

Suchi Guha

List of Publications by Year in descending order

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132
papers

2,933
citations

186265

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docs citations

133
times ranked

4171
citing authors

#	ARTICLE	IF	CITATIONS
1	Understanding charge transport in lead iodide perovskite thin-film field-effect transistors. <i>Science Advances</i> , 2017, 3, e1601935.	10.3	354
2	Electronic structures and spectral properties of endohedral fullerenes. <i>Coordination Chemistry Reviews</i> , 2005, 249, 1111-1132.	18.8	154
3	Temperature-dependent photoluminescence of organic semiconductors with varying backbone conformation. <i>Physical Review B</i> , 2003, 67, .	3.2	122
4	Empirical bond polarizability model for fullerenes. <i>Physical Review B</i> , 1996, 53, 13106-13114.	3.2	114
5	Planarity of paraHexaphenyl. <i>Physical Review Letters</i> , 1999, 82, 3625-3628.	7.8	98
6	Structural and Spectroscopic Investigations of Bulk Poly[bis(2-ethyl)hexylfluorene]. <i>Macromolecules</i> , 2004, 37, 9438-9448.	4.8	66
7	Chain Morphologies in Semicrystalline Polyfluorene: Evidence from Raman Scattering. <i>Physical Review Letters</i> , 2006, 96, 025503.	7.8	61
8	Polyfluorene as a model system for space-charge-limited conduction. <i>Physical Review B</i> , 2007, 75, .	3.2	61
9	Capacitance-voltage characterization of polyfluorene-based metal-insulator-semiconductor diodes. <i>Applied Physics Letters</i> , 2006, 89, 013506.	3.3	55
10	Low-operating voltage and stable organic field-effect transistors with poly (methyl methacrylate) gate dielectric solution deposited from a high dipole moment solvent. <i>Applied Physics Letters</i> , 2011, 99, .	3.3	55
11	Development of strain reduced GaN on Si (111) by substrate engineering. <i>Applied Physics Letters</i> , 2005, 87, 082103.	3.3	51
12	Quantum dots by ultraviolet and x-ray lithography. <i>Nanotechnology</i> , 2007, 18, 315603.	2.6	51
13	Squeezing Organic Conjugated Molecules—What Does One Learn?. <i>Advanced Materials</i> , 2001, 13, 613-618.	21.0	50
14	Conformations in dioctyl substituted polyfluorene: A combined theoretical and experimental Raman scattering study. <i>Journal of Chemical Physics</i> , 2007, 126, 064905.	3.0	46
15	Agarose-stabilized gold nanoparticles for surface-enhanced Raman spectroscopic detection of DNA nucleosides. <i>Applied Physics Letters</i> , 2006, 88, 153114.	3.3	45
16	Isotopically resolved Raman spectra of C ₆₀ . <i>Physical Review Letters</i> , 1994, 72, 3359-3362.	7.8	44
17	Tuning Intermolecular Interactions: A Study of the Structural and Vibrational Properties of p-Hexaphenyl under Pressure. <i>Journal of Physical Chemistry A</i> , 2001, 105, 6203-6211.	2.5	43
18	Diffusion length of triplet excitons in organic semiconductors. <i>Physical Review B</i> , 2010, 82, .	3.2	41

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19	Polarization fluctuation dominated electrical transport processes of polymer-based ferroelectric field effect transistors. <i>Physical Review B</i> , 2012, 85, .	3.2	40
20	Hydrostatic pressure dependence of the luminescence and Raman frequencies in polyfluorene. <i>Physical Review B</i> , 2003, 68, .	3.2	37
21	Geometry-Dependent Electronic Properties of Highly Fluorescent Conjugated Molecules. <i>Physical Review Letters</i> , 2000, 85, 2388-2391.	7.8	35
22	Laser writing of semiconductor nanoparticles and quantum dots. <i>Applied Physics Letters</i> , 2004, 85, 6007-6009.	3.3	35
23	Bioinspired Peptide Nanostructures for Organic Field-Effect Transistors. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 21408-21415.	8.0	35
24	Self-Assembled Peptide-Polyfluorene Nanocomposites for Biodegradable Organic Electronics. <i>Advanced Materials Interfaces</i> , 2015, 2, 1500265.	3.7	35
25	Enhanced performance of ferroelectric-based all organic capacitors and transistors through choice of solvent. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	34
26	Polycaprolactone fibers with self-assembled peptide micro/nanotubes: a practical route towards enhanced mechanical strength and drug delivery applications. <i>Journal of Materials Chemistry B</i> , 2016, 4, 1405-1413.	5.8	33
27	Harvesting triplet excitons for application in polymer solar cells. <i>Applied Physics Letters</i> , 2009, 94, 063307.	3.3	32
28	Defect reduction in strained $\text{In}_x\text{Ga}_{1-x}\text{As}$ via growth on $\text{GaAs}(100)$ substrates patterned to submicron dimensions. <i>Applied Physics Letters</i> , 1990, 56, 2304-2306.	3.3	31
29	Multifunctional biosensors based on peptide-polyelectrolyte conjugates. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 3223-3233.	2.8	30
30	Air-Stable Hybrid Perovskite Solar Cell by Sequential Vapor Deposition in a Single Reactor. <i>ACS Applied Energy Materials</i> , 2020, 3, 2350-2359.	5.1	30
31	Photoluminescence of short-period GaAs/AlAs superlattices: A hydrostatic pressure and temperature study. <i>Physical Review B</i> , 1998, 58, 7222-7229.	3.2	28
32	Cyclometalated Platinum-Containing Diketopyrrolopyrrole Complexes and Polymers: Photophysics and Photovoltaic Applications. <i>Chemistry of Materials</i> , 2017, 29, 8449-8461.	6.7	27
33	Synthesis of liquid crystalline benzothiazole based derivatives: A study of their optical and electrical properties. <i>Organic Electronics</i> , 2010, 11, 1-9.	2.6	26
34	Polarization-induced transport in ferroelectric organic field-effect transistors. <i>Journal of Applied Physics</i> , 2015, 117, .	2.5	26
35	Interface states in polyfluorene-based metal-insulator-semiconductor devices. <i>Organic Electronics</i> , 2007, 8, 591-600.	2.6	25
36	Functionalized Self-Assembled Peptide Nanotubes with Cobalt Ferrite Nanoparticles for Applications in Organic Electronics. <i>ACS Applied Nano Materials</i> , 2018, 1, 1175-1187.	5.0	25

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37	Pressure-Induced Phase Changes in Cesium Lead Bromide Perovskite Nanocrystals with and without Ruddlesden-Popper Faults. <i>Chemistry of Materials</i> , 2020, 32, 785-794.	6.7	25
38	Tuning Charge Transport in PVDF-Based Organic Ferroelectric Transistors: Status and Outlook. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 26757-26775.	8.0	24
39	Hybrid ZnO-organic semiconductor interfaces in photodetectors: A comparison of two near-infrared donor-acceptor copolymers. <i>Organic Electronics</i> , 2017, 45, 115-123.	2.6	22
40	Raman microprobe study of narrow In _x Ga _{1-x} As stripes on patterned GaAs(100) substrates. <i>Applied Physics Letters</i> , 1991, 58, 1644-1646.	3.3	21
41	The isotope effect on the Raman spectrum of molecular C ₆₀ . <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1994, 70, 651-659.	0.6	21
42	Raman modes in oligophenyls under hydrostatic pressure. <i>Physica Status Solidi (B): Basic Research</i> , 2004, 241, 3339-3344.	1.5	21
43	Visible-light photocatalytic activity of NH ₄ NO ₃ ion-exchanged nitrogen-doped titanate and TiO ₂ nanotubes. <i>Journal of Molecular Catalysis A</i> , 2014, 394, 48-56.	4.8	21
44	Peptide-Based Assemblies on Electrospun Polyamide-6/Chitosan Nanofibers for Detecting Visceral Leishmaniasis Antibodies. <i>ACS Applied Electronic Materials</i> , 2019, 1, 2086-2095.	4.3	20
45	MAPLE-deposited polymer films for improved organic device performance. <i>Applied Physics A: Materials Science and Processing</i> , 2011, 105, 547-554.	2.3	19
46	Polarization Modulation in Ferroelectric Organic Field-Effect Transistors. <i>Physical Review Applied</i> , 2018, 10, .	3.8	18
47	Raman cross section for the pentagonal-pinch mode in buckminsterfullerene C ₆₀ . <i>Chemical Physics Letters</i> , 1997, 270, 129-134.	2.6	17
48	Temperature-dependent optical studies of Ti _{1-x} CoxO ₂ . <i>Applied Physics Letters</i> , 2003, 83, 3296-3298.	3.3	17
49	Photophysics of organic emissive semiconductors under hydrostatic pressure. <i>Physica Status Solidi (B): Basic Research</i> , 2004, 241, 3318-3327.	1.5	17
50	Pulsed laser thin film growth of di-octyl substituted polyfluorene and its co-polymers. <i>Applied Surface Science</i> , 2008, 254, 7069-7073.	6.1	17
51	Electrical and Optical Properties of Diketopyrrolopyrrole-Based Copolymer Interfaces in Thin Film Devices. <i>ACS Applied Materials & Interfaces</i> , 2011, 3, 1463-1471.	8.0	17
52	Tuning structural and optical properties of blue-emitting polymeric semiconductors. <i>Physica Status Solidi (B): Basic Research</i> , 2011, 248, 1083-1090.	1.5	17
53	Surface-Enhanced Raman Spectroscopic Studies of Metal-Semiconductor Interfaces in Organic Field-Effect Transistors. <i>Journal of Physical Chemistry C</i> , 2012, 116, 12779-12785.	3.1	17
54	An explanation for the directionality of interfacet migration during molecular beam epitaxial growth on patterned substrates. <i>Journal of Applied Physics</i> , 1993, 73, 8662-8664.	2.5	16

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55	Bandlike Transport in Ferroelectric-Based Organic Field-Effect Transistors. <i>Physical Review Applied</i> , 2016, 6, .	3.8	16
56	UVâ€“Ozone Modified Solâ€“Gel Processed ZnO for Improved Diketopyrrolopyrrole-Based Hybrid Photodetectors. <i>ACS Applied Electronic Materials</i> , 2019, 1, 2455-2462.	4.3	16
57	Charge transfer complex states in diketopyrrolopyrrole polymers and fullerene blends: Implications for organic solar cell efficiency. <i>Applied Physics Letters</i> , 2011, 99, 233307.	3.3	15
58	Tuning Intermolecular Interactions in Dioctyl-Substituted Polyfluorene via Hydrostatic Pressure. <i>Journal of Physical Chemistry A</i> , 2010, 114, 4680-4688.	2.5	14
59	Enhanced mobility and environmental stability in all organic fieldâ€“effect transistors: The role of high dipole moment solvent. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013, 51, 1533-1542.	2.1	14
60	Mixed-halide perovskites solar cells through PbI ₂ and PbCl ₂ precursor films by sequential chemical vapor deposition. <i>Solar Energy</i> , 2021, 215, 179-188.	6.1	14
61	Isotope effect on the Raman spectrum of the pentagonal-pinch mode in C ₆₀ . <i>Physical Review B</i> , 1997, 56, 15431-15438.	3.2	13
62	Comparative optical studies of p-type and unintentionally doped GaN: The influence of annealing. <i>Applied Physics Letters</i> , 2001, 78, 58-60.	3.3	13
63	Crystallization of amorphous silicon by self-propagation of nanoengineered thermites. <i>Journal of Applied Physics</i> , 2007, 101, 054509.	2.5	13
64	Probing nonlinear optical coefficients in self-assembled peptide nanotubes. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 3084-3093.	2.8	13
65	Coupling of organic cation and inorganic lattice in methylammonium lead halide perovskites: Insights into a pressure-induced isostructural phase transition. <i>Physical Review Materials</i> , 2020, 4, .	2.4	13
66	Raman study of photoexcited C ₆₀ . <i>Solid State Communications</i> , 1993, 87, 981-986.	1.9	12
67	Patterning porous matrices and planar substrates with quantum dots. <i>Journal of Sol-Gel Science and Technology</i> , 2006, 39, 299-306.	2.4	12
68	Density functional calculations of the strain effects on binding energies and adatom diffusion on (0001) GaN surfaces. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2009, 158, 13-18.	3.5	12
69	Measuring Structural Inhomogeneity of Conjugated Polymer at High Pressures up to 30 GPa. <i>Macromolecules</i> , 2013, 46, 8284-8288.	4.8	12
70	Structural study of helical polyfluorene under high quasihydrostatic pressure. <i>Physical Review E</i> , 2013, 87, 022602.	2.1	12
71	Blue emitting organic semiconductors under high pressure: status and outlook. <i>Reports on Progress in Physics</i> , 2016, 79, 066601.	20.1	12
72	Optical Properties of Poly(Para-Phenylenes) under High Pressure. <i>Physica Status Solidi (B): Basic Research</i> , 1999, 211, 177-188.	1.5	11

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73	Matrix-assisted pulsed-laser evaporated polymer films in all-organic field-effect transistors and metal-insulator-semiconductor diodes. <i>Organic Electronics</i> , 2011, 12, 1580-1587.	2.6	11
74	Printed dielectric-based organic diodes and transistors. <i>Flexible and Printed Electronics</i> , 2016, 1, 015004.	2.7	11
75	High pressure studies on the planarity of para-hexaphenyl. <i>Synthetic Metals</i> , 1999, 101, 180-181.	3.9	10
76	Infra red quantum dot photolithography. <i>Journal of Sol-Gel Science and Technology</i> , 2006, 40, 101-107.	2.4	10
77	Space-charge-limited conduction in ethylhexyl substituted polyfluorene. <i>Journal of Materials Science: Materials in Electronics</i> , 2009, 20, 351-354.	2.2	10
78	Surface-enhanced Raman spectroscopic studies of the Au-pentacene interface: A combined experimental and theoretical investigation. <i>Journal of Chemical Physics</i> , 2013, 139, 044715.	3.0	10
79	SERS active self-assembled diphenylalanine micro/nanostructures: A combined experimental and theoretical investigation. <i>Journal of Chemical Physics</i> , 2017, 147, 084703.	3.0	10
80	Textured Poling of the Ferroelectric Dielectric Layer for Improved Organic Field-Effect Transistors. <i>Advanced Materials Interfaces</i> , 2019, 6, 1801787.	3.7	10
81	Triplet excitons in a ladder-type conjugated polymer: Application in solar cells. <i>Synthetic Metals</i> , 2009, 159, 2338-2341.	3.9	9
82	Hybrid n-GaN and polymer interfaces: Model systems for tunable photodiodes. <i>Organic Electronics</i> , 2013, 14, 2818-2825.	2.6	9
83	Plasmonic nano-protrusions: hierarchical nanostructures for single-molecule Raman spectroscopy. <i>Nanotechnology</i> , 2017, 28, 025302.	2.6	9
84	Correlating Charge Transport with Structure in Deconstructed Diketopyrrolopyrrole Oligomers: A Case Study of a Monomer in Field-Effect Transistors. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 19844-19852.	8.0	9
85	Temperature dependent carrier mobility in organic field-effect transistors: The role of dielectrics. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	8
86	Enhanced Third Harmonic Generation in Lead Bromide Perovskites with Ruddlesden-Popper Planar Faults. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 4092-4097.	4.6	8
87	On the structure of oligophenylenes. <i>Synthetic Metals</i> , 2001, 119, 371-372.	3.9	7
88	Optical properties of dioctyl substituted polyfluorene under hydrostatic pressure. <i>Physica Status Solidi (B): Basic Research</i> , 2009, 246, 563-569.	1.5	7
89	The role of triplet states in the emission mechanism of polymer light-emitting diodes. <i>Europhysics Letters</i> , 2009, 87, 57008.	2.0	7
90	Pressure dependence of singlet and triplet excitons in amorphous polymer semiconductors. <i>Europhysics Letters</i> , 2013, 104, 27008.	2.0	7

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91	Photocurrent spectroscopic studies of diketopyrrolopyrrole-based statistical copolymers. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 4291.	2.8	7
92	Enhanced piezoresponse and nonlinear optical properties of fluorinated self-assembled peptide nanotubes. <i>AIP Advances</i> , 2019, 9, 115202.	1.3	7
93	Interface-controlled pulsed-laser deposited polymer films in organic devices. <i>Synthetic Metals</i> , 2010, 160, 2501-2504.	3.9	6
94	Visualisation of charge-transfer excitations in donor-acceptor molecules using the particle-hole map: a case study. <i>Molecular Physics</i> , 2016, 114, 1365-1373.	1.7	6
95	Inorganic Ruddlesden-Popper Faults in Cesium Lead Bromide Perovskite Nanocrystals for Enhanced Optoelectronic Performance. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 38579-38585.	8.0	6
96	Raman Spectroscopic Studies of Polyfluorenes. <i>The Open Physical Chemistry Journal</i> , 2008, 2, 6-12.	0.4	6
97	Probing electronic excitations in organic light-emitting diodes via Raman scattering. <i>Applied Physics Letters</i> , 2007, 90, 252105.	3.3	5
98	Evidence for structural transition in hairy-rod poly[9,9-bis(2-ethylhexyl)fluorene] under high pressure conditions. <i>Physical Review E</i> , 2010, 82, 051803.	2.1	5
99	Role of the triplet state in the green emission peak of polyfluorene films: A time evolution study. <i>Journal of Chemical Physics</i> , 2010, 132, 044104.	3.0	5
100	Revealing interfacial disorder at the growth-front of thick many-layer epitaxial graphene on SiC: a complementary neutron and X-ray scattering investigation. <i>Nanoscale</i> , 2019, 11, 14434-14445.	5.6	5
101	High-pressure optical studies of donor-acceptor polymer heterojunctions. <i>Physical Review B</i> , 2011, 84, .	3.2	4
102	Persistence of nematic liquid crystalline phase in a polyfluorene-based organic semiconductor: A high pressure study. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2014, 52, 1014-1023.	2.1	4
103	Interfacial Effects of UV-Ozone Treated Sol-Gel Processable ZnO for Hybrid Photodetectors and Thin Film Transistors. <i>MRS Advances</i> , 2019, 4, 1793-1800.	0.9	4
104	Solution-Processed Organic and ZnO Field-Effect Transistors in Complementary Circuits. <i>Electronic Materials</i> , 2021, 2, 60-71.	1.9	4
105	Influence of the molecular geometry on the photoexcitations of highly emissive organic semiconductors. , 1999, , .		4
106	Extrinsic Nature of the 2.5 eV Raman Resonance in C60. <i>Molecular Crystals and Liquid Crystals</i> , 1994, 256, 391-398.	0.3	3
107	Electron-phonon interactions in solid C60 studied by transient picosecond Raman spectroscopy. <i>Applied Physics Letters</i> , 1996, 68, 1051-1053.	3.3	3
108	Chain Morphologies in Blue-Emitting Polyfluorenes: Impact on Light-Emitting Diodes. <i>Materials Research Society Symposia Proceedings</i> , 2006, 916, 1.	0.1	3

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109	Electrical Characterization of Polyfluorene-Based Metal-Insulator-Semiconductor Diodes. Materials Research Society Symposia Proceedings, 2006, 937, 1.	0.1	3
110	Probing structure-property relationship in chemical vapor deposited hybrid perovskites by pressure and temperature. Journal of Materials Research, 2021, 36, 1805-1812.	2.6	3
111	Temperature-Dependent Phase Stable Hybrid Halide Perovskite Films by Chemical Vapor Deposition. ACS Applied Electronic Materials, 2022, 4, 4258-4264.	4.3	3
112	Nondestructive analysis of structural defects in wide bandgap II-VI heterostructures. Journal of Electronic Materials, 1996, 25, 235-238.	2.2	2
113	Optical Properties of Organic Wide Band-Gap Semiconductors under High Pressure. ACS Symposium Series, 2001, , 127-142.	0.5	2
114	Weak magnetic field-dependent photoluminescence properties of lead bromide perovskites. Journal of Applied Physics, 2022, 131, .	2.5	2
115	Functionalized polymer dielectrics for low-operating voltage organic field-effect transistors. Journal of Materials Research, 2022, 37, 1547-1557.	2.6	2
116	Passivation of GaAs by Electrochemical Sulfur Treatments. Materials Research Society Symposia Proceedings, 1993, 315, 163.	0.1	1
117	High-pressure study of the Raman modes in YBa ₂ (Cu _{0.96} Ni _{0.04}) ₄ O ₈ . Physical Review B, 1999, 60, 4363-4369.	3.2	1
118	Optical transitions in para-phenylenes under hydrostatic pressure. Synthetic Metals, 2001, 119, 657-658.	3.9	1
119	Effect of temperature and pressure on the optical properties of polyfluorene. Synthetic Metals, 2003, 135-136, 273-274.	3.9	1
120	Polarization-Induced Transport: A Comparative Study of Ferroelectric and Non-Ferroelectric Dielectric-Gated Organic Field-Effect Transistors. MRS Advances, 2017, 2, 2951-2956.	0.9	1
121	Atomic deuteration of epitaxial many-layer graphene on 4H-SiC(0001 \bar{A}). Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2019, 37, 041804.	1.2	1
122	Measuring structural inhomogeneity of a helical conjugated polymer at high pressure and temperature. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 392-396.	2.1	1
123	Temperature Dependence of the Intervalley Deformation Potential of GaAs/AlAs Superlattices Under Hydrostatic Pressure. Materials Research Society Symposia Proceedings, 1997, 499, 201.	0.1	0
124	Structural Properties Of Hexaphenyl Powder Under High Pressure. Materials Research Society Symposia Proceedings, 1997, 488, 867.	0.1	0
125	Electronic Properties of Poly(Para-Phenylenes) Under High Pressure. Materials Research Society Symposia Proceedings, 1997, 488, 873.	0.1	0
126	Optical Spectroscopic Studies of a Soluble Fluorene-Based Conjugated Polymer: A Hydrostatic Pressure and Temperature Study. Materials Research Society Symposia Proceedings, 2001, 708, 1071.	0.1	0

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127	Raman Scattering from Organic Light Emitting Diodes. AIP Conference Proceedings, 2005, , .	0.4	0
128	Organic Electronics: Self-Assembled Peptide-Polyfluorene Nanocomposites for Biodegradable Organic Electronics (Adv. Mater. Interfaces 14/2015). Advanced Materials Interfaces, 2015, 2, n/a-n/a.	3.7	0
129	High Pressure Structural Studies of Conjugated Molecules. Materials and Energy, 2018, , 175-187.	0.1	0
130	Raman Phonons under Hydrostatic Pressure in YBa ₂ (Cu _{1-x} Ni _x) ₄ O ₈ .. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 1998, 7, 535-537.	0.0	0
131	Polarization-induced transport in organic field-effect transistors: the role of ferroelectric dielectrics. , 2017, , .		0
132	Organic Electrochemical Transistors in Bioanalytical Chemistry. , 2022, , 305-312.		0