

Akihiro Shimizu

List of Publications by Year in descending order

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68
papers

6,409
citations

61945

43
h-index

76872

74
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100
all docs

100
docs citations

100
times ranked

4327
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrogenerated Cationic Reactive Intermediates: The Pool Method and Further Advances. <i>Chemical Reviews</i> , 2018, 118, 4702-4730.	23.0	449
2	Polymer-Bound Pyrene-4,5,9,10-tetraone for Fast-Charge and -Discharge Lithium-Ion Batteries with High Capacity. <i>Journal of the American Chemical Society</i> , 2012, 134, 19694-19700.	6.6	434
3	Synthesis, Intermolecular Interaction, and Semiconductive Behavior of a Delocalized Singlet Biradical Hydrocarbon. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 6564-6568.	7.2	312
4	Synthesis and Characterization of Teranthrene: A Singlet Biradical Polycyclic Aromatic Hydrocarbon Having Kekulé Structures. <i>Journal of the American Chemical Society</i> , 2010, 132, 11021-11023.	6.6	285
5	Strong Two-Photon Absorption of Singlet Diradical Hydrocarbons. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 3544-3546.	7.2	261
6	Electrochemical C-H Amination: Synthesis of Aromatic Primary Amines via <i>N</i> -Arylpyridinium Ions. <i>Journal of the American Chemical Society</i> , 2013, 135, 5000-5003.	6.6	235
7	Indeno[2,1- <i>b</i>]fluorene: A 20 π -Electron Hydrocarbon with Very Low Energy Light Absorption. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 6076-6079.	7.2	228
8	Indeno[2,1- <i>a</i>]fluorene: An Air-Stable <i>ortho</i> -Quinodimethane Derivative. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 6906-6910.	7.2	221
9	Singlet Diradical Character from Experiment. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 937-940.	2.1	181
10	Direct C-N Coupling of Imidazoles with Aromatic and Benzylic Compounds via Electrooxidative C-H Functionalization. <i>Journal of the American Chemical Society</i> , 2014, 136, 4496-4499.	6.6	176
11	Metal- and Chemical-Free C ₁ H/C ₂ H Cross-Coupling of Aromatic Compounds: The Use of Radical Cation Pools. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 7259-7262.	7.2	175
12	The Stabilized Cation Pool Method: Metal- and Oxidant-Free Benzylic C-H/Aromatic C-H Cross-Coupling. <i>Journal of the American Chemical Society</i> , 2016, 138, 8400-8403.	6.6	175
13	Alternating Covalent Bonding Interactions in a One-Dimensional Chain of a Phenalenyl-Based Singlet Biradical Molecule Having Kekulé Structures. <i>Journal of the American Chemical Society</i> , 2010, 132, 14421-14428.	6.6	162
14	Halogen and Chalcogen Cation Pools Stabilized by DMSO. Versatile Reagents for Alkene Difunctionalization. <i>Journal of the American Chemical Society</i> , 2013, 135, 16070-16073.	6.6	150
15	Singlet Biradical Character of Phenalenyl-Based Kekulé Hydrocarbon with Naphthoquinoid Structure. <i>Organic Letters</i> , 2007, 9, 81-84.	2.4	148
16	Introduction of two lithiooxycarbonyl groups enhances cyclability of lithium batteries with organic cathode materials. <i>Journal of Power Sources</i> , 2014, 260, 211-217.	4.0	142
17	Resonance Balance Shift in Stacks of Delocalized Singlet Biradicals. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 5482-5486.	7.2	140
18	Heterocyclization Approach for Electrooxidative Coupling of Functional Primary Alkylamines with Aromatics. <i>Journal of the American Chemical Society</i> , 2015, 137, 9816-9819.	6.6	127

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19	Ambipolar organic field-effect transistors based on a low band gap semiconductor with balanced hole and electron mobilities. <i>Applied Physics Letters</i> , 2007, 91, .	1.5	120
20	Aromaticity and π -bond covalency: prominent intermolecular covalent bonding interaction of a Kekulé hydrocarbon with very significant singlet biradical character. <i>Chemical Communications</i> , 2012, 48, 5629.	2.2	111
21	Non-alternant non-benzenoid kekulenes: the birth of a new kekulene family. <i>Chemical Society Reviews</i> , 2015, 44, 6560-6577.	18.7	106
22	Automated Solution-Phase Synthesis of Oligosaccharides via Iterative Electrochemical Assembly of Thioglycosides. <i>Organic Letters</i> , 2013, 15, 4520-4523.	2.4	97
23	Theoretical study of third-order nonlinear optical properties in square nanographenes with open-shell singlet ground states. <i>Chemical Physics Letters</i> , 2008, 467, 120-125.	1.2	96
24	Signature of multiradical character in second hyperpolarizabilities of rectangular graphene nanoflakes. <i>Chemical Physics Letters</i> , 2010, 489, 212-218.	1.2	90
25	Tetracyclopenta[<i>def,jkl,pqr,vwx</i>]tetraphenylene: A Potential Tetraradicaloid Hydrocarbon. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 2090-2094.	7.2	87
26	Synthesis, Structure, and Photophysical Properties of Dibenzo[<i>de</i>], [<i>mn</i>]naphthacenes. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 7059-7062.	7.2	85
27	Synthesis, Crystal Structure, and Physical Properties of Sterically Unprotected Hydrocarbon Radicals. <i>Journal of the American Chemical Society</i> , 2011, 133, 14240-14243.	6.6	84
28	Electrochemical Intramolecular C-H Amination: Synthesis of Benzoxazoles and Benzothiazoles. <i>Chemistry - A European Journal</i> , 2015, 21, 3211-3214.	1.7	76
29	Benz[<i>c</i>]indeno[2,1- <i>a</i>]fluorene: a 2,3-naphthoquinodimethane incorporated into an indenofluorene frame. <i>Chemical Science</i> , 2014, 5, 163-168.	3.7	75
30	Metal-Free Benzylic C-H Amination via Electrochemically Generated Benzylaminosulfonium Ions. <i>Chemistry - A European Journal</i> , 2017, 23, 61-64.	1.7	72
31	Nitrogen-Containing Polycyclic Quinones as Cathode Materials for Lithium-Ion Batteries with Increased Voltage. <i>Energy Technology</i> , 2014, 2, 155-158.	1.8	71
32	Synthesis and Isolation of a Kinetically Stabilized Crystalline Triangulene. <i>Journal of the American Chemical Society</i> , 2021, 143, 19599-19605.	6.6	65
33	New Approach to 1,4-Benzoxazinones by Electrochemical C-H Amination. <i>Chemistry - A European Journal</i> , 2017, 23, 12096-12099.	1.7	58
34	Automated Electrochemical Assembly of the Protected Potential TMG-chitotriomycin Precursor Based on Rational Optimization of the Carbohydrate Building Block. <i>Organic Letters</i> , 2015, 17, 1525-1528.	2.4	55
35	Theoretical consideration of singlet open-shell character of polyperiacenes using Clar's aromatic sextet valence bond model and quantum chemical calculations. <i>AIP Conference Proceedings</i> , 2012, , .	0.3	54
36	Fluoreno[2,3- <i>b</i>]fluorene vs Indeno[2,1- <i>b</i>]fluorene: Unusual Relationship between the Number of π Electrons and Excitation Energy in <i>m</i> -Quinodimethane-Type Singlet Diradicaloids. <i>Journal of Organic Chemistry</i> , 2017, 82, 1380-1388.	1.7	52

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37	Third-order nonlinear optical properties of trigonal, rhombic and bow-tie graphene nanoflakes with strong structural dependence of diradical character. <i>Chemical Physics Letters</i> , 2009, 480, 278-283.	1.2	49
38	Liquid Quinones for Solvent-Free Redox Flow Batteries. <i>Advanced Materials</i> , 2017, 29, 1606592.	11.1	41
39	Indenofluorene congeners: Biradicaloids and beyond. <i>Pure and Applied Chemistry</i> , 2014, 86, 517-528.	0.9	40
40	Synthesis and Isolation of a Kekulé Hydrocarbon with a Triplet Ground State. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	34
41	Reaction Integration Using Electrogenerated Cationic Intermediates. <i>Bulletin of the Chemical Society of Japan</i> , 2015, 88, 763-775.	2.0	33
42	Photostability enhancement of the pentacene derivative having two nitronyl nitroxide radical substituents. <i>Chemical Communications</i> , 2016, 52, 2889-2892.	2.2	33
43	HOMO-LUMO Energy-Gap Tuning of π -Conjugated Zwitterions Composed of Electron-Donating Anion and Electron-Accepting Cation. <i>Journal of Organic Chemistry</i> , 2021, 86, 770-781.	1.7	31
44	Switching the reaction pathways of electrochemically generated β -haloalkoxysulfonium ions for synthesis of halohydrins and epoxides. <i>Beilstein Journal of Organic Chemistry</i> , 2015, 11, 242-248.	1.3	28
45	Experimental consideration of covalent bonding interactions in stacks of singlet biradicals having Kekulé structures. <i>Journal of Physical Organic Chemistry</i> , 2011, 24, 876-882.	0.9	25
46	Azoniadibenzo[<i>a</i> , <i>j</i>]phenalenide: A Polycyclic Zwitterion with Singlet Biradical Character. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 6415-6419.	7.2	21
47	Synthesis and physical properties of zethrene derivatives bearing donor/acceptor substituents at 7,14-positions. <i>Organic and Biomolecular Chemistry</i> , 2013, 11, 8256.	1.5	17
48	Scanning Tunneling Microscopy Study of a Phenalenyl-Based Singlet Biradical on Graphite. <i>Journal of Physical Chemistry C</i> , 2009, 113, 1515-1519.	1.5	16
49	Electronic structure of delocalized singlet biradical Ph ₂ -IDPL solid film. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 12570.	1.3	15
50	Metal-Free Twofold Electrochemical C-H Amination of Activated Arenes: Application to Medicinally Relevant Precursor Synthesis. <i>Chemistry - A European Journal</i> , 2020, 26, 17574-17580.	1.7	14
51	Oxidative Cyclodimerization After Tandem Cyclization of Dehydrobenzo[14]annulenes Induced by Alkyl lithium. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 4184-4188.	7.2	13
52	Generation, Characterization, and Reactions of Thionium Ions Based on the Indirect Cation Pool Method. <i>Bulletin of the Chemical Society of Japan</i> , 2016, 89, 61-66.	2.0	12
53	PPV Polymerization through the Gilch Route: Diradical Character of Monomers. <i>Chemistry - A European Journal</i> , 2015, 21, 19176-19185.	1.7	9
54	Redox active dendronized polystyrenes equipped with peripheral triaryl amines. <i>Beilstein Journal of Organic Chemistry</i> , 2014, 10, 3097-3103.	1.3	8

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55	Transformation of octadehydrodibenzo[12]annulene to benzonaphthopentalene by successive nucleophilic and electrophilic transannular cyclizations. <i>Tetrahedron</i> , 2014, 70, 8474-8479.	1.0	8
56	Metal- and Oxidant-Free Alkenyl C [~] H/Aromatic C [~] H Cross-Coupling Using Electrochemically Generated Iodosulfonium Ions. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 12891-12895.	7.2	7
57	Azoniadibenzo[a , j]phenalene: A Polycyclic Zwitterion with Singlet Biradical Character. <i>Angewandte Chemie</i> , 2019, 131, 6481-6485.	1.6	7
58	Chemistry of Phenalenyl-based Delocalized Singlet Biradicals. <i>Yuki Gosei Kagaku Kyokaiishi/Journal of Synthetic Organic Chemistry</i> , 2010, 68, 64-74.	0.0	6
59	Metal- and Oxidant-Free Alkenyl C [~] H/Aromatic C [~] H Cross-Coupling Using Electrochemically Generated Iodosulfonium Ions. <i>Angewandte Chemie</i> , 2018, 130, 13073-13077.	1.6	4
60	Synthesis and Isolation of a Kekulé Hydrocarbon with a Triplet Ground State. <i>Angewandte Chemie</i> , 0, , .	1.6	4
61	Ï-Topology and ultrafast excited-state dynamics of remarkably photochemically stabilized pentacene derivatives with radical substituents. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 13514-13518.	1.3	2
62	Development of Electroorganic Reactions Utilizing Stabilized Reactive Species and Its Application to Organic Energy Storage Materials. <i>Electrochemistry</i> , 2018, 86, 298-302.	0.6	1
63	Anthracene-Based Zwitterion with a Small HOMO-LUMO Energy Gap. <i>Synthesis</i> , 2021, 53, 4042-4047.	1.2	1
64	Singlet Open-Shell Character of Polyperiacenes. , 2011, , 45-57.		0
65	Theoretical aspects on the evaluation and interpretation of the third-order nonlinear optical properties of diradical compounds. , 2012, , .		0
66	Singlet open-shell character of conjugated Kekulé molecules. , 2012, , .		0
67	Indeno[2,1-b]fluorene: A 20-Electron Hydrocarbon with Very Low-Energy Light Absorption (<i>Angew. Chem.</i> 23/2013). <i>Angewandte Chemie</i> , 2013, 125, 6228-6228.	1.6	0
68	Tetracyclopenta[def,jkl,pqr,vwx]tetraphenylene: A Potential Tetraradicaloid Hydrocarbon (<i>Angew. Chem.</i> 7/2015). <i>Angewandte Chemie</i> , 2015, 127, 2000-2000.	1.6	0