBa ₂ Cu ₃ O _{7-δ} thin films in zero and large applied fields. Journal of Applied Physics, 1999, 86, 2137-2145.	2.5	28
34	Efficient microwave heating of microfluidic systems. Sensors and Actuators B: Chemical, 2013, 181, 904-909.	7.8	26
35	High Q Microwave Microfluidic Sensor Using a Central Gap Ring Resonator. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 1830-1838.	4.6	24
36	Two-fluid interpretation of the microwave conductivity of YBa ₂ Cu ₃ O _{7-δ} . Physical Review B, 1997, 55, 3222-3229.	3.2	23

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37	Unusual features in the nonlinear microwave surface impedance of Y-Ba-Cu-O thin films. <i>Physical Review B</i> , 1998, 58, 11189-11192.	3.2	23
38	Modelling and Measurements of the Microwave Dielectric Properties of Microspheres. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2015, 63, 4492-4500.	4.6	23
39	Microwave properties of YBCO thin films. <i>IEEE Transactions on Applied Superconductivity</i> , 1995, 5, 1737-1740.	1.7	22
40	Investigating the Broadband Microwave Absorption of Nanodiamond Impurities. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2015, 63, 4110-4118.	4.6	22
41	Microwave measurements of powdered YBa ₂ Cu ₃ O _{7-δ} . <i>Journal of Physics F: Metal Physics</i> , 1988, 18, 1547-1562.	1.6	20
42	Meissnerâ€™Ochsenfeld superconducting anomalies in the Beâ€™Agâ€™F system. <i>Solid State Communications</i> , 2004, 130, 137-142.	1.9	19
43	Microfluidic Microwave Sensor for Simultaneous Dielectric and Magnetic Characterization. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2013, 61, 234-243.	4.6	19
44	Microwave Cavity Perturbation Studies on H-form and Cu Ion-Exchanged SCR Catalyst Materials: Correlation of Ammonia Storage and Dielectric Properties. <i>Topics in Catalysis</i> , 2017, 60, 243-249.	2.8	19
45	Microwave cavity perturbation of nitrogen doped nano-crystalline diamond films. <i>Carbon</i> , 2019, 145, 740-750.	10.3	19
46	Non-linear microwave surface impedance of patterned YBa ₂ Cu ₃ O ₇ thin films. <i>Journal of Alloys and Compounds</i> , 1993, 195, 563-566.	5.5	18
47	The Mott transition and optimal performance of transparent conducting oxides in thin-film solar cells. <i>Energy and Environmental Science</i> , 2012, 5, 5387-5391.	30.8	18
48	Real-time measurements of size, speed, and dielectric property of liquid segments using a microwave microfluidic sensor. , 2014, , .		17
49	Double Microstrip Microfluidic Sensor for Temperature Correction of Liquid Characterization. <i>IEEE Microwave and Wireless Components Letters</i> , 2018, 28, 735-737.	3.2	17
50	Superalkaliâ€™Alkalide Interactions and Ion Pairing in Low-Polarity Solvents. <i>Journal of the American Chemical Society</i> , 2021, 143, 3934-3943.	13.7	17
51	Surface impedance measurements of YBa/sub 2/Cu/sub 3/O/sub 7/ thin films using coplanar resonators. <i>IEEE Transactions on Applied Superconductivity</i> , 1993, 3, 1719-1722.	1.7	16
52	Matrix-Bound Nanochemical Possibilities. <i>Chemistry of Materials</i> , 1996, 8, 2114-2120.	6.7	16
53	Can we synthesise a dense bundle of quasi one-dimensional metallic wires?. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1996, 217-218, 198-202.	5.6	16
54	Sensitive measurement of the surface impedance of superconducting single crystals using a sapphire dielectric resonator. <i>IEEE Transactions on Applied Superconductivity</i> , 1997, 7, 2009-2012.	1.7	16

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55	Lumped element kinetic inductance detectors for far-infrared astronomy. , 2008, , .		16
56	Adaptive Coupling of Resonators for Efficient Microwave Heating of Microfluidic Systems. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 3681-3690.	4.6	16
57	Measurement of the microwave conductivities of high-Tc superconducting powders. Physica C: Superconductivity and Its Applications, 1994, 232, 189-198.	1.2	15
58	Switched YBa2Cu3O7 lumped element bandstop filter. Electronics Letters, 1995, 31, 985-986.	1.0	15
59	Novel Coupling Structure for the Resonant Coaxial Probe. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 1699-1708.	4.6	15
60	Design of continuous non-invasive blood glucose monitoring sensor based on a microwave split ring resonator. , 2014, , .		15
61	Temperature Correction for Cylindrical Cavity Perturbation Measurements. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 2153-2161.	4.6	15
62	Continuous and scalable polymer capsule processing for inertial fusion energy target shell fabrication using droplet microfluidics. Scientific Reports, 2017, 7, 6302.	3.3	15
63	Evaluating the coefficient of thermal expansion of additive manufactured AlSi10Mg using microwave techniques. Additive Manufacturing, 2019, 30, 100841.	3.0	15
64	Modulated optical reflectance characterization of high temperature superconducting thin film microwave devices. Journal of Applied Physics, 2000, 87, 8628-8635.	2.5	14
65	Phenomenological model of the nonlinear microwave response of a superconductor containing weak links. Physical Review B, 2001, 63, .	3.2	13
66	Calculation of the Characteristics of Coplanar Resonators for Kinetic Inductance Detectors. IEEE Transactions on Applied Superconductivity, 2005, 15, 552-555.	1.7	13
67	Multi-Resonators, microwave microfluidic sensor for liquid characterization. Microwave and Optical Technology Letters, 2021, 63, 1042-1047.	1.4	13
68	Non-linear microwave surface impedance of epitaxial HTS thin films in low DC magnetic fields. IEEE Transactions on Applied Superconductivity, 1999, 9, 2121-2124.	1.7	12
69	Unusual microwave response and bulk conductivity of very thin FeSe0.3Te0.7 films as a function of temperature. Low Temperature Physics, 2014, 40, 492-499.	0.6	12
70	Rubidium doped zeolite rho: structure and microwave conductivity of a metallic zeolite. Dalton Transactions, 2004, , 3122.	3.3	11
71	An active, non-intrusive, high resolution microwave field probe with applications in high power RF device and circuit design. , 2010, , .		11
72	Particle size characterisation of metals powders for Additive Manufacturing using a microwave sensor. Powder Technology, 2018, 327, 536-543.	4.2	11

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73	Measurement Technique for Microwave Surface Resistance of Additive Manufactured Metals. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 189-197.	4.6	11
74	Synthesis, structure, and properties of the high-temperature superconductor $\text{HgBa}_2\text{CuO}_4+\delta$. Physical Review B, 1997, 55, 12776-12776.	3.2	10
75	Measurements and modeling of HTS shielded dielectric resonators. IEEE Transactions on Applied Superconductivity, 1999, 9, 1928-1931.	1.7	10
76	Compact, narrow bandwidth, lumped element bandstop resonators. IEEE Microwave and Wireless Components Letters, 2005, 15, 524-526.	3.2	10
77	A non-invasive microwave method for assessing solid-state ammonia storage. Sensors and Actuators B: Chemical, 2015, 210, 726-730.	7.8	10
78	High temperature superconductor lumped element resonator. Electronics Letters, 1993, 29, 1728.	1.0	9
79	The synthesis, solid state conductivity and X-ray crystal structure of 558, 147-153.	1.8	9
80	Bioluminescence of <i>Vibrio fischeri</i> : bacteria respond quickly and sensitively to pulsed microwave electric (but not magnetic) fields. Journal of Biomedical Optics, 2019, 24, 1.	2.6	9
81	Microwave conductivity of patterned $\text{YBa}/\text{sub } 2/\text{Cu}/\text{sub } 3/\text{O}/\text{sub } 7$ thin films. IEEE Transactions on Applied Superconductivity, 1995, 5, 1987-1990.	1.7	8
82	Temperature and magnetic field effects on microwave intermodulation in YBCO films. IEEE Transactions on Applied Superconductivity, 2003, 13, 3581-3584.	1.7	8
83	Microwave characterisation of carbon nanotube powders. Nanoscale Research Letters, 2012, 7, 429.	5.7	8
84	Microstrip split ring resonator for microsphere detection and characterization. , 2015, , .		8
85	Effect of build orientation and surface finish on surface resistance in microwave components produced by Selective Laser Melting. , 2017, , .		8
86	A study of the structural series in the $\text{Tl}_x\text{Ca}_y\text{Ba}_{1-x-y}\text{Cu}_z\text{O}$ superconducting system. Journal of Solid State Chemistry, 1990, 88, 193-200.	2.9	7
87	Anomalous features in surface impedance of Y-Ba-Cu-O thin films: dependence on frequency, RF and DC fields. IEEE Transactions on Applied Superconductivity, 2001, 11, 3497-3500.	1.7	7
88	The separated electric and magnetic field responses of luminescent bacteria exposed to pulsed microwave irradiation. Applied Physics Letters, 2016, 109, .	3.3	7
89	Measurement of average particle size in metal powders by microwave cavity perturbation in the magnetic field. Sensors and Actuators A: Physical, 2017, 259, 137-143.	4.1	7
90	Microwave Permittivity of Trace sp^2 Carbon Impurities in Sub-Micron Diamond Powders. ACS Omega, 2018, 3, 2183-2192.	3.5	7

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91	Simultaneous neutron powder diffraction and microwave dielectric studies of ammonia absorption in metal-organic framework systems. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 10460-10469.	2.8	7
92	Model of microwave effects on bacterial spores. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	7
93	A novel dual mode X-band EPR resonator for rapid in situ microwave heating. <i>Journal of Magnetic Resonance</i> , 2020, 310, 106644.	2.1	7
94	Liftoff Dielectric Resonator for the Microwave Surface Resistance Measurement of Metal Plates. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2021, 70, 1-8.	4.7	7
95	Microwave surface impedance of a Bi ₂ /Sr ₂ /CaCu ₂ /O ₈ single crystal and derivation of $\rho_c(T,B)$. <i>IEEE Transactions on Applied Superconductivity</i> , 1993, 3, 1442-1445.	1.7	6
96	The Low Temperature Microwave Properties of GdBa ₂ Cu ₃ O _{7-x} and Sr ₂ RuO ₄ . <i>Journal of Superconductivity and Novel Magnetism</i> , 2001, 14, 73-79.	0.5	6
97	A Lumped Element Kinetic Inductance device for detection of THz radiation. , 2007, , .		6
98	The biological effect of 2.45 GHz microwaves on the viability and permeability of bacterial and yeast cells. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	6
99	Microwave resonators incorporating ceramic YBaCuO helices. <i>IEEE Transactions on Magnetics</i> , 1991, 27, 2948-2951.	2.1	5
100	Microwave surface impedance of patterned YBa ₂ Cu ₃ O ₇ thin films. <i>Physica B: Condensed Matter</i> , 1994, 194-196, 1605-1606.	2.7	5
101	Can Alkali Metal Doped Zeolites be Metallic? - Microwave Conductivity of Rubidium Doped Zeolite Rho. <i>Zeitschrift Fur Physikalische Chemie</i> , 2003, 217, 939-956.	2.8	5
102	Effects of Residual Surface Resistance on the Microwave Properties of YBCO Thin Films. <i>IEEE Transactions on Applied Superconductivity</i> , 2005, 15, 3706-3709.	1.7	5
103	Microwave complex permeability of magnetite using non-demagnetising and demagnetising cavity modes. , 2014, , .		5
104	Dielectric properties of aqueous glucose solutions using microwave cavity and coaxial probe. , 2016, , .		5
105	Microwave Noninvasive Blood Glucose Monitoring Sensor: Penetration Depth and Sensitivity Analysis. , 2018, , .		5
106	Temperature Correction Using Degenerate Modes for Cylindrical Cavity Perturbation Measurements. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2019, 67, 800-805.	4.6	5
107	Dielectric Spectroscopy of Hydrogen-Treated Hexagonal Boron Nitride Ceramics. <i>ACS Applied Electronic Materials</i> , 2020, 2, 1193-1202.	4.3	5
108	Microwaves in Chemistry. <i>IEEE Journal of Microwaves</i> , 2021, 1, 32-42.	6.5	5

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109	Anomalies in nonlinear microwave surface impedance of YBCO thin films on MgO: superconductor versus substrate effects. IEEE Transactions on Applied Superconductivity, 2003, 13, 3598-3601.	1.7	4
110	Simultaneous neutron diffraction and microwave dielectric characterisation of ammine materials – a non-destructive, non-contact characterisation tool for determining ammonia content in solids. Physical Chemistry Chemical Physics, 2016, 18, 23340-23347.	2.8	4
111	Effect of Surface Stresses on Microwave Surface Resistance and Its Impact for Cavity Perturbation Measurements. IEEE Microwave and Wireless Components Letters, 2017, 27, 939-941.	3.2	4
112	Rapid, non-invasive characterization of the dispersity of emulsions via microwaves. Chemical Science, 2018, 9, 6975-6980.	7.4	4
113	Effect of Build Orientation and Laser Power on Microwave Loss in Metal Additive Manufactured Components. IEEE Access, 2021, 9, 44514-44520.	4.2	4
114	Microwave surface impedance of YBCO thin films in DC applied fields. European Physical Journal D, 1996, 46, 1089-1090.	0.4	3
115	Microstructure and RF property correlation in HTS films. IEEE Transactions on Applied Superconductivity, 1999, 9, 2175-2178.	1.7	3
116	Microwave and modulated optical reflectance studies of YBCO thin films. IEEE Transactions on Applied Superconductivity, 2003, 13, 3638-3642.	1.7	3
117	Kinetic inductance detectors for 200 μ m astronomy. , 2006, , .		3
118	Monte Carlo simulation of indium tin oxide current spreading layers in light emitting diodes. Thin Solid Films, 2007, 515, 8660-8663.	1.8	3
119	Microwave properties of platinum nanoparticle films. , 2008, , .		3
120	Correlation of structural and linear electromagnetic properties of high-T _c thin films with their nonlinear microwave performance. Superconductor Science and Technology, 2005, 18, 1478-1482.	3.5	2
121	A novel concentration detection method of hydrogen peroxide using microwave cavity perturbation technique. , 2014, , .		2
122	What the deep sea can tell us about microwaves. , 2016, , .		2
123	Dual feeding cavity resonator for efficiency enhancement in liquid heating applications. Electronics Letters, 2017, 53, 1262-1264.	1.0	2
124	Design Considerations of a Dual Mode X-Band EPR Resonator for Rapid In-Situ Microwave Heating. Applied Magnetic Resonance, 0, , 1.	1.2	2
125	Possible coherence peak in the microwave conductivity of YBa ₂ Cu ₃ O ₇ . Physica B: Condensed Matter, 1994, 194-196, 1607-1608.	2.7	1
126	Microwave applications of high-temperature superconductors. Current Opinion in Solid State and Materials Science, 1997, 2, 11-17.	11.5	1

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127	Field and thermionic-field transport in GaAs/AlGaAs/GaAs heterojunction barriers. Physica Status Solidi (B): Basic Research, 2007, 244, 685-698.	1.5	1
128	Corrections to "Temperature Correction for Cylindrical Cavity Perturbation Measurements" [Jun 17 2153-2161]. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 5078-5078.	4.6	1
129	Monitoring changes in microwave absorption of Ti64 powder during microwave sintering. , 2017, , .		1
130	Novel Variable Coupling Technique for Microwave Liquid Heating and Sensing. , 2018, , .		1
131	The influence of solvent composition on the coordination environment of the Co/Mn/Br based <i>p</i> -xylene oxidation catalyst as revealed by EPR and ESEEM spectroscopy. Catalysis Science and Technology, 2022, 12, 5274-5280.	4.1	1
132	Dielectric resonator measurements of Zs on HTS crystals in high dc magnetic fields. European Physical Journal D, 1996, 46, 1087-1088.	0.4	0
133	FIELD AND THERMIONIC FIELD TRANSPORT IN ALUMINIUM GALLIUM ARSENIDE HETEROJUNCTION BARRIERS. International Journal of High Speed Electronics and Systems, 2007, 17, 39-42.	0.7	0
134	A Novel VHF Heating System to Aid Selective Laser Melting. , 2019, , .		0
135	Simultaneous neutron powder diffraction and microwave characterisation at elevated temperatures. Physical Chemistry Chemical Physics, 2021, 23, 23602-23609.	2.8	0