Suchi Guha

List of Publications by Year
in descending order

132 papers	2,933 citations	186265 28 h-index	206112 48 g-index
133 all docs	133 docs citations	133 times ranked	4171 citing authors

#	Article	IF	Citations
1	Organic Electrochemical Transistors in Bioanalytical Chemistry. , 2022, , 305-312.		0
2	Weak magnetic field-dependent photoluminescence properties of lead bromide perovskites. Journal of Applied Physics, 2022, 131, .	2.5	2
3	Functionalized polymer dielectrics for low-operating voltage organic field-effect transistors. Journal of Materials Research, 2022, 37, 1547-1557.	2.6	2
4	Temperature-Dependent Phase Stable Hybrid Halide Perovskite Films by Chemical Vapor Deposition. ACS Applied Electronic Materials, 2022, 4, 4258-4264.	4.3	3
5	Mixed-halide perovskites solar cells through PbICl and PbCl2 precursor films by sequential chemical vapor deposition. Solar Energy, 2021, 215, 179-188.	6.1	14
6	Solution-Processed Organic and ZnO Field-Effect Transistors in Complementary Circuits. Electronic Materials, 2021, 2, 60-71.	1.9	4
7	Enhanced Third Harmonic Generation in Lead Bromide Perovskites with Ruddlesdenâ€“Popper Planar Faults. Journal of Physical Chemistry Letters, 2021, 12, 4092-4097.	4.6	8
8	Probing structureâ€“property relationship in chemical vapor deposited hybrid perovskites by pressure and temperature. Journal of Materials Research, 2021, 36, 1805-1812.	2.6	3
9	Inorganic Ruddlesden-Popper Faults in Cesium Lead Bromide Perovskite Nanocrystals for Enhanced Optoelectronic Performance. ACS Applied Materials & Interfaces, 2021, 13, 38579-38585.	8.0	6
10	Pressure-Induced Phase Changes in Cesium Lead Bromide Perovskite Nanocrystals with and without Ruddlesdenâ€“Popper Faults. Chemistry of Materials, 2020, 32, 785-794.	6.7	25
11	Air-Stable Hybrid Perovskite Solar Cell by Sequential Vapor Deposition in a Single Reactor. ACS Applied Energy Materials, 2020, 3, 2350-2359.	5.1	30
12	Tuning Charge Transport in PVDF-Based Organic Ferroelectric Transistors: Status and Outlook. ACS Applied Materials & Interfaces, 2020, 12, 26757-26775.	8.0	24
13	Coupling of organic cation and inorganic lattice in methylammonium lead halide perovskites: Insights into a pressure-induced isostructural phase transition. Physical Review Materials, 2020, 4, .	2.4	13
14	Interfacial Effects of UV-Ozone Treated Sol-Gel Processable ZnO for Hybrid Photodetectors and Thin Film Transistors. MRS Advances, 2019, 4, 1793-1800.	0.9	4
15	Revealing interfacial disorder at the growth-front of thick many-layer epitaxial graphene on SiC: a complementary neutron and X-ray scattering investigation. Nanoscale, 2019, 11, 14434-14445.	5.6	5
16	Atomic deuteration of epitaxial many-layer graphene on 4H-SiC(0001Â¯). Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, 041804.	1.2	1
17	UVâ€“Ozone Modified Solâ€–Gel Processed ZnO for Improved Diketopyrrolopyrrole-Based Hybrid Photodetectors. ACS Applied Electronic Materials, 2019, 1, 2455-2462.	4.3	16
18	Peptide-Based Assemblies on Electrospun Polyamide-6/Chitosan Nanofibers for Detecting Visceral Leishmaniasis Antibodies. ACS Applied Electronic Materials, 2019, 1, 2086-2095.	4.3	20

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19	Temperature dependent carrier mobility in organic field-effect transistors: The role of dielectrics. Journal of Applied Physics, 2019, 125, .	2.5	8
20	Textured Poling of the Ferroelectric Dielectric Layer for Improved Organic Fieldâ€Effect Transistors. Advanced Materials Interfaces, 2019, 6, 1801787.	3.7	10
21	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
22	Enhanced piezoresponse and nonlinear optical properties of fluorinated self-assembled peptide nanotubes. AIP Advances, 2019, 9, 115202.	1.3	7
23	Functionalized Self-Assembled Peptide Nanotubes with Cobalt Ferrite Nanoparticles for Applications in Organic Electronics. ACS Applied Nano Materials, 2018, 1, 1175-1187.	5.0	25
24	High Pressure Structural Studies of Conjugated Molecules. Materials and Energy, 2018, , 175-187.	0.1	0
25	Correlating Charge Transport with Structure in Deconstructed Diketopyrrolopyrrole Oligomers: A Case Study of a Monomer in Field-Effect Transistors. ACS Applied Materials & Interfaces, 2018, 10, 19844-19852.	8.0	9
26	Polarization Modulation in Ferroelectric Organic Field-Effect Transistors. Physical Review Applied, 2018, 10, .	3.8	18
27	Understanding charge transport in lead iodide perovskite thin-film field-effect transistors. Science Advances, 2017, 3, e1601935.	10.3	354
28	Hybrid ZnO-organic semiconductor interfaces in photodetectors: A comparison of two near-infrared donor-acceptor copolymers. Organic Electronics, 2017, 45, 115-123.	2.6	22
29	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
30	Probing nonlinear optical coefficients in self-assembled peptide nanotubes. Physical Chemistry Chemical Physics, 2017, 19, 3084-3093.	2.8	13
31	Plasmonic nano-protrusions: hierarchical nanostructures for single-molecule Raman spectroscopy. Nanotechnology, 2017, 28, 025302.	2.6	9
32	SERS active self-assembled diphenylalanine micro/nanostructures: A combined experimental and theoretical investigation. Journal of Chemical Physics, 2017, 147, 084703.	3.0	10
33	Cyclometalated Platinum-Containing Diketopyrrolopyrrole Complexes and Polymers: Photophysics and Photovoltaic Applications. Chemistry of Materials, 2017, 29, 8449-8461.	6.7	27
34	Polarization-induced transport in organic field-effect transistors: the role of ferroelectric dielectrics. , 2017, , .		0
35	Blue emitting organic semiconductors under high pressure: status and outlook. Reports on Progress in Physics, 2016, 79, 066601.	20.1	12
36	Bandlike Transport in Ferroelectric-Based Organic Field-Effect Transistors. Physical Review Applied, 2016, 6, .	3.8	16

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37	Printed dielectric-based organic diodes and transistors. Flexible and Printed Electronics, 2016, 1, 015004.	2.7	11
38	Polycaprolactone fibers with self-assembled peptide micro/nanotubes: a practical route towards enhanced mechanical strength and drug delivery applications. Journal of Materials Chemistry B, 2016, 4, 1405-1413.	5.8	33
39	Visualisation of charge-transfer excitations in donorâ€“acceptor molecules using the particleâ€“hole map: a case study. Molecular Physics, 2016, 114, 1365-1373.	1.7	6
40	Multifunctional biosensors based on peptideâ€“polyelectrolyte conjugates. Physical Chemistry Chemical Physics, 2016, 18, 3223-3233.	2.8	30
41	Selfâ€Assembled Peptideâ€“Polyfluorene Nanocomposites for Biodegradable Organic Electronics. Advanced Materials Interfaces, 2015, 2, 1500265.	3.7	35
42	Polarization-induced transport in ferroelectric organic field-effect transistors. Journal of Applied Physics, 2015, 117, .	2.5	26
43	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
44	Enhanced performance of ferroelectric-based all organic capacitors and transistors through choice of solvent. Applied Physics Letters, 2014, 104, .	3.3	34
45	Persistence of nematic liquid crystalline phase in a polyfluoreneâ€based organic semiconductor: A high pressure study. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 1014-1023.	2.1	4
46	Bioinspired Peptide Nanostructures for Organic Field-Effect Transistors. ACS Applied Materials & Interfaces, 2014, 6, 21408-21415.	8.0	35
47	Photocurrent spectroscopic studies of diketopyrrolopyrrole-based statistical copolymers. Physical Chemistry Chemical Physics, 2014, 16, 4291.	2.8	7
48	Visible-light photocatalytic activity of NH 4 NO 3 ion-exchanged nitrogen-doped titanate and TiO 2 nanotubes. Journal of Molecular Catalysis A, 2014, 394, 48-56.	4.8	21
49	Surface-enhanced Raman spectroscopic studies of the Au-pentacene interface: A combined experimental and theoretical investigation. Journal of Chemical Physics, 2013, 139, 044715.	3.0	10
50	Enhanced mobility and environmental stability in all organic fieldâ€effect transistors: The role of high dipole moment solvent. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 1533-1542.	2.1	14
51	Pressure dependence of singlet and triplet excitons in amorphous polymer semiconductors. Europhysics Letters, 2013, 104, 27008.	2.0	7
52	Hybrid n-GaN and polymer interfaces: Model systems for tunable photodiodes. Organic Electronics, 2013, 14, 2818-2825.	2.6	9
53	Measuring Structural Inhomogeneity of Conjugated Polymer at High Pressures up to 30 GPa. Macromolecules, 2013, 46, 8284-8288.	4.8	12
54	Structural study of helical polyfluorene under high quasihydrostatic pressure. Physical Review E, 2013, 87, 022602.	2.1	12

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55	Polarization fluctuation dominated electrical transport processes of polymer-based ferroelectric field effect transistors. Physical Review B, 2012, 85, .	3.2	40
56	Surface-Enhanced Raman Spectroscopic Studies of Metalâ€“Semiconductor Interfaces in Organic Field-Effect Transistors. Journal of Physical Chemistry C, 2012, 116, 12779-12785.	3.1	17
57	Electrical and Optical Properties of Diketopyrrolopyrrole-Based Copolymer Interfaces in Thin Film Devices. ACS Applied Materials & Interfaces, 2011, 3, 1463-1471.	8.0	17
58	MAPLE-deposited polymer films for improved organic device performance. Applied Physics A: Materials Science and Processing, 2011, 105, 547-554.	2.3	19
59	Tuning structural and optical properties of blueâ€emitting polymeric semiconductors. Physica Status Solidi (B): Basic Research, 2011, 248, 1083-1090.	1.5	17
60	Matrix-assisted pulsed-laser evaporated polymer films in all-organic field-effect transistors and metalâ€“insulatorâ€“semiconductor diodes. Organic Electronics, 2011, 12, 1580-1587.	2.6	11
61	Low-operating voltage and stable organic field-effect transistors with poly (methyl methacrylate) gate dielectric solution deposited from a high dipole moment solvent. Applied Physics Letters, 2011, 99, .	3.3	55
62	High-pressure optical studies of donor-acceptor polymer heterojunctions. Physical Review B, 2011, 84, .	3.2	4
63	Charge transfer complex states in diketopyrrolopyrrole polymers and fullerene blends: Implications for organic solar cell efficiency. Applied Physics Letters, 2011, 99, 233307.	3.3	15
64	Synthesis of liquid crystalline benzothiazole based derivatives: A study of their optical and electrical properties. Organic Electronics, 2010, 11, 1-9.	2.6	26
65	Diffusion length of triplet excitons in organic semiconductors. Physical Review B, 2010, 82, .	3.2	41
66	Evidence for structural transition in hairy-rod poly[9,9-bis(2-ethylhexyl)fluorene] under high pressure conditions. Physical Review E, 2010, 82, 051803.	2.1	5
67	Tuning Intermolecular Interactions in Dioctyl-Substituted Polyfluorene via Hydrostatic Pressure. Journal of Physical Chemistry A, 2010, 114, 4680-4688.	2.5	14
68	Interface-controlled pulsed-laser deposited polymer films in organic devices. Synthetic Metals, 2010, 160, 2501-2504.	3.9	6
69	Role of the triplet state in the green emission peak of polyfluorene films: A time evolution study. Journal of Chemical Physics, 2010, 132, 044104.	3.0	5
70	Space-charge-limited conduction in ethylâ€“hexyl substituted polyfluorene. Journal of Materials Science: Materials in Electronics, 2009, 20, 351-354.	2.2	10
71	Optical properties of diâ€octyl substituted polyfluorene under hydrostatic pressure. Physica Status Solidi (B): Basic Research, 2009, 246, 563-569.	1.5	7
72	Density functional calculations of the strain effects on binding energies and adatom diffusion on (0001) GaN surfaces. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 158, 13-18.	3.5	12

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73	Harvesting triplet excitons for application in polymer solar cells. Applied Physics Letters, 2009, 94, 063307.	3.3	32
74	Triplet excitons in a ladder-type conjugated polymer: Application in solar cells. Synthetic Metals, 2009, 159, 2338-2341.	3.9	9
75	The role of triplet states in the emission mechanism of polymer light-emitting diodes. Europhysics Letters, 2009, 87, 57008.	2.0	7
76	Pulsed laser thin film growth of di-octyl substituted polyfluorene and its co-polymers. Applied Surface Science, 2008, 254, 7069-7073.	6.1	17
77	Raman Spectroscopic Studies of Polyfluorenes. The Open Physical Chemistry Journal, 2008, 2, 6-12.	0.4	6
78	Probing electronic excitations in organic light-emitting diodes via Raman scattering. Applied Physics Letters, 2007, 90, 252105.	3.3	5
79	Crystallization of amorphous silicon by self-propagation of nanoengineered thermites. Journal of Applied Physics, 2007, 101, 054509.	2.5	13
80	Polyfluorene as a model system for space-charge-limited conduction. Physical Review B, 2007, 75, .	3.2	61
81	Conformations in dioctyl substituted polyfluorene: A combined theoretical and experimental Raman scattering study. Journal of Chemical Physics, 2007, 126, 064905.	3.0	46
82	Quantum dots by ultraviolet and x-ray lithography. Nanotechnology, 2007, 18, 315603.	2.6	51
83	Interface states in polyfluorene-based metalâ€“insulatorâ€“semiconductor devices. Organic Electronics, 2007, 8, 591-600.	2.6	25
84	Agarose-stabilized gold nanoparticles for surface-enhanced Raman spectroscopic detection of DNA nucleosides. Applied Physics Letters, 2006, 88, 153114.	3.3	45
85	Patterning porous matrices and planar substrates with quantum dots. Journal of Sol-Gel Science and Technology, 2006, 39, 299-306.	2.4	12
86	Infra red quantum dot photolithography. Journal of Sol-Gel Science and Technology, 2006, 40, 101-107.	2.4	10
87	Chain Morphologies in Blue-Emitting Polyfluorenes: Impact on Light-Emitting Diodes. Materials Research Society Symposia Proceedings, 2006, 916, 1.	0.1	3
88	Electrical Characterization of Polyfluorene-Based Metal-Insulator-Semiconductor Diodes. Materials Research Society Symposia Proceedings, 2006, 937, 1.	0.1	3
89	Chain Morphologies in Semicrystalline Polyfluorene: Evidence from Raman Scattering. Physical Review Letters, 2006, 96, 025503.	7.8	61
90	Capacitance-voltage characterization of polyfluorene-based metal-insulator-semiconductor diodes. Applied Physics Letters, 2006, 89, 013506.	3.3	55

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91	Electronic structures and spectral properties of endohedral fullerenes. Coordination Chemistry Reviews, 2005, 249, 1111-1132.	18.8	154
92	Raman Scattering from Organic Light Emitting Diodes. AIP Conference Proceedings, 2005, , .	0.4	0
93	Development of strain reduced GaN on Si (111) by substrate engineering. Applied Physics Letters, 2005, 87, 082103.	3.3	51
94	Laser writing of semiconductor nanoparticles and quantum dots. Applied Physics Letters, 2004, 85, 6007-6009.	3.3	35
95	Raman modes in oligophenyls under hydrostatic pressure. Physica Status Solidi (B): Basic Research, 2004, 241, 3339-3344.	1.5	21
96	Photophysics of organic emissive semiconductors under hydrostatic pressure. Physica Status Solidi (B): Basic Research, 2004, 241, 3318-3327.	1.5	17
97	Structural and Spectroscopic Investigations of Bulk Poly[bis(2-ethyl)hexylfluorene]. Macromolecules, 2004, 37, 9438-9448.	4.8	66
98	Effect of temperature and pressure on the optical properties of polyfluorene. Synthetic Metals, 2003, 135-136, 273-274.	3.9	1
99	Temperature-dependent optical studies of Ti1â^'xCoxO2. Applied Physics Letters, 2003, 83, 3296-3298.	3.3	17
100	Temperature-dependent photoluminescence of organic semiconductors with varying backbone conformation. Physical Review B, 2003, 67, .	3.2	122
101	Hydrostatic pressure dependence of the luminescence and Raman frequencies in polyfluorene. Physical Review B, 2003, 68, .	3.2	37
102	Optical Properties of Organic Wide Band-Gap Semiconductors under High Pressure. ACS Symposium Series, 2001, , 127-142.	0.5	2
103	Optical transitions in para-phenylenes under hydrostatic pressure. Synthetic Metals, 2001, 119, 657-658.	3.9	1
104	On the structure of oligophenylenes. Synthetic Metals, 2001, 119, 371-372.	3.9	7
105	Comparative optical studies of p-type and unintentionally doped GaN: The influence of annealing. Applied Physics Letters, 2001, 78, 58-60.	3.3	13
106	Tuning Intermolecular Interactions:â€‰ A Study of the Structural and Vibrational Properties of p-Hexaphenyl under Pressure. Journal of Physical Chemistry A, 2001, 105, 6203-6211.	2.5	43
107	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
108	Squeezing Organic Conjugated Moleculesâ€"What Does One Learn?. Advanced Materials, 2001, 13, 613-618.	21.0	50

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109	Geometry-Dependent Electronic Properties of Highly Fluorescent Conjugated Molecules. Physical Review Letters, 2000, 85, 2388-2391.	7.8	35
110	High-pressure study of the Raman modes inYBa2(Cu0.96Ni0.04)4O8. Physical Review B, 1999, 60, 4363-4369.	3.2	1
111	Planarity ofparaHexaphenyl. Physical Review Letters, 1999, 82, 3625-3628.	7.8	98
112	Optical Properties of Poly(Para-Phenylenes) under High Pressure. Physica Status Solidi (B): Basic Research, 1999, 211, 177-188.	1.5	11
113	High pressure studies on the planarity of para-hexaphenyl. Synthetic Metals, 1999, 101, 180-181.	3.9	10
114	Influence of the molecular geometry on the photoexcitations of highly emissive organic semiconductors. , 1999, , .		4
115	Photoluminescence of short-period GaAs/AlAs superlattices: A hydrostatic pressure and temperature study. Physical Review B, 1998, 58, 7222-7229.	3.2	28
116	Raman Phonons under Hydrostatic Pressure in YBa2(Cu1-xNix)4O8.. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 1998, 7, 535-537.	0.0	0
117	Isotope effect on the Raman spectrum of the pentagonal-pinch mode inC60. Physical Review B, 1997, 56, 15431-15438.	3.2	13
118	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
119	Structural Properties Of Hexaphenyl Powder Under High Pressure. Materials Research Society Symposia Proceedings, 1997, 488, 867.	0.1	0
120	Electronic Properties of Poly(Para-Phenylenes) Under High Pressure. Materials Research Society Symposia Proceedings, 1997, 488, 873.	0.1	0
121	Raman cross section for the pentagonal-pinch mode in buckminsterfullerene C60. Chemical Physics Letters, 1997, 270, 129-134.	2.6	17
122	Electronâ€“phonon interactions in solid C60 studied by transient picosecond Raman spectroscopy. Applied Physics Letters, 1996, 68, 1051-1053.	3.3	3
123	Empirical bond polarizability model for fullerenes. Physical Review B, 1996, 53, 13106-13114.	3.2	114
124	Nondestructive analysis of structural defects in wide bandgap II-VI heterostructures. Journal of Electronic Materials, 1996, 25, 235-238.	2.2	2
125	Isotopically resolved Raman spectra ofC60. Physical Review Letters, 1994, 72, 3359-3362.	7.8	44
126	Extrinsic Nature of the 2.5 eV Raman Resonance in C60. Molecular Crystals and Liquid Crystals, 1994, 256, 391-398.	0.3	3

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127	The isotope effect on the Raman spectrum of molecular C60. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1994, 70, 651-659.	0.6	21
128	Raman study of photoexcited C60. Solid State Communications, 1993, 87, 981-986.	1.9	12
129	An explanation for the directionality of interfacet migration during molecular beam epitaxical growth on patterned substrates. Journal of Applied Physics, 1993, 73, 8662-8664.	2.5	16
130	Passivation of GaAs by Electrochemical Sulfur Treatments. Materials Research Society Symposia Proceedings, 1993, 315, 163.	0.1	1
131	Raman microprobe study of narrow InxGa1âˆ’xAs stripes on patterned GaAs(100) substrates. Applied Physics Letters, 1991, 58, 1644-1646.	3.3	21
132	Defect reduction in strained InxGa1âˆ’xAs via growth on GaAsâ€‰(100) substrates patterned to submicron dimensions. Applied Physics Letters, 1990, 56, 2304-2306.	3.3	31