S Ravi P Silva

List of Publications by Citations

546 papers	17,286 citations	64 h-index	107 g-index
604 ext. papers	19,102 ext. citations	5.8 avg, IF	6.77 L-index

#	Paper	IF	Citations
546	Raman spectroscopy on amorphous carbon films. *Journal of Applied Physics*, **1996**, 80, 440-447	2.5	1051
545	Low-threshold cold cathodes made of nitrogen-doped chemical-vapour-deposited diamond. *Nature*, **1996**, 381, 140-141	50.4	477
544	Nitrogen containing hydrogenated amorphous carbon for thin-film field emission cathodes. *Applied Physics Letters*, **1996**, 68, 2529-2531	3.4	442
543	Nitrogen modification of hydrogenated amorphous carbon films. *Journal of Applied Physics*, **1997**, 81, 2626-2634	2.5	319
542	Influence of ion energy and substrate temperature on the optical and electronic properties of tetrahedral amorphous carbon (ta-C) films. *Journal of Applied Physics*, **1997**, 81, 139-145	2.5	317
541	From 1D and 2D ZnO nanostructures to 3D hierarchical structures with enhanced gas sensing properties. *Nanoscale*, **2014**, 6, 235-47	7.7	315
540	Properties of carbon ion deposited tetrahedral amorphous carbon films as a function of ion energy. *Journal of Applied Physics*, **1996**, 79, 7234-7240	2.5	268
539	Hardness, elastic modulus, and structure of very hard carbon films produced by cathodic-arc deposition with substrate pulse biasing. *Applied Physics Letters*, **1996**, 68, 779-781	3.4	231
538	Polyurea-functionalized multiwalled carbon nanotubes: synthesis, morphology, and Raman spectroscopy. *Journal of Physical Chemistry B*, **2005**, 109, 11925-32	3.4	213
537	Role of the Exposed Polar Facets in the Performance of Thermally and UV Activated ZnO Nanostructured Gas Sensors. *Journal of Physical Chemistry C*, **2013**, 117, 17850-17858	3.8	208
536	Pulsed-laser-induced nanoscale island formation in thin metal-on-oxide films. *Physical Review B*, **2005**, 72,	3.3	204
535	Triple functionalisation of single-walled carbon nanotubes with doxorubicin, a monoclonal antibody, and a fluorescent marker for targeted cancer therapy. *Carbon*, **2009**, 47, 2152-2160	10.4	196
534	Large-area synthesis of carbon nanofibres at room temperature. *Nature Materials*, **2002**, 1, 165-8	27	176
533	Tetrahedral amorphous carbon films prepared by magnetron sputtering and dc ion plating. *Journal of Applied Physics*, **1996**, 79, 1416-1422	2.5	173
532	Higher dispersion efficacy of functionalized carbon nanotubes in chemical and biological environments. *ACS Nano*, **2010**, 4, 2615-26	16.7	168
531	Mechanical properties and Raman spectra of tetrahedral amorphous carbon films with high sp3 fraction deposited using a filtered cathodic arc. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **1997**, 76, 351-361		163
530	Photoluminescence and Raman spectroscopy in hydrogenated carbon films. *IEEE Transactions on Magnetics*, **1997**, 33, 3148-3150	2	156

529	Platinum Integrated Graphene for Methanol Fuel Cells. *Journal of Physical Chemistry C*, **2010**, 114, 15837-15841	3.8	147
528	'Inorganics-in-organics': recent developments and outlook for 4G polymer solar cells. *Nanoscale*, **2013**, 5, 8411-27	7.7	132
527	Triboelectric nanogenerators: providing a fundamental framework. *Energy and Environmental Science*, **2017**, 10, 1801-1811	35.4	130
526	Characterization of a-C:H:N deposition from CH4/N2 rf plasmas using optical emission spectroscopy. *Journal of Applied Physics*, **1996**, 79, 7227-7233	2.5	127
525	Drug loading, dispersion stability, and therapeutic efficacy in targeted drug delivery with carbon nanotubes. *Carbon*, **2012**, 50, 622-632	10.4	119
524	Iron filled single-wall carbon nanotubes □A novel ferromagnetic medium. *Chemical Physics Letters*, **2006**, 421, 129-133	2.5	118
523	Carbon nanotubes: a multi-functional material for organic optoelectronics. *Journal of Materials Chemistry*, **2008**, 18, 1183		117
522	Novel catalysts, room temperature, and the importance of oxygen for the synthesis of single-walled carbon nanotubes. *Nano Letters*, **2005**, 5, 1209-15	11.5	116
521	On-chip fabrication of high performance nanostructured ZnO UV detectors. *Scientific Reports*, **2015**, 5, 8516	4.9	108
520	Stress-induced formation of high-density amorphous carbon thin films. *Journal of Applied Physics*, **1997**, 82, 6024-6030	2.5	105
519	High sensitivity organic inorganic hybrid X-ray detectors with direct transduction and broadband response. *Nature Communications*, **2018**, 9, 2926	17.4	102
518	A study of electron field emission as a function of film thickness from amorphous carbon films. *Applied Physics Letters*, **1998**, 73, 3784-3786	3.4	100
517	Resonant tunnelling and fast switching in amorphous-carbon quantum-well structures. *Nature Materials*, **2006**, 5, 19-22	27	99
516	Nitrogen doping of amorphous carbon thin films. *Journal of Applied Physics*, **1998**, 84, 2071-2081	2.5	99
515	Hybrid carbon nanotube networks as efficient hole extraction layers for organic photovoltaics. *ACS Nano*, **2013**, 7, 556-65	16.7	95
514	Structural and optoelectronic properties of C60 rods obtained via a rapid synthesis route. *Journal of Materials Chemistry*, **2006**, 16, 3715		92
513	Nanostructured copper phthalocyanine-sensitized multiwall carbon nanotube films. *Langmuir*, **2007**, 23, 6424-30	4	91
512	Origin of electric field enhancement in field emission from amorphous carbon thin films. *Applied Physics Letters*, **2001**, 78, 2339-2341	3.4	89

511	Ultra-broadband light trapping using nanotextured decoupled graphene multilayers. *Science Advances*, **2016**, 2, e1501238	14.3	88
510	Interpenetrating multiwall carbon nanotube electrodes for organic solar cells. *Applied Physics Letters*, **2006**, 89, 133117	3.4	88
509	Electron field emission from a single carbon nanotube: Effects of anode location. *Applied Physics Letters*, **2005**, 87, 103112	3.4	87
508	Structure and luminescence properties of an amorphous hydrogenated carbon. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **1996**, 74, 369-386		87
507	Evidence for a new two-dimensional C4H-type polymer based on hydrogenated graphene. *Advanced Materials*, **2011**, 23, 4497-503	24	86
506	Hybrid graphene-metal oxide solution processed electron transport layers for large area high-performance organic photovoltaics. *Advanced Materials*, **2014**, 26, 2078-83	24	84
505	Oxidised carbon nanotubes as solution processable, high work function hole-extraction layers for organic solar cells. *Organic Electronics*, **2009**, 10, 388-395	3.5	83
504	Electron-energy-loss spectroscopy characterization of the sp2 bonding fraction within carbon thin films. *Physical Review B*, **2000**, 62, 12628-12631	3.3	80
503	Thermal expansion coefficient of hydrogenated amorphous carbon. *Applied Physics Letters*, **2003**, 83, 3099-3101	3.4	79
502	Self-texturing of nitrogenated amorphous carbon thin films for electron field emission. *Applied Physics Letters*, **1997**, 71, 1477-1479	3.4	77
501	Charge transport effects in field emission from carbon nanotube-polymer composites. *Applied Physics Letters*, **2005**, 87, 263105	3.4	77
500	The importance of oxygen-containing defects on carbon nanotubes for the detection of polar and non-polar vapours through hydrogen bond formation. *Nanotechnology*, **2007**, 18, 175701	3.4	76
499	First human trials of a dry electrophysiology sensor using a carbon nanotube array interface. *Sensors and Actuators A: Physical*, **2008**, 144, 275-279	3.9	76
498	Disorder, clustering, and localization effects in amorphous carbon. *Physical Review B*, **2004**, 70,	3.3	76
497	Electronic properties of semiconducting diamond-like carbon-diamond. *Thin Solid Films*, **1992**, 212, 232-239	2.2	74
496	Vertically aligned graphene nanosheets on multi-yolk/shell structured TiC@C nanofibers for stable Li-S batteries. *Energy Storage Materials*, **2020**, 27, 159-168	19.4	73
495	Characterization of carbon nanotube (MWCNT) containing P(3HB)/bioactive glass composites for tissue engineering applications. *Acta Biomaterialia*, **2010**, 6, 735-42	10.8	72
494	Formation of low-temperature self-organized nanoscale nickel metal islands. *Nanotechnology*, **2003**, 14, 1223-1227	3.4	71

493	EPR linewidth variation, spin relaxation times, and exchange in amorphous hydrogenated carbon. *Physical Review B*, **2000**, 61, 3546-3554	3.3	71
492	Influence of sp2 clusters on the field emission properties of amorphous carbon thin films. *Applied Physics Letters*, **2000**, 77, 2006-2008	3.4	71
491	Critical review of recent progress of flexible perovskite solar cells. *Materials Today*, **2020**, 39, 66-88	21.8	70
490	Field emission from nonaligned carbon nanotubes embedded in a polystyrene matrix. *Applied Physics Letters*, **2002**, 80, 3189-3191	3.4	70
489	A dry electrophysiology electrode using CNT arrays. *Sensors and Actuators A: Physical*, **2006**, 132, 34-41	3.9	69
488	Doping of rf plasma deposited diamond-like carbon films. *Thin Solid Films*, **1995**, 270, 194-199	2.2	67
487	Recent progress in silver nanowire networks for flexible organic electronics. *Journal of Materials Chemistry C*, **2020**, 8, 4636-4674	7.1	66
486	Solution-processable graphene oxide as an efficient hole injection layer for high luminance organic light-emitting diodes. *Journal of Materials Chemistry C*, **2013**, 1, 1708	7.1	66
485	Confined crystals of the smallest phase-change material. *Nano Letters*, **2013**, 13, 4020-7	11.5	65
484	Room temperature photoluminescence from nanostructured amorphous carbon. *Applied Physics Letters*, **2004**, 85, 6236-6238	3.4	65
483	Solution processed reduced graphene oxide/metal oxide hybrid electron transport layers for highly efficient polymer solar cells. *Journal of Materials Chemistry A*, **2013**, 1, 9922	13	64
482	Properties of nitrogen doped tetrahedral amorphous carbon films prepared by filtered cathodic vacuum arc technique. *Journal of Non-Crystalline Solids*, **1998**, 242, 40-48	3.9	64
481	Carbon nanotubes grown on In2O3:Sn glass as large area electrodes for organic photovoltaics. *Applied Physics Letters*, **2007**, 90, 023105	3.4	64
480	Disentanglement of the electronic properties of metallicity-selected single-walled carbon nanotubes. *Physical Review B*, **2009**, 80,	3.3	62
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477	Water-soluble multiwall-carbon-nanotube-polythiophene composite for bilayer photovoltaics. *Applied Physics Letters*, **2006**, 89, 123115	3.4	61
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475	Screening the missing electron: nanochemistry in action. *Physical Review Letters*, **2009**, 102, 046804	7.4	58
474	A flexible metallic TiC nanofiber/vertical graphene 1D/2D heterostructured as active electrocatalyst for advanced Li□S batteries. *Informa□□Materi□y*, **2021**, 3, 790-803	23.1	57
473	Formation of hollow MoS2/carbon microspheres for high capacity and high rate reversible alkali-ion storage. *Journal of Materials Chemistry A*, **2018**, 6, 8280-8288	13	56
472	Maximizing the electron field emission performance of carbon nanotube arrays. *Applied Physics Letters*, **2009**, 94, 133104	3.4	56
471	Metal nanoparticle production by pulsed laser nanostructuring of thin metal films. *Applied Surface Science*, **2007**, 253, 8080-8085	6.7	56
470	Operation of a reversed pentacene-fullerene discrete heterojunction photovoltaic device. *Applied Physics Letters*, **2007**, 90, 113505	3.4	55
469	Effect of aspect ratio and anode location on the field emission properties of a single tip based emitter. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **2005**, 23, 632		55
468	Tuning the work function of surface oxidised multi-wall carbon nanotubes via cation exchange. *Chemical Physics Letters*, **2007**, 434, 92-95	2.5	54
467	Nature of Power Generation and Output Optimization Criteria for Triboelectric Nanogenerators. *Advanced Energy Materials*, **2018**, 8, 1802190	21.8	54
466	Multi-Functional Carbon Fibre Composites using Carbon Nanotubes as an Alternative to Polymer Sizing. *Scientific Reports*, **2016**, 6, 37334	4.9	53
465	Evidence of hexagonal diamond in plasma-deposited carbon films. *Journal of Materials Science*, **1994**, 29, 4962-4966	4.3	53
464	Optical properties of amorphous C/diamond thin films. *Journal of Applied Physics*, **1992**, 72, 1149-1153	2.5	53
463	A unified theoretical model for Triboelectric Nanogenerators. *Nano Energy*, **2018**, 48, 391-400	17.1	52
462	Fluoropolymer indium-tin-oxide buffer layers for improved power conversion in organic photovoltaics. *Applied Physics Letters*, **2008**, 93, 133302	3.4	52
461	Novel nanoparticles with Cr substituted ferrite for self-regulating temperature hyperthermia. *Nanoscale*, **2017**, 9, 13929-13937	7.7	51
460	Properties of cadmium sulphide films grown by single-source metalorganic chemical vapour deposition with dithiocarbamate precursors. *Journal of Crystal Growth*, **1996**, 167, 133-142	1.6	51
459	Generation of Chemically Unmodified Pure Single-Walled Carbon Nanotubes by Solubilizing with RNA and Treatment with Ribonuclease A. *Advanced Materials*, **2006**, 18, 1598-1602	24	50
458	Photoluminescence in amorphous carbon thin films and its relation to the microscopic properties. *Thin Solid Films*, **1995**, 270, 160-164	2.2	50

457	Effects of humidity on the electronic properties of graphene prepared by chemical vapour deposition. *Carbon*, **2016**, 103, 273-280	10.4	49
456	Dynamics of confined plumes during short and ultrashort pulsed laser ablation of graphite. *Physical Review B*, **2005**, 72,	3.3	49
455	Nitrogenated amorphous carbon as a semiconductor. *Diamond and Related Materials*, **1996**, 5, 401-404	3.5	48
454	Organic–inorganic Solar Cells: Recent Developments and Outlook. *IEEE Journal of Selected Topics in Quantum Electronics*, **2010**, 16, 1595-1606	3.8	46
453	Interpretation of enhancement factor in nonplanar field emitters. *Applied Physics Letters*, **2005**, 87, 01311	3.4	46
452	Excimer laser nanostructuring of nickel thin films for the catalytic growth of carbon nanotubes. *Applied Physics Letters*, **2004**, 84, 4035-4037	3.4	46
451	The structure of tetrahedral amorphous carbon thin films. *Thin Solid Films*, **1996**, 290-291, 317-322	2.2	46
450	Carbon Materials in Perovskite Solar Cells: Prospects and Future Challenges. *Energy and Environmental Materials*, **2019**, 2, 107-118	13	45
449	Carrier type inversion in quasi-free standing graphene: studies of local electronic and structural properties. *Scientific Reports*, **2015**, 5, 10505	4.9	45
448	Graphene oxide hole transport layers for large area, high efficiency organic solar cells. *Applied Physics Letters*, **2014**, 105, 073304	3.4	45
447	A PbS nanocrystal-C60 photovoltaic device for infrared light harvesting. *Applied Physics Letters*, **2007**, 91, 133506	3.4	45
446	Thickness dependence of properties of excimer laser crystallized nano-polycrystalline silicon. *Journal of Applied Physics*, **2005**, 97, 114305	2.5	45
445	Field emission from undoped and nitrogen-doped tetrahedral amorphous carbon film prepared by filtered cathodic vacuum arc technique. *Diamond and Related Materials*, **1998**, 7, 640-644	3.5	45
444	The band structure of graphene oxide examined using photoluminescence spectroscopy. *Journal of Materials Chemistry C*, **2015**, 3, 12484-12491	7.1	44
443	ZnO nanodisk based UV detectors with printed electrodes. *Langmuir*, **2014**, 30, 3913-21	4	44
442	Evidence for metal-semiconductor transitions in twisted and collapsed double-walled carbon nanotubes by scanning tunneling microscopy. *Nano Letters*, **2008**, 8, 3350-6	11.5	44
441	Influence of precursor gases on the structure of plasma deposited amorphous hydrogenated carbon–nitrogen films. *Applied Physics Letters*, **1996**, 68, 2645-2647	3.4	44
440	Photoconductivity in highly tetrahedral diamondlike amorphous carbon. *Applied Physics Letters*, **1993**, 63, 370-372	3.4	44

439	Influence of dc bias voltage on the refractive index and stress of carbon-diamond films deposited from a CH4/Ar rf plasma. *Journal of Applied Physics*, **1991**, 70, 5374-5379	2.5	43
438	Uptake and Release of Double-Walled Carbon Nanotubes by Mammalian Cells. *Advanced Functional Materials*, **2010**, 20, 3272-3279	15.6	42
437	Catalyst and chirality dependent growth of carbon nanotubes determined through nano-test tube chemistry. *Advanced Materials*, **2010**, 22, 3685-9	24	42
436	The Role of Substituent Effects in Tuning Metallophilic Interactions and Emission Energy of Bis-4-(2-pyridyl)-1,2,3-triazolatoplatinum(II) Complexes. *Angewandte Chemie - International Edition*, **2015**, 54, 7949-53	16.4	41
435	Optimising DNA binding to carbon nanotubes by non-covalent methods. *Carbon*, **2011**, 49, 1775-1781	10.4	41
434	Intrinsic Gain in Self-Aligned Polysilicon Source-Gated Transistors. *IEEE Transactions on Electron Devices*, **2010**, 57, 2434-2439	2.9	41
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431	Laser-nanostructured Ag films as substrates for surface-enhanced Raman spectroscopy. *Applied Physics Letters*, **2006**, 88, 081904	3.4	40
430	Enhancing the electrical conduction in amorphous carbon and prospects for device applications. *Diamond and Related Materials*, **2003**, 12, 151-158	3.5	40
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428	Source-gated transistors for order-of-magnitude performance improvements in thin-film digital circuits. *Scientific Reports*, **2014**, 4, 4295	4.9	39
427	Design of double-walled carbon nanotubes for biomedical applications. *Nanotechnology*, **2012**, 23, 365102	3.4	39
426	Engineering the plasmon resonance of large area bimetallic nanoparticle films by laser nanostructuring for chemical sensors. *Optics Letters*, **2011**, 36, 1362-4	3	39
425	Growth of carbon nanotubes at temperatures compatible with integrated circuit technologies. *Carbon*, **2011**, 49, 280-285	10.4	39
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423	Silver filled single-wall carbon nanotubes—synthesis, structural and electronic properties. *Nanotechnology*, **2006**, 17, 2415-2419	3.4	39
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421	Interpretation of the field enhancement factor for electron emission from carbon nanotubes. *Journal of Applied Physics*, **2009**, 106, 014314	2.5	38
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419	Highly conductive and dispersible graphene and its application in P3HT-based solar cells. *Chemical Communications*, **2014**, 50, 8705-8	5.8	37
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414	Organic solar cells with plasmonic layers formed by laser nanofabrication. *Physical Chemistry Chemical Physics*, **2013**, 15, 8237-44	3.6	36
413	Measurement and validation of PbS nanocrystal energy levels. *Applied Physics Letters*, **2008**, 93, 043501	3.4	36
412	Electron delocalization in amorphous carbon by ion implantation. *Physical Review B*, **2001**, 63,	3.3	36
411	Low-Field Behavior of Source-Gated Transistors. *IEEE Transactions on Electron Devices*, **2013**, 60, 2444-2449	2.9	35
410	Field emission from multiwall carbon nanotubes on paper substrates. *Applied Physics Letters*, **2007**, 90, 173124	3.4	35
409	Direct Observation of Compositionally Homogeneous a-C:H Band-Gap-Modulated Superlattices. *Physical Review Letters*, **1995**, 75, 4258-4261	7.4	35
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405	Efficient field emission from Li-salt functionalized multiwall carbon nanotubes on flexible substrates. *Applied Physics Letters*, **2007**, 90, 013120	3.4	32
404	Characterisation of defects in thin films of hydrogenated amorphous carbon. *Diamond and Related Materials*, **2000**, 9, 781-785	3.5	32

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402	Stable Hollow-Structured Silicon Suboxide-Based Anodes toward High-Performance Lithium-Ion Batteries. *Advanced Functional Materials*, **2021**, 31, 2101796	15.6	32
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393	Polymer supported carbon nanotube arrays for field emission and sensor devices. *Applied Physics Letters*, **2006**, 89, 103113	3.4	30
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387	Laser direct write of silver nanoparticles from solution onto glass substrates for surface-enhanced Raman spectroscopy. *Applied Physics Letters*, **2007**, 91, 023107	3.4	29
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384	Chloroquine-enhanced gene delivery mediated by carbon nanotubes. *Carbon*, **2011**, 49, 5348-5358	10.4	28
383	The Inner Shell Influence on the Electronic Structure of Double-Walled Carbon Nanotubes. *Advanced Materials*, **2008**, 20, 189-194	24	28
382	Electron field emission from composite electrodes of carbon nanotubes-boron-doped diamond and carbon felts. *Applied Physics Letters*, **2006**, 88, 083116	3.4	28
381	Electron field emission from room temperature grown carbon nanofibers. *Journal of Applied Physics* , **2004**, 95, 3153-3157	2.5	28
380	Electron field emission from excimer laser crystallized amorphous silicon. *Applied Physics Letters*, **2002**, 80, 4154-4156	3.4	28
379	An EPR study of defects in hydrogenated amorphous carbon thin films. *Diamond and Related Materials*, **1998**, 7, 864-868	3.5	28
378	Exploring the theoretical and experimental optimization of high-performance triboelectric nanogenerators using microarchitectured silk cocoon films. *Nano Energy*, **2020**, 74, 104882	17.1	27
377	Electrical properties of pulsed UV laser irradiated amorphous carbon. *Applied Physics Letters*, **2008**, 92, 152104	3.4	27
376	Mechanical and NH3 sensing properties of long multi-walled carbon nanotube ropes. *Carbon*, **2006**, 44, 1821-1825	10.4	27
375	Highly photoconductive amorphous carbon nitride films prepared by cyclic nitrogen radical sputtering. *Applied Physics Letters*, **2004**, 85, 2803-2805	3.4	27
374	Electron energy loss spectroscopy of carbonaceous materials. *Thin Solid Films*, **2005**, 488, 283-290	2.2	27
373	Diamond-like carbon thin film deposition using a magnetically confined r.f. PECVD system. *Diamond and Related Materials*, **1995**, 4, 977-983	3.5	27
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371	Cr(3+) substituted spinel ferrite nanoparticles with high coercivity. *Nanotechnology*, **2016**, 27, 245707	3.4	26
370	Field Plate Optimization in Low-Power High-Gain Source-Gated Transistors. *IEEE Transactions on Electron Devices*, **2012**, 59, 2180-2186	2.9	26
369	Electron field emission of carbon nanotubes on carbon felt. *Chemical Physics Letters*, **2006**, 424, 151-155	2.5	26
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366	Functionalized multiwall carbon nanotubes incorporated polymer/fullerene hybrid photovoltaics. *Applied Physics Letters*, **2010**, 97, 033105	3.4	25
365	Carbon spheres generated in dusty plasmas *Carbon*, **2005**, 43, 704-708	10.4	25
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