

Amilra Prasanna De Silva

List of Publications by Year in descending order

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92
papers

18,011
citations

38720

50
h-index

46771

89
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99
all docs

99
docs citations

99
times ranked

10897
citing authors

#	ARTICLE	IF	CITATIONS
1	Signaling Recognition Events with Fluorescent Sensors and Switches. <i>Chemical Reviews</i> , 1997, 97, 1515-1566.	23.0	6,736
2	Luminescent sensors and switches in the early 21st century. <i>Tetrahedron</i> , 2005, 61, 8551-8588.	1.0	1,074
3	Molecular logic and computing. <i>Nature Nanotechnology</i> , 2007, 2, 399-410.	15.6	812
4	Molecular-Scale Logic Gates. <i>Chemistry - A European Journal</i> , 2004, 10, 574-586.	1.7	591
5	Molecular fluorescent signalling with "fluor" spacer "receptor"™ systems: approaches to sensing and switching devices via supramolecular photophysics. <i>Chemical Society Reviews</i> , 1992, 21, 187-195.	18.7	573
6	Fluorescent PET (Photoinduced Electron Transfer) sensors as potent analytical tools. <i>Analyst</i> , The, 2009, 134, 2385.	1.7	507
7	Current developments in fluorescent PET (photoinduced electron transfer) sensors and switches. <i>Chemical Society Reviews</i> , 2015, 44, 4203-4211.	18.7	462
8	Integration of Logic Functions and Sequential Operation of Gates at the Molecular-Scale. <i>Journal of the American Chemical Society</i> , 1999, 121, 1393-1394.	6.6	352
9	Fluorescent Polymeric AND Logic Gate with Temperature and pH as Inputs. <i>Journal of the American Chemical Society</i> , 2004, 126, 3032-3033.	6.6	340
10	Molecular Photoionic AND Logic Gates with Bright Fluorescence and "Off" On "Digital Action. <i>Journal of the American Chemical Society</i> , 1997, 119, 7891-7892.	6.6	330
11	Proof-of-Principle of Molecular-Scale Arithmetic. <i>Journal of the American Chemical Society</i> , 2000, 122, 3965-3966.	6.6	323
12	New Fluorescent Model Compounds for the Study of Photoinduced Electron Transfer: The Influence of a Molecular Electric Field in the Excited State. <i>Angewandte Chemie International Edition in English</i> , 1995, 34, 1728-1731.	4.4	313
13	Communicating Chemical Congregation: A Molecular AND Logic Gate with Three Chemical Inputs as a "Lab-on-a-Molecule" Prototype. <i>Journal of the American Chemical Society</i> , 2006, 128, 4950-4951.	6.6	312
14	Fluorescent Molecular Thermometers Based on Polymers Showing Temperature-Induced Phase Transitions and Labeled with Polarity-Responsive Benzofurazans. <i>Analytical Chemistry</i> , 2003, 75, 5926-5935.	3.2	295
15	Fluorescent signalling crown ethers; "switching on"™ of fluorescence by alkali metal ion recognition and binding in situ. <i>Journal of the Chemical Society Chemical Communications</i> , 1986, , 1709-1710.	2.0	233
16	Molecular computational elements encode large populations of small objects. <i>Nature Materials</i> , 2006, 5, 787-789.	13.3	228
17	Simultaneously Multiply-Configurable or Superposed Molecular Logic Systems Composed of ICT (Internal Charge Transfer) Chromophores and Fluorophores Integrated with One- or Two-Ion Receptors. <i>Chemistry - A European Journal</i> , 2002, 8, 4935-4945.	1.7	216
18	Newer optical-based molecular devices from older coordination chemistry. <i>Dalton Transactions</i> , 2003, , 1902-1913.	1.6	172

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19	A new class of fluorescent pH indicators based on photo-induced electron transfer. Journal of the Chemical Society Chemical Communications, 1985, , 1669.	2.0	167
20	Bright molecules with sense, logic, numeracy and utility. Organic and Biomolecular Chemistry, 2008, 6, 2468.	1.5	164
21	A supramolecular chemistry basis for molecular logic and computation. Coordination Chemistry Reviews, 2007, 251, 1623-1632.	9.5	163
22	Molecular Logic Gate Arrays. Chemistry - an Asian Journal, 2011, 6, 750-766.	1.7	160
23	Direct visual indication of pH windows: $\text{pH} \rightarrow \text{fluorescent PET (photoinduced electron transfer)}$ Tj ETQq1 1,0,784314,rgBT /Ove	2.2	159
24	Arenedicarboximide Building Blocks for Fluorescent Photoinduced Electron Transfer pH Sensors Applicable with Different Media and Communication Wavelengths. Chemistry - A European Journal, 1998, 4, 1810-1815.	1.7	133
25	Development of fluorescent microgel thermometers based on thermo-responsive polymers and their modulation of sensitivity range. Journal of Materials Chemistry, 2005, 15, 2796.	6.7	132
26	Proton-Controlled Switching of Luminescence in Lanthanide Complexes in Aqueous Solution: pH Sensors Based on Long-Lived Emission. Angewandte Chemie International Edition in English, 1996, 35, 2116-2118.	4.4	129
27	$\text{pH} \rightarrow \text{fluorescent sensors for physiological levels of magnesium ions based on photoinduced electron transfer (PET), which also behave as photoionic OR logic gates. Journal of the Chemical Society Chemical Communications, 1994, .$	2.0	127
28	Membrane Media Create Small Nanospaces for Molecular Computation. Journal of the American Chemical Society, 2005, 127, 8920-8921.	6.6	113
29	Modulation of the Sensitive Temperature Range of Fluorescent Molecular Thermometers Based on Thermo-responsive Polymers. Analytical Chemistry, 2004, 76, 1793-1798.	3.2	107
30	Fluorescence $\rightarrow \text{Signalling upon Linear Recognition and Binding of } \pm, \text{ } \text{Alkanediyldiammonium ions by 9,10-Bis}\{(1\text{-aza-4,7,10,13,16-pentaoxacyclooctadecyl)methyl}\}\text{anthracene. Angewandte Chemie International Edition in English, 1990, 29, 1173-1175.}$	4.4	101
31	Luminescent Molecular Thermometers. Journal of Chemical Education, 2006, 83, 720.	1.1	100
32	Taking baby steps in molecular logic-based computation. Chemical Communications, 2015, 51, 8403-8409.	2.2	95
33	Fluorescent PET(Photoinduced Electron Transfer) reagents for thiols. Tetrahedron Letters, 1998, 39, 5077-5080.	0.7	92
34	Luminescence and charge transfer. Part 2. Aminomethyl anthracene derivatives as fluorescent PET (photoinduced electron transfer) sensors for protons. Journal of the Chemical Society Perkin Transactions II, 1992, , 1559.	0.9	90
35	A layer of logic. Nature, 2008, 454, 417-418.	13.7	86
36	Direct detection of ion pairs by fluorescence enhancement. Chemical Communications, 2003, , 2010.	2.2	83

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37	Multiplexing Sensory Molecules Map Protons Near Micellar Membranes. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 4667-4669.	7.2	79
38	Switching between molecular switch types by module rearrangement: Ca ²⁺ -enabled, H ⁺ -driven "On-Off"™, H ⁺ -driven YES and PASS 0 as well as H ⁺ , Ca ²⁺ -driven AND logic operations. <i>Chemical Communications</i> , 2004, , 2048-2049.	2.2	78
39	Luminescent sensors and photonic switches. <i>Pure and Applied Chemistry</i> , 2001, 73, 503-511.	0.9	77
40	Quantitative mapping of aqueous microfluidic temperature with sub-degree resolution using fluorescence lifetime imaging microscopy. <i>Lab on A Chip</i> , 2010, 10, 1267.	3.1	74
41	Fluorescent PET (photoinduced electron transfer) sensors selective for submicromolar calcium with quantitatively predictable spectral and ion-binding properties. <i>Journal of the Chemical Society Chemical Communications</i> , 1990, , 186.	2.0	72
42	Luminescence and charge transfer. Part 3. The use of chromophores with ICT (internal charge) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 552 sensors and related absorption pH sensors with aminoalkyl side chains. <i>Journal of the Chemical Society Perkin Transactions II</i> , 1993, , 1611.	0.9	72
43	Photoionic devices with receptor-functionalized fluorophores. <i>Pure and Applied Chemistry</i> , 1996, 68, 1443-1448.	0.9	69
44	Luminescent Photoinduced Electron Transfer (PET) Molecules for Sensing and Logic Operations. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 2865-2871.	2.1	69
45	Building pH Sensors into Paper-Based Small-Molecular Logic Systems for Very Simple Detection of Edges of Objects. <i>Journal of the American Chemical Society</i> , 2015, 137, 3763-3766.	6.6	67
46	Analog Parallel Processing of Molecular Sensory Information. <i>Journal of the American Chemical Society</i> , 2007, 129, 3050-3051.	6.6	66
47	Fluorescent PET (photo-induced electron transfer) sensors for alkali metal ions with improved selectivity against protons and with predictable binding constants. <i>Journal of the Chemical Society Chemical Communications</i> , 1989, , 1183.	2.0	65
48	From complexation to computation: Recent progress in molecular logic. <i>Inorganica Chimica Acta</i> , 2007, 360, 751-764.	1.2	65
49	Switching "on"™ the luminescence of one metal ion with another: selectivity characteristics with respect to the emitting and triggering metal. <i>Chemical Communications</i> , 1997, , 1891.	2.2	60
50	Fluorescent PET (photoinduced electron transfer) sensors with targeting/anchoring modules as molecular versions of submarine periscopes for mapping membrane-bounded protons. <i>Journal of the Chemical Society Chemical Communications</i> , 1994, , 405.	2.0	57
51	Chemical approaches to nanometre-scale logic gates. <i>Journal of Physics Condensed Matter</i> , 2006, 18, S1847-S1872.	0.7	52
52	Compartmental fluorescent pH indicators with nearly complete predictability of indicator parameters; molecular engineering of pH sensors. <i>Journal of the Chemical Society Chemical Communications</i> , 1989, , 1054.	2.0	51
53	Multiply reconfigurable "plug and play"™ molecular logic via self-assembly. <i>Chemical Communications</i> , 2009, , 1386.	2.2	51
54	Solid-bound, proton-driven, fluorescent "off"™ switches based on PET (photoinduced electron) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 552	1.0	48

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55	Molecular memory with downstream logic processing exemplified by switchable and self-indicating guest capture and release. <i>Nature Communications</i> , 2019, 10, 49.	5.8	45
56	Phosphorescent PET (photoinduced electron transfer) sensors: prototypical examples for proton monitoring and a "message in a bottle"™ enhancement strategy with cyclodextrins. <i>Journal of the Chemical Society Chemical Communications</i> , 1991, , 1148-1150.	2.0	40
57	The pH-dependent fluorescence of pyridylmethyl-4-amino-1,8-naphthalimides. <i>Arkivoc</i> , 2003, 2003, 229-243.	0.3	40
58	Neue fluoreszierende Modellverbindungen für das Studium des lichtinduzierten Elektronentransfers: der Einfluss eines molekularen elektrischen Feldes im angeregten Zustand. <i>Angewandte Chemie</i> , 1995, 107, 1889-1891.	1.6	38
59	Molecular Logic Gates and Luminescent Sensors Based on Photoinduced Electron Transfer. <i>Topics in Current Chemistry</i> , 2010, 300, 1-28.	4.0	38
60	The Anthracen-9-ylmethoxy Unit: An Underperforming Motif Within the Fluorescent PET (Photoinduced Electron Transfer) Sensing Framework. <i>Journal of Fluorescence</i> , 2005, 15, 769-775.	1.3	37
61	From PASS 1 to YES to AND logic: building parallel processing into molecular logic gates by sequential addition of receptors. <i>New Journal of Chemistry</i> , 2010, 34, 476.	1.4	37
62	Measurement of Local Sodium Ion Levels near Micelle Surfaces with Fluorescent Photoinduced Electron Transfer Sensors. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 768-771.	7.2	37
63	Sense and versatility. <i>Nature</i> , 2007, 445, 718-719.	13.7	31
64	Small molecular logic systems can draw the outlines of objects via edge visualization. <i>Chemical Science</i> , 2015, 6, 4472-4478.	3.7	31
65	Supra-molecular agents running tasks intelligently (SMARTI): recent developments in molecular logic-based computation. <i>Molecular Systems Design and Engineering</i> , 2020, 5, 1325-1353.	1.7	31
66	Sterically Hindered Diaryl Benzobis(thiadiazole)s as Effective Photochromic Switches. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 9754-9756.	7.2	30
67	Modification of Fluorescent Photoinduced Electron Transfer (PET) Sensors/Switches To Produce Molecular Photoionic Triode Action. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 3622-3625.	7.2	29
68	Consolidating molecular AND logic with two chemical inputs. <i>Analytica Chimica Acta</i> , 2006, 568, 156-160.	2.6	26
69	Consolidating Molecular Logic with New Solid-Bound YES and PASS...1 Gates and Their Combinations. <i>ChemPhysChem</i> , 2017, 18, 1760-1766.	1.0	23
70	Path-selective photoinduced electron transfer (PET) in a membrane-associated system studied by pH-dependent fluorescence. <i>Inorganica Chimica Acta</i> , 2012, 381, 243-246.	1.2	22
71	Bright ideas. <i>Nature Chemistry</i> , 2012, 4, 440-441.	6.6	21
72	Logische Schaltungen mit leuchtenden Molekülen. <i>Nachrichten Aus Der Chemie</i> , 2001, 49, 602-606.	0.0	20

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73	Fluorescent molecular logic gates based on photoinduced electron transfer (PET) driven by a combination of atomic and biomolecular inputs. <i>Chemical Communications</i> , 2020, 56, 6838-6841.	2.2	20
74	Lighting-up protein-ligand interactions with fluorescent PET (photoinduced electron transfer) sensor designs. <i>Chemical Communications</i> , 2018, 54, 1319-1322.	2.2	19
75	Population analysis to increase the robustness of molecular computational identification and its extension into the near-infrared for substantial numbers of small objects. <i>Chemical Science</i> , 2019, 10, 2272-2279.	3.7	19
76	Fluoreszenzveränderungen durch Bindung von \pm -Alkandiyldiammonium-Ionen an 9,10-Bis{(1-aza-4,7,10,13,16-pentaoxacyclooctadecyl)methyl}anthracen: ein System zur molekularen Längenerkennung. <i>Angewandte Chemie</i> , 1990, 102, 1159-1161.	1.6	14
77	Bright spies for chiral molecules. <i>Nature</i> , 1995, 374, 310-311.	13.7	13
78	Fluorescent Molecular Logic Gates Driven by Temperature and by Protons in Solution and on Solid. <i>Chemistry - A European Journal</i> , 2021, 27, 13268-13274.	1.7	12
79	Taming Tris(bipyridine)ruthenium(II) and Its Reactions in Water by Capture/Release with Shape-Switchable Symmetry-Matched Cyclophanes. <i>Journal of the American Chemical Society</i> , 2022, 144, 4977-4988.	6.6	12
80	Information gathering and processing with fluorescent molecules. <i>Frontiers of Chemical Science and Engineering</i> , 2014, 8, 240-251.	2.3	11
81	Fluorescent Photoinduced Electron-Transfer Sensors. <i>ACS Symposium Series</i> , 1993, , 45-58.	0.5	9
82	Crossing the divide: Experiences of taking fluorescent PET (photoinduced electron transfer) sensing/switching systems from solution to solid. <i>Dyes and Pigments</i> , 2022, 204, 110453.	2.0	9
83	Bright molecules for sensing, computing and imaging: a tale of two once-troubled cities. <i>Beilstein Journal of Organic Chemistry</i> , 2015, 11, 2774-2784.	1.3	8
84	A Personal Journey across Fluorescent Sensing and Logic Associated with Polymers of Various Kinds. <i>Polymers</i> , 2019, 11, 1351.	2.0	8
85	2010: A Small Space Odyssey with Luminescent Molecules. <i>Israel Journal of Chemistry</i> , 2011, 51, 16-22.	1.0	7
86	Fluorescent logic systems for sensing and molecular computation: structure-activity relationships in edge-detection. <i>Faraday Discussions</i> , 2015, 185, 337-346.	1.6	7
87	Precise Proton Mapping near Ionic Micellar Membranes with Fluorescent Photoinduced Electron-Transfer Sensors. <i>Chemistry - A European Journal</i> , 2019, 25, 8522-8527.	1.7	7
88	What has supramolecular chemistry done for us?. <i>Supramolecular Chemistry</i> , 2016, 28, 201-203.	1.5	5
89	Recent developments in CO ₂ capture/storage/utilization with aromatic macrocycles. <i>Carbon Capture Science & Technology</i> , 2022, 4, 100058.	4.9	5
90	Luminescent Logic and Sensing. , 2005, , 307-315.		3

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91	Molecular logic and computing. , 2009, , 90-101.		1
92	AN INEXPENSIVE STIRRING DEVICE FOR THE "MERRY-GO-ROUND"™ PHOTOREACTOR FOR THE DETERMINATION OF REACTION QUANTUM YIELDS. Photochemistry and Photobiology, 1987, 46, 1021-1022.	1.3	0