Colm Durkan

List of Publications by Year
in descending order

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103	3,194	185998	168136
papers	citations	28 h-index	53 g-index

107	107	107	4448
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Recent advancements in the use of exosomes as drug delivery systems. Journal of Nanobiotechnology, 2018, 16, 81.	4.2	416
2	Size effects in the electrical resistivity of polycrystalline nanowires. Physical Review B, 2000, 61, 14215-14218.	1.1	247
3	Single Crystals of Single-Walled Carbon Nanotubes Formed by Self-Assembly. Science, 2001, 292, 1136-1139.	6.0	174
4	Electronic spin detection in molecules using scanning-tunneling- microscopy-assisted electron-spin resonance. Applied Physics Letters, 2002, 80, 458-460.	1.5	173
5	Endogenous pH-responsive nanoparticles with programmable size changes for targeted tumor therapy and imaging applications. Theranostics, 2018, 8, 3038-3058.	4.6	159
6	A review and outlook for an anomaly of scanning tunnelling microscopy (STM): superlattices on graphite. Journal Physics D: Applied Physics, 2005, 38, R329-R355.	1.3	146
7	Analysis of failure mechanisms in electrically stressed Au nanowires. Journal of Applied Physics, 1999, 86, 1280-1286.	1.1	129
8	Flux Closure Vortexlike Domain Structures in Ferroelectric Thin Films. Physical Review Letters, 2010, 104, 207602.	2.9	116
9	Probing domains at the nanometer scale in piezoelectric thin films. Physical Review B, 1999, 60, 16198-16204.	1.1	74
10	Redox Activation of a Polyaniline-Coated Cantilever: An Electro-Driven Microdevice Parts of this research are supported by The Israel Ministry of Science and the Israel Science Foundation. M. Lahav gratefully acknowledges the support of The Clore Israel Foundation Scholars Programme.. Angewandte Chemie - International Edition, 2001, 40, 4095.	7.2	65
11	Investigations into local piezoelectric properties by atomic force microscopy. Applied Physics Letters, 2000, 76, 366-368.	1.5	58
12	M2 macrophage-derived exosomes promote the c-KIT phenotype of vascular smooth muscle cells during vascular tissue repair after intravascular stent implantation. Theranostics, 2020, 10, 10712-10728.	4.6	56
13	Atherosclerosis Treatment with Stimuliâ€Responsive Nanoagents: Recent Advances and Future Perspectives. Advanced Healthcare Materials, 2019, 8, e1900036.	3.9	55
14	Recent advances of electrochemical sensors for detecting and monitoring ROS/RNS. Biosensors and Bioelectronics, 2021, 179, 113052.	5.3	55
15	Controlled fabrication of 1â€“2nm nanogaps by electromigration in gold and gold-palladium nanowires. Applied Physics Letters, 2007, 91, 123120.	1.5	53
16	Tailoring the Local Interaction between Graphene Layers in Graphite at the Atomic Scale and Above Using Scanning Tunneling Microscopy. ACS Nano, 2009, 3, 3455-3462.	7.3	52
17	Observation of magnetic domains using a reflection-mode scanning near-field optical microscope. Applied Physics Letters, 1997, 70, 1323-1325.	1.5	51
18	Analysis of failure mechanisms in electrically stressed gold nanowires. Ultramicroscopy, 2000, 82, 125-133.	0.8	49

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19	Surface enhanced Raman spectroscopy as a probe for local modification of carbon films. Physical Review B, 2002, 66, .	1.1	44
20	Observation and investigation of graphite superlattice boundaries by scanning tunneling microscopy. Surface Science, 2007, 601, 498-509.	0.8	42
21	Cadmium-induced dysfunction of the blood-brain barrier depends on ROS-mediated inhibition of PTPase activity in zebrafish. Journal of Hazardous Materials, 2021, 412, 125198.	6.5	41
22	Bundles of polytwins as meta-elastic domains in the thin polycrystalline simple multi-ferroic system PZT. Nanotechnology, 2010, 21, 065702.	1.3	35
23	Nucleation, growth, and control of ferroelectric-ferroelastic domains in thin polycrystalline films. Physical Review B, 2012, 86, .	1.1	35
24	Anomalously Large Spectral Shifts near the Quantum Tunnelling Limit in Plasmonic Rulers with Subatomic Resolution. Nano Letters, 2019, 19, 2051-2058.	4.5	35
25	Nanometer resolution piezoresponse force microscopy to study deep submicron ferroelectric and ferroelastic domains. Applied Physics Letters, 2009, 94, 162903.	1.5	33
26	Domains Beyond the Grain Boundary. Advanced Functional Materials, 2011, 21, 1827-1832.	7.8	32
27	Overview of Crosstalk Between Multiple Factor of Transcytosis in Blood Brain Barrier. Frontiers in Neuroscience, 2019, 13, 1436.	1.4	31
28	Unexpected Controllable Pair-Structure in Ferroelectric Nanodomains. Nano Letters, 2011, 11, 4619-4625.	4.5	30
29	Detection of single electronic spins by scanning tunnelling microscopy. Contemporary Physics, 2004, 45, 1-10.	0.8	29
30	Investigation of the physical mechanisms of shearâ€force imaging. Journal of Applied Physics, 1996, 80, 5659-5664.	1.1	28
31	Study of shear force as a distance regulation mechanism for scanning nearâ€field optical microscopy. Journal of Applied Physics, 1996, 79, 1219-1223.	1.1	24
32	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>90</mml:mn><mml:mo>Â°</mml:mo></mml:mrow></mml:math>domain dynamics and relaxation in thin ferroelectric/ferroelastic films. Physical Review B, 2010, 81, .	1.1	23
33	Silicon depletion layer actuators. Applied Physics Letters, 2008, 92, .	1.5	22
34	Polarization effects in reflection-mode scanning near-field optical microscopy. Journal of Applied Physics, 1998, 83, 1837-1843.	1.1	21
35	Highâ€Fidelity Determination and Tracing of Small Extracellular Vesicle Cargoes. Small, 2020, 16, e2002800.	5.2	21
36	Unraveling the rotational disorder of graphene layers in graphite. Physical Review B, 2010, 81, .	1.1	20

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37	Electrical actuation and readout in a nanoelectromechanical resonator based on a laterally suspended zinc oxide nanowire. Nanotechnology, 2012, 23, 025501.	1.3	20
38	Evaluating femtosecond laser ablation of graphene on SiO2/Si substrate. Journal of Laser Applications, 2016, 28, 022202.	0.8	20
39	Nanoparticles retard immune cells recruitment in vivo by inhibiting chemokine expression. Biomaterials, 2021, 265, 120392.	5.7	19
40	Investigations into local ferroelectric properties by atomic force microscopy. Ultramicroscopy, 2000, 82, 141-148.	0.8	18
41	Effect of Surface Treatments on the Nanomechanical Properties of Human Hair. ACS Biomaterials Science and Engineering, 2018, 4, 3063-3071.	2.6	18
42	High-contrast topography-free sample for near-field optical microscopy. Applied Physics Letters, 2000, 76, 1206-1208.	1.5	16
43	A high pressure, high temperature, scanning tunneling microscope for in situ studies of catalysts. Review of Scientific Instruments, 2000, 71, 3777.	0.6	15
44	Nanometer Scale Electrical Characterization of Artificial Mesostructures. Critical Reviews in Solid State and Materials Sciences, 2000, 25, 1-28.	6.8	15
45	Nanoâ€Domain Pinning in Ferroelasticâ€Ferroelectrics by Extended Structural Defects. Advanced Functional Materials, 2014, 24, 5567-5574.	7.8	15
46	Reflection-mode scanning near-field optical microscopy: Influence of sample type, tip shape, and polarization of light. Journal of Applied Physics, 1998, 83, 1171-1176.	1.1	14
47	Edge and terrace structure of CoTPP on Au(1 1 1) investigated by ultra-high vacuum scanning tunnelling microscopy at room temperature. Surface Science, 2010, 604, 660-665.	0.8	14
48	On the use of nanomechanical atomic force microscopy to characterise oil-exposed surfaces. RSC Advances, 2018, 8, 6680-6689.	1.7	14
49	Plasmon-Induced Trap State Emission from Single Quantum Dots. Physical Review Letters, 2021, 126, 047402.	2.9	14
50	A Depletion Layer Actuator. , 2007, , .		13
51	Direct measurement of charge transport through helical poly(ethyl propiolate) nanorods wired into gaps in single walled carbon nanotubes. Nanotechnology, 2009, 20, 105201.	1.3	12
52	Mechanics of nanosprings: Stiffness and Youngâ€™s modulus of molybdenum-based nanocrystals. Applied Physics Letters, 2002, 80, 4244-4246.	1.5	11
53	The frontiers of microscopy. Materials Today, 2008, 11, 8-11.	8.3	11
54	High-frequency programmable acoustic wave device realized through ferroelectric domain engineering. Applied Physics Letters, 2014, 104, 133505.	1.5	11

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55	Temperature dependence of the ohmic conductivity and activation energy of Pb1+y(Zr0.3Ti0.7)O3 thin films. Applied Physics Letters, 2001, 79, 518-520.	1.5	10
56	On the failure of graphene devices by Joule heating under current stressing conditions. Applied Physics Letters, 2015, 107, .	1.5	10
57	Identification of organic species with â€œdouble-sided tapeâ€•characteristics on the surface of carbonate reservoir rock. Fuel, 2021, 288, 119627.	3.4	10
58	Study of polarization-dependent energy coupling between near-field optical probe and mesoscopic metal structure. Journal of Applied Physics, 2004, 95, 3988-3993.	1.1	9
59	Observation of Large-Scale Features on Graphite by Scanning Tunnelling Microscopy. Japanese Journal of Applied Physics, 2005, 44, 5443-5446.	0.8	9
60	Shifting atomic patterns: on the origin of the different atomic-scale patterns of graphite as observed using scanning tunnelling microscopy. Nanotechnology, 2012, 23, 185703.	1.3	9
61	Cleaning Transferred Graphene for Optimization of Device Performance. Advanced Materials Interfaces, 2019, 6, 1801794.	1.9	9
62	SRGN, a new identified shear-stress-responsive gene in endothelial cells. Molecular and Cellular Biochemistry, 2020, 474, 15-26.	1.4	9
63	40 nm resolution in reflection-mode SNOM with Î» = 685 nm. Ultramicroscopy, 1995, 61, 227-231.	0.8	8
64	Simple Model of Electronic Density of States of Graphite and Its Application to the Investigation of Superlattices. Japanese Journal of Applied Physics, 2005, 44, 5365-5369.	0.8	8
65	Response to Comment on "Single Crystals of Single-Walled Carbon Nanotubes Formed by Self-Assembly". Science, 2003, 300, 1236c-1236.	6.0	7
66	Role of hybridization on the Schottky barrier height of carbon nanotube field effect transistors. Physical Review B, 2009, 79, .	1.1	7
67	Imaging confined charge density oscillations on graphite at room temperature. Physical Review B, 2011, 84, .	1.1	7
68	Nanometreâ€scale investigations by atomic force microscopy into the effect of different treatments on the surface structure of hair. International Journal of Cosmetic Science, 2014, 36, 598-605.	1.2	7
69	Electron transport behavior of quinoidal heteroacene-based junctions: effective electron-transport pathways and quantum interference. Physical Chemistry Chemical Physics, 2018, 20, 28860-28870.	1.3	7
70	Mussel adhesive protein fused with VEâ€cadherin extracellular domain promotes endothelialâ€cell tight junctions and in vivo endothelization recovery of vascular stent. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 94-103.	1.6	7
71	Anomalous n-type electrical behaviour of Pd-contacted CNTFET fabricated on small-diameter nanotube. Nanotechnology, 2010, 21, 215202.	1.3	6
72	Size effects in the resistivity of graphene nanoribbons. Nanotechnology, 2019, 30, 445203.	1.3	6

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73	Performing quantitative MFM measurements on soft magnetic nanostructures. Nanotechnology, 2012, 23, 455701.	1.3	5
74	Reversible nanoscale switching of polytwin orientation in a ferroelectric thin film induced by a local electric field. Applied Physics Letters, 2013, 103, 092904.	1.5	5
75	Probing the location of displayed cytochrome b562on amyloid by scanning tunnelling microscopy. Nanotechnology, 2013, 24, 175102.	1.3	5
76	Scaling of piezoelectric properties in nanometre to micrometre scale. Electronics Letters, 2000, 36, 1538.	0.5	5
77	Current at the Nanoscale. , 2008, , .		5
78	The inverse problem in magnetic force microscopyâ€"inferring sample magnetization from MFM images. Nanotechnology, 2013, 24, 305705.	1.3	4
79	Periodic ripples on thermally-annealed graphene on Cu (110)â€"reconstruction or moirÃ© pattern?. Nanotechnology, 2018, 29, 455705.	1.3	4
80	Multiscale Approach Linking Self-Aggregation and Surface Interactions of Synthesized Foulants to Fouling Mitigation Strategies. Energy & Fuels, 2019, 33, 7216-7224.	2.5	4
81	Effect of the heteroatom-separation on the electron transport behavior of heteroacene-junctions. Computational Materials Science, 2019, 162, 124-132.	1.4	4
82	Electron Transport through a Coordination Junction Formed by Carboxy Thiophenols and Bivalent Metal Ions. Journal of Physical Chemistry C, 2020, 124, 21137-21146.	1.5	4
83	Photooxidation crosslinking to recover residual stress in decellularized blood vessel. International Journal of Energy Production and Management, 2021, 8, rbaa058.	1.9	4
84	Method for increasing shear-force detection sensitivity with uncoated fiber tips. Applied Optics, 1997, 36, 8173.	2.1	3
85	Correlation between shape and stray field in indented square nanomagnets: Experimental and theoretical study. Physical Review B, 2010, 82, .	1.1	3
86	Calibration of the spring constant of cantilevers of arbitrary shape using the phase signal in an atomic force microscope. Nanotechnology, 2012, 23, 485708.	1.3	3
87	Channel selective tunnelling through a nanographene assembly. Nanotechnology, 2012, 23, 095601.	1.3	3
88	Site-specific variations in surface structure and Young's modulus of human hair surfaces at the nanometer scale as induced through bleach treatment. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 126, 105001.	1.5	3
89	Optical impedance matching with scanning near-field optical microscopy. Journal Physics D: Applied Physics, 2003, 36, 2193-2197.	1.3	2
90	Hydrothermally-Grown ZnO Nanowire Tips for Scanning Tunnelling Microscopy. Journal of Nanoscience and Nanotechnology, 2012, 12, 2394-2398.	0.9	2

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91	On the Manipulation of Ferroelectric and Ferroelastic Domains at the Nanoscale. Journal of Electronic Materials, 2015, 44, 2230-2242.	1.0	2
92	Nanometer-Scale Investigations into Oil-Rich Chalk Formations. Energy & Fuels, 2015, 29, 6896-6902.	2.5	2
93	Probing the Interactions of Dolomite Surfaces with Oil at the Molecular Scale. Energy & Fuels, 2019, 33, 6161-6169.	2.5	2
94	Correlation between the microstructure and the deformation behaviour of metallic nanowires. Computational Materials Science, 2019, 168, 116-124.	1.4	2
95	Domains Beyond Grain Boundaries: Domains Beyond the Grain Boundary (Adv. Funct. Mater. 10/2011). Advanced Functional Materials, 2011, 21, 1746-1746.	7.8	1
96	Altering the ordering and disordering of a triangular nanographene at room temperature. Nanotechnology, 2012, 23, 015606.	1.3	1
97	Controllable nanodomain defects in ferroelectric/ferroelastic biferroic thin films. , 2013, , .		1
98	Towards reproducible, scalable lateral molecular electronic devices. Applied Physics Letters, 2014, 105, .	1.5	1
99	A novel paradigm for the fabrication of highly uniform nanowire arrays using residual stress-induced patterning. Journal of Materials Chemistry C, 2016, 4, 5814-5821.	2.7	1
100	Adsorption of 4-n-Nonylphenol, Carvacrol, and Ethanol onto Iron Oxide from Nonaqueous Hydrocarbon Solvents. Langmuir, 2019, 35, 11662-11669.	1.6	1
101	Theoretical estimation of size effects on the electronic transport in tailored graphene nanoribbons. Physical Chemistry Chemical Physics, 2021, 23, 1727-1737.	1.3	1
102	Response to â€œComment on â€˜Nanometer resolution piezoreponse force microscopy to study deep submicron ferroelectric and ferroelastic domainsâ€™ â€•[Appl. Phys. Lett. 97, 046101 (2010)]. Applied Physics Letters, 2010, 97, 046102.	1.5	0
103	Characterisation of carbonaceous deposition in oil exposed surfaces at the nanoscale. , 2016, , .		0