Kannan Balasubramanian

List of Publications by Year
in descending order

62	5,275	159358	114278
papers	citations	30 h-index	63 g-index

68	68	68	8304
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Chemically Functionalized Carbon Nanotubes. Small, 2005, 1, 180-192.	5.2	1,520
2	Biosensors based on carbon nanotubes. Analytical and Bioanalytical Chemistry, 2006, 385, 452-468.	1.9	671
3	Contact and edge effects in graphene devices. Nature Nanotechnology, 2008, 3, 486-490.	15.6	658
4	Electrochemical Modification of Graphene. Advanced Materials, 2008, 20, 3050-3053.	11.1	280
5	A Selective Electrochemical Approach to Carbon Nanotube Field-Effect Transistors. Nano Letters, 2004, 4, 827-830.	4.5	115
6	Photoelectronic transport imaging of individual semiconducting carbon nanotubes. Applied Physics Letters, 2004, 84, 2400-2402.	1.5	114
7	Photocurrent Imaging of Charge Transport Barriers in Carbon Nanotube Devices. Nano Letters, 2005, 5, 507-510.	4.5	99
8	Electrochemically functionalized carbon nanotubes for device applications. Journal of Materials Chemistry, 2008, 18, 3071.	6.7	97
9	Enzyme-Free Sugar Sensing in Microfluidic Channels with an Affinity-Based Single-Wall Carbon Nanotube Sensor. Analytical Chemistry, 2010, 82, 6090-6097.	3.2	92
10	Labelâ€Free Detection of Few Copies of DNA with Carbon Nanotube Impedance Biosensors. Angewandte Chemie - International Edition, 2011, 50, 3710-3714.	7.2	87
11	Challenges in the use of 1D nanostructures for on-chip biosensing and diagnostics: A review. Biosensors and Bioelectronics, 2010, 26, 1195-1204.	5.3	82
12	25th Anniversary Article: Labelâ€Free Electrical Biodetection Using Carbon Nanostructures. Advanced Materials, 2014, 26, 1154-1175.	11.1	80
13	Electrical Transport and Confocal Raman Studies of Electrochemically Modified Individual Carbon Nanotubes. Advanced Materials, 2003, 15, 1515-1518.	11.1	75
14	Carbon nanotube transistors â€“ chemical functionalization and device characterization. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 633-646.	0.8	68
15	Chemical Vapor Deposition of Graphene on a â€œPeeled-Offâ€•Epitaxial Cu(111) Foil: A Simple Approach to Improved Properties. ACS Nano, 2014, 8, 8636-8643.	7.3	65
16	Functionalized Metallic Carbon Nanotube Devices for pH Sensing. ChemPhysChem, 2007, 8, 220-223.	1.0	60
17	Surface Enhanced Raman Scattering of Carbon Nanotubes Decorated by Individual Fluorescent Gold Particles. Journal of Physical Chemistry C, 2008, 112, 391-396.	1.5	59
18	Coulomb blockade phenomena in electromigration break junctions. Applied Physics Letters, 2005, 87, 013106.	1.5	53

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19	Applications of the Static Quenching of Rhodamine B by Carbon Nanotubes. ChemPhysChem, 2009, 10, 2251-2255.	1.0	52
20	Tuning the isoelectric point of graphene by electrochemical functionalization. Scientific Reports, 2015, 5, 11794.	1.6	50
21	Electrochemically decorated carbon nanotubes for hydrogen sensing. Applied Surface Science, 2007, 253, 8394-8397.	3.1	48
22	Siteâ€Specific Selfâ€Assembled Liquidâ€Gated ZnO Nanowire Transistors for Sensing Applications. Small, 2010, 6, 589-594.	5.2	46
23	Bioelectronics and Interfaces Using Monolayer Graphene. ChemElectroChem, 2019, 6, 31-59.	1.7	46
24	Selective Enhancement of Carbon Nanotube Photoluminescence by Resonant Energy Transfer. ChemPhysChem, 2009, 10, 905-909.	1.0	44
25	Self-Assembled Electrical Biodetector Based on Reduced Graphene Oxide. ACS Nano, 2012, 6, 5514-5520.	7.3	44
26	Real-Time Label-Free Direct Electronic Monitoring of Topoisomerase Enzyme Binding Kinetics on Graphene. ACS Nano, 2015, 9, 11166-11176.	7.3	43
27	Electronicâ€Bandâ€Structure Mapping of Nanotube Transistors by Scanning Photocurrent Microscopy. Small, 2007, 3, 2038-2042.	5.2	40
28	Enhancing the Electrochemical and Electronic Performance of CVDâ€Grown Graphene by Minimizing Trace Metal Impurities. ChemElectroChem, 2014, 1, 2070-2074.	1.7	33
29	Raman properties of gold nanoparticle-decorated individual carbon nanotubes. Applied Physics Letters, 2007, 90, 173109.	1.5	31
30	Tunable Enhancement of Raman Scattering in Grapheneâ€Nanoparticle Hybrids. Advanced Functional Materials, 2014, 24, 6348-6358.	7.8	31
31	Exclusive-OR gate with a single carbon nanotube. Applied Physics Letters, 2006, 88, 053119.	1.5	27
32	Interplay of non-uniform charge distribution on the electrochemical modification of graphene. Nanoscale, 2018, 10, 15048-15057.	2.8	27
33	Towards in vitro molecular diagnostics using nanostructures. Cellular and Molecular Life Sciences, 2012, 69, 373-388.	2.4	26
34	Effect of Stacking Order on the Electric-Field Induced Carrier Modulation in Graphene Bilayers. Nano Letters, 2009, 9, 3124-3128.	4.5	25
35	Linear and nonlinear iterative scalar inversion of multi-frequency multi-bistatic experimental electromagnetic scattering data. Inverse Problems, 2001, 17, 1597-1610.	1.0	24
36	Spatially Resolved Potential Distribution in Carbon Nanotube Crossâ€Junction Devices. Advanced Materials, 2009, 21, 2720-2724.	11.1	22

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37	Selective electrochemical functionalization of the graphene edge. Chemical Science, 2019, 10, 936-942.	3.7	22
38	Tuning the functional interface of carbon nanotubes by electrochemistry: Toward nanoscale chemical sensors and biosensors. Journal of Materials Research, 2012, 27, 391-402.	1.2	21
39	Chemically exfoliated large-area two-dimensional flakes of molybdenum disulfide for device applications. APL Materials, 2013, 1, .	2.2	21
40	Field-effect-based chemical sensing using nanowire-nanoparticle hybrids: The ion-sensitive metal-semiconductor field-effect transistor. Applied Physics Letters, 2013, 102, 023501.	1.5	20
41	Selective Functionalization of Graphene Peripheries by using Bipolar Electrochemistry. ChemElectroChem, 2016, 3, 372-377.	1.7	20
42	Vertical arrays of nanofluidic channels fabricated without nanolithography. Lab on A Chip, 2009, 9, 1556.	3.1	19
43	Marker-free on-the-fly fabrication of graphene devices based on fluorescence quenching. Nanotechnology, 2010, 21, 015303.	1.3	18
44	Binding Kinetics of Methylene Blue on Monolayer Graphene Investigated by Multiparameter Surface Plasmon Resonance. ACS Omega, 2018, 3, 7133-7140.	1.6	18
45	Effect of the electronic structure of carbon nanotubes on the selectivity of electrochemical functionalization. Physical Chemistry Chemical Physics, 2008, 10, 2256.	1.3	17
46	Identifying Chemical Functionalization on Individual Carbon Nanotubes and Graphene by Local Vibrational Fingerprinting. ACS Nano, 2015, 9, 3314-3323.	7.3	17
47	Spatially resolved photocurrents in graphene nanoribbon devices. Applied Physics Letters, 2013, 102, 043106.	1.5	15
48	A primary battery-on-a-chip using monolayer graphene. Nanotechnology, 2016, 27, 29LT01.	1.3	14
49	pH sensitivity of interfacial electron transfer at a supported graphene monolayer. Nanoscale, 2019, 11, 14742-14756.	2.8	14
50	Fast Electron Transfer Kinetics at an Isolated Graphene Edge Nanoelectrode with and without Nanoparticles: Implications for Sensing Electroactive Species. ACS Applied Nano Materials, 2020, 3, 11725-11735.	2.4	14
51	Template-free self-assembly of hierarchical ZnO structures from nanoscale building blocks. Chemical Physics Letters, 2010, 498, 317-322.	1.2	11
52	Electrochemically modified singleâ€walled carbon nanotubes. Physica Status Solidi (B): Basic Research, 2007, 244, 4021-4025.	0.7	10
53	Labelâ€free indicatorâ€free nucleic acid biosensors using carbon nanotubes. Engineering in Life Sciences, 2012, 12, 121-130.	2.0	10
54	Funktionalisierte Kohlenstoff-NanorÃ¶hren: Nanozylinder mit hohem Anwendungspotential. Chemie in Unserer Zeit, 2005, 39, 16-25.	0.1	9

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55	Faradaic effects in electrochemically gated graphene sensors in the presence of redox active molecules. Nanotechnology, 2020, 31, 405201.	1.3	9
56	Polymer-electrolyte gated graphene transistors for analog and digital phase detection. Applied Physics Letters, 2011, 99, 043307.	1.5	8
57	Chemie des Graphens. Chemie in Unserer Zeit, 2011, 45, 240-249.	0.1	7
58	Charge transport through carbon nanotubes interacting with light. Semiconductor Science and Technology, 2006, 21, S22-S32.	1.0	6
59	Rolling circle amplification-based detection of human topoisomerase I activity on magnetic beads. Analytical Biochemistry, 2014, 451, 42-44.	1.1	6
60	A highly durable graphene monolayer electrode under long-term hydrogen evolution cycling. Chemical Communications, 2022, 58, 3823-3826.	2.2	4
61	Electric field effect in graphite crystallites. Applied Physics Letters, 2012, 100, 203116.	1.5	3
62	Grapheneâ€mercuryâ€graphene sandwich electrode for electroanalysis. ChemElectroChem, 2021, 8, 4277.	1.7	1