Derek Ho

List of Publications by Year
in descending order

86 papers	1,853 citations	236925 25 h-index	302126 39 g-index
86 all docs	86 docs citations	86 times ranked	2533 citing authors

#	Article	IF	Citations
1	Microâ€Redoxcapacitor: A Hybrid Architecture Out of the Notorious Energyâ€Power Density Dilemma. Advanced Functional Materials, 2022, 32, .	14.9	32
2	Dual Defocused Laser Pyrolysis: A Lasingâ€Centric Strategy for Defect and Morphological Optimization in Microsupercapacitor Electrodes. Small Methods, 2022, , 2101616.	8.6	2
3	Microâ€Redoxcapacitor: A Hybrid Architecture Out of the Notorious Energyâ€Power Density Dilemma (Adv. Funct. Mater. 19/2022). Advanced Functional Materials, 2022, 32, .	14.9	5
4	SnS₂/MXene derived TiO₂ hybrid for ultra-fast room temperature NO₂ gas sensing. Journal of Materials Chemistry C, 2021, 9, 7407-7416.	5.5	33
5	High Energy Efficiency and Thermal Stability of BaTiO₃â€“BiScO₃ Thin Films Based on Defects Engineering. ACS Applied Electronic Materials, 2021, 3, 1097-1106.	4.3	9
6	The Adatom Concentration Profile: A Paradigm for Understanding Two-Dimensional MoS₂ Morphological Evolution in Chemical Vapor Deposition Growth. ACS Nano, 2021, 15, 6839-6848.	14.6	20
7	Modulation of the Reaction Mechanism via S/Mo: A Rational Strategy for Large-Area MoS₂ Growth. Chemistry of Materials, 2021, 33, 3249-3257.	6.7	12
8	Interlayer Structure Engineering of MXeneâ€Based Capacitorâ€Type Electrode for Hybrid Microâ€Supercapacitor toward Batteryâ€Level Energy Density. Advanced Science, 2021, 8, e2100775.	11.2	104
9	Precursor Concentration Ratio: The Key to Controllable Lateral-to-Standing MoO₂ Flake Transition. Chemistry of Materials, 2021, 33, 6052-6058.	6.7	6
10	Theoretical analysis and image reconstruction for multi-bit quanta image sensors. Signal Processing, 2021, 185, 108087.	3.7	3
11	Battery-Sensor Hybrid: A New Gas Sensing Paradigm with Complete Energy Self-Sufficiency. ACS Applied Materials & Interfaces, 2021, 13, 46507-46517.	8.0	6
12	Natively stretchable micro-supercapacitors based on a PEDOT:PSS hydrogel. Journal of Materials Chemistry C, 2021, 9, 1685-1692.	5.5	23
13	Rolled-up island-bridge (RIB): a new and general electrode configuration design for a wire-shaped stretchable micro-supercapacitor array. Journal of Materials Chemistry A, 2021, 9, 2899-2911.	10.3	25
14	Critical Effect of Filmâ€“Electrode Interface on Enhanced Energy Storage Performance of BaTiO₃â€“BiScO₃ Ferroelectric Thin Films. ACS Applied Electronic Materials, 2021, 3, 4726-4733.	4.3	5
15	Multi-length scale hierarchical architecture overcoming pressure sensing range-speed tradeoff for skin electronics. Journal of Materials Chemistry C, 2021, 9, 17129-17135.	5.5	6
16	A synergistic self-assembled 3D PEDOT:PSS/graphene composite sponge for stretchable microsupercapacitors. Journal of Materials Chemistry A, 2020, 8, 554-564.	10.3	72
17	Concurrently Realizing Geometric Confined Growth and Doping of Transition Metals within Graphene Hosts for Bifunctional Electrocatalysts toward a Solid-State Rechargeable Micro-Znâ€“Air Battery. ACS Applied Materials & Interfaces, 2020, 12, 38031-38044.	8.0	24
18	Asynchronous Event-driven Encoder With Simultaneous Temporal Envelope and Phase Extraction for Cochlear Implants. IEEE Transactions on Biomedical Circuits and Systems, 2020, 14, 620-630.	4.0	3

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19	Mn dopant induced high-valence Ni³⁺ sites and oxygen vacancies for enhanced water oxidation. Materials Chemistry Frontiers, 2020, 4, 1993-1999.	5.9	28
20	Nitrogen Dioxide Gas Sensor Based on Liquid-Phase-Exfoliated Black Phosphorus Nanosheets. ACS Applied Nano Materials, 2020, 3, 6440-6447.	5.0	28
21	Wideband Class-F^{â˜1} Power Amplifier With Dual-/Quad-Mode Bandpass Response. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 2239-2249.	5.4	23
22	Bean Pod-Inspired Ultrasensitive and Self-Healing Pressure Sensor Based on Laser-Induced Graphene and Polystyrene Microsphere Sandwiched Structure. ACS Applied Materials & Interfaces, 2020, 12, 9710-9717.	8.0	69
23	Size-Tunable Flowerlike MoS₂ Nanospheres Combined with Laser-Induced Graphene Electrodes for NO₂ Sensing. ACS Applied Nano Materials, 2020, 3, 2545-2553.	5.0	36
24	Linearity Enhanced Harmonic-Modulated Impedance Inverter Doherty-Like Power Amplifier. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 2029-2041.	5.4	25
25	High energy storage efficiency and thermal stability of Aâ€siteâ€deficient and 110â€textured BaTiO₃â€“BiScO₃ thin films. Journal of the American Ceramic Society, 2020, 103, 3168-3177.	3.8	13
26	Oxygen octahedral tilt ordering in (Na1/2Bi1/2)TiO3 ferroelectric thin films. Applied Physics Letters, 2020, 116, .	3.3	2
27	AND logic gate based fluorescence probe for simultaneous detection of peroxynitrite and hypochlorous acid. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 230, 118073.	3.9	18
28	A Low-Cost Time-Correlated Single Photon Counting Portable DNA Analyzer. Sensors, 2019, 19, 2838.	3.8	4
29	Cuffless Continuous Blood Pressure Estimation From Pulse Morphology of Photoplethysmograms. IEEE Access, 2019, 7, 141970-141977.	4.2	31
30	Fully Integrated Liquid-Core Waveguide Fluorescence Lifetime Detection Microsystem for DNA Biosensing. IEEE Access, 2019, 7, 111944-111953.	4.2	0
31	A Mixed Topology for Broadband High-Efficiency Doherty Power Amplifier. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 1050-1064.	4.6	29
32	An ultra-sensitive and ratiometric fluorescent probe based on the DTBET process for Hg²⁺detection and imaging applications. Analyst, The, 2019, 144, 1353-1360.	3.5	43
33	Liquid-core waveguide TCSPC sensor for high-accuracy fluorescence lifetime analysis. Analytical and Bioanalytical Chemistry, 2019, 411, 3641-3652.	3.7	7
34	Highly sensitive and selective NO2 sensor based on 3D MoS2/rGO composites prepared by a low temperature self-assembly method. Journal of Alloys and Compounds, 2019, 793, 541-551.	5.5	35
35	A novel method for predicting optimal gas sensing temperature of morphologically distinct nanostructured Schottky interfaces. Sensors and Actuators B: Chemical, 2019, 287, 468-475.	7.8	6
36	Low Detection Limit Time-Correlated Single Photon Counting Lifetime Analytical System for Point-of-Care Applications. IEEE Access, 2019, 7, 18256-18266.	4.2	4

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37	Temperature-dependent sensitivity in Pt/La2O3 nanobelt Schottky interface hydrogen sensors. Materials Research Bulletin, 2019, 110, 174-180.	5.2	3
38	Three-Dimensional Graphene Structure for Healable Flexible Electronics Based on Dielsâ€“Alder Chemistry. ACS Applied Materials & Interfaces, 2018, 10, 9727-9735.	8.0	44
39	Coupling Coefficient Reconfigurable Wideband Branch-Line Coupler Topology With Harmonic Suppression. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 1912-1920.	4.6	21
40	Loading the Third Harmonic: A Linear and Efficient Post-Matching Doherty PA. IEEE Microwave Magazine, 2018, 19, 99-105.	0.8	18
41	A New Class of Components for Simultaneous Power Splitting Over Microwave and Millimeter-Wave Frequency Bands. IEEE Access, 2018, 6, 146-158.	4.2	5
42	Postmatching Doherty Power Amplifier With Extended Back-Off Range Based on Self-Generated Harmonic Injection. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 1951-1963.	4.6	49
43	Exposure-Programmable CMOS Pixel With Selective Charge Storage and Code Memory for Computational Imaging. IEEE Transactions on Circuits and Systems I: Regular Papers, 2018, 65, 1555-1566.	5.4	9
44	Morphology, stoichiometry, and crystal structure control via post-annealing for Ptâ€“ZnO nanograin Schottky barrier interfaces. Applied Surface Science, 2018, 443, 506-514.	6.1	9
45	Determination of the Optimal Sensing Temperature in Pt/Ta2O5/MoO3 Schottky Contacted Nanobelt Straddling Heterojunction. Sensors, 2018, 18, 3770.	3.8	7
46	A novel surface area to volume ratio estimation technique for nanohemisphere contacted Schottky barrier structures. AIP Advances, 2018, 8, 085311.	1.3	0
47	Broadband High Efficiency Post-matching Doherty Power Amplifier Based on Mixed-Topology. , 2018, , .		7
48	An Omniâ€Healable and Highly Sensitive Capacitive Pressure Sensor with Microarray Structure. Chemistry - A European Journal, 2018, 24, 16823-16832.	3.3	49
49	New Dual-/Tri-Band Bandpass Filters and Diplexer With Large Frequency Ratio. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 2978-2992.	4.6	46
50	Design of a Compact Wideband Butler Matrix Using Vertically Installed Planar Structure. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2018, 8, 1420-1430.	2.5	22
51	Ultra-sensitive fluorescent probes for hypochlorite acid detection and exogenous/endogenous imaging of living cells. Chemical Communications, 2018, 54, 7967-7970.	4.1	50
52	Coupling coefficient range extension technique for broadband branch-line coupler. Journal of Electromagnetic Waves and Applications, 2018, 32, 92-112.	1.6	2
53	Reaction-Based Offâ€“On Near-infrared Fluorescent Probe for Imaging Alkaline Phosphatase Activity in Living Cells and Mice. ACS Applied Materials & Interfaces, 2017, 9, 6796-6803.	8.0	127
54	Broadband Efficiency-Enhanced Mutually Coupled Harmonic Postmatching Doherty Power Amplifier. IEEE Transactions on Circuits and Systems I: Regular Papers, 2017, 64, 1758-1771.	5.4	67

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55	A reaction-based near-infrared fluorescent sensor for Cu2+ detection in aqueous buffer and its application in living cells and tissues imaging. Biosensors and Bioelectronics, 2017, 94, 24-29.	10.1	77
56	Solutionâ€Processed Porous Tungsten Molybdenum Oxide Electrodes for Energy Storage Smart Windows. Advanced Materials Technologies, 2017, 2, 1700047.	5.8	48
57	Construction of an alkaline phosphatase-specific two-photon probe and its imaging application in living cells and tissues. Biomaterials, 2017, 140, 220-229.	11.4	57
58	Enhancement of Gas Sensitivity For MoO3 Nanobelt Sensor by Thermionic Field Emission. , 2017, 1, 1-4.		0
59	An Equal-Length Multiway Differential Metamaterial Phase Shifter. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 136-146.	4.6	18
60	High-sensitivity low-power tungsten doped niobium oxide nanorods sensor for nitrogen dioxide air pollution monitoring. Sensors and Actuators B: Chemical, 2017, 238, 204-213.	7.8	20
61	Efficiency enhanced post-matching Doherty power amplifier based on modified phase compensation network. , 2017, , .		6
62	Recent Advances in Fluorescence Lifetime Analytical Microsystems: Contact Optics and CMOS Time-Resolved Electronics. Sensors, 2017, 17, 2800.	3.8	26
63	Bidirectional multi-level spatial coded exposure CMOS capacitive TIA pixel design. , 2016, , .		1
64	Nanostructured TiO<inf>2</inf> Schottky diode with large surface area for chemical sensors. , 2016, , .		0
65	Glove-based hand gesture recognition sign language translator using capacitive touch sensor. , 2016, , .		68
66	Nanoparticle-on-chip: A CMOS DNA analyzer. , 2016, , .		0
67	Compact band pass filter with controllable bandwidth based on low radiation spurâ€line defected ground structure. Microwave and Optical Technology Letters, 2016, 58, 2966-2968.	1.4	3
68	Tungsten-Doped Nb₂O₅Nanorod Sensor for Toxic and Combustible Gas Monitoring Applications. IEEE Electron Device Letters, 2016, 37, 1223-1226.	3.9	3
69	Design technique for meta-structure planar directional couplers with arbitrary coupling ratios. , 2016, , .		0
70	CMOS computational pixel for binary temporal optically encoded high-speed imaging. , 2016, , .		0
71	Exposure optimization for multi-bit quanta image sensor with ultra-small well capacity. , 2016, , .		0
72	MoO<inf>3</inf> nanoplatelets based Schottky diode for low-noise sensors in harsh envionments. , 2016, , .		0

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73	CMOS Time-Resolved, Contact, and Multispectral Fluorescence Imaging for DNA Molecular Diagnostics. Sensors, 2014, 14, 20602-20619.	3.8	13
74	The Intersection of CMOS Microsystems and Upconversion Nanoparticles for Luminescence Bioimaging and Bioassays. Sensors, 2014, 14, 16829-16855.	3.8	11
75	Corrigendum on â€˜Shape-controlled synthesis of organolead halide perovskite nanocrystals and their tunable optical absorptionâ€™ (2014 Mater. Res. Express 1 015034). Materials Research Express, 2014, 1, 039501.	1.6	11
76	Shape-controlled synthesis of organolead halide perovskite nanocrystals and their tunable optical absorption. Materials Research Express, 2014, 1, 015034.	1.6	43
77	CMOS Tunable-Color Image Sensor With Dual-ADC Shot-Noise-Aware Dynamic Range Extension. IEEE Transactions on Circuits and Systems I: Regular Papers, 2013, 60, 2116-2129.	5.4	12
78	CMOS Spectrally-Multiplexed FRET-on-a-Chip for DNA Analysis. IEEE Transactions on Biomedical Circuits and Systems, 2013, 7, 643-654.	4.0	23
79	CMOS Tunable-Wavelength Multi-Color Photogate Sensor. IEEE Transactions on Biomedical Circuits and Systems, 2013, 7, 805-819.	4.0	9
80	Single-filter multi-color CMOS fluorescent contact sensing microsystem. , 2012, , .		4
81	CMOS 3-T digital pixel sensor with in-pixel shared comparator. , 2012, , .		2
82	CMOS field-modulated color sensor. , 2011, , .		5
83	A CMOS/Thin-Film Fluorescence Contact Imaging Microsystem for DNA Analysis. IEEE Transactions on Circuits and Systems I: Regular Papers, 2010, 57, 1029-1038.	5.4	56
84	A hybrid thin-film/CMOS fluorescence contact imager. , 2009, , .		3
85	Design Considerations for Sub-mW RF CMOS Low-Noise Amplifiers. , 2007, , .		4
86	Low-Voltage Low-Power Low-Noise Amplifier for Wireless Sensor Networks. , 2006, , .		4