

# Masahiko Taniguchi

## List of Publications by Year in descending order

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111  
papers

4,275  
citations

94269

37  
h-index

118652

62  
g-index

117  
all docs

117  
docs citations

117  
times ranked

3346  
citing authors

#	ARTICLE	IF	CITATIONS
1	Database of Absorption and Fluorescence Spectra of >300 Common Compounds for use in PhotochemCAD. <i>Photochemistry and Photobiology</i> , 2018, 94, 290-327.	1.3	306
2	A Scalable Synthesis of Meso-Substituted Dipyrrromethanes. <i>Organic Process Research and Development</i> , 2003, 7, 799-812.	1.3	284
3	Synthetic Chlorins, Possible Surrogates for Chlorophylls, Prepared by Derivatization of Porphyrins. <i>Chemical Reviews</i> , 2017, 117, 344-535.	23.0	250
4	PhotochemCAD 2: A Refined Program with Accompanying Spectral Databases for Photochemical Calculations. <i>Photochemistry and Photobiology</i> , 2005, 81, 212.	1.3	202
5	Accessing the near-infrared spectral region with stable, synthetic, wavelength-tunable bacteriochlorins. <i>New Journal of Chemistry</i> , 2008, 32, 947.	1.4	120
6	Examination of Tethered Porphyrin, Chlorin, and Bacteriochlorin Molecules in Mesoporous Metal-Oxide Solar Cells. <i>Journal of Physical Chemistry C</i> , 2007, 111, 15464-15478.	1.5	98
7	Photophysical Properties and Electronic Structure of Stable, Tunable Synthetic Bacteriochlorins: Extending the Features of Native Photosynthetic Pigments. <i>Journal of Physical Chemistry B</i> , 2011, 115, 10801-10816.	1.2	93
8	Synthetic Chlorins Bearing Auxochromes at the 3- and 13-Positions. <i>Journal of Organic Chemistry</i> , 2006, 71, 4092-4102.	1.7	92
9	Comprehensive review of photophysical parameters ( $\mu$ , $f$ , $\lambda$ , $s$ ) of tetraphenylporphyrin (H2TPP) and zinc tetraphenylporphyrin (ZnTPP) – Critical benchmark molecules in photochemistry and photosynthesis. <i>Journal of Photochemistry and Photobiology C: Photochemistry Reviews</i> , 2021, 46, 100401.	5.6	90
10	Synthesis and Physicochemical Properties of Metallobacteriochlorins. <i>Inorganic Chemistry</i> , 2012, 51, 9443-9464.	1.9	89
11	PhotochemCAD 3: Diverse Modules for Photophysical Calculations with Multiple Spectral Databases. <i>Photochemistry and Photobiology</i> , 2018, 94, 277-289.	1.3	87
12	Synthesis of Meso-Substituted Chlorins via Tetrahydrobilene-a Intermediates. <i>Journal of Organic Chemistry</i> , 2001, 66, 7342-7354.	1.7	86
13	A Tin-Complexation Strategy for Use with Diverse Acylation Methods in the Preparation of 1,9-Diacylidipyrrromethanes. <i>Journal of Organic Chemistry</i> , 2004, 69, 765-777.	1.7	78
14	Effects of Substituents on Synthetic Analogs of Chlorophylls. Part 2: Redox Properties, Optical Spectra and Electronic Structure. <i>Photochemistry and Photobiology</i> , 2007, 83, 1125-1143.	1.3	77
15	Photophysical Properties and Electronic Structure of Porphyrins Bearing Zero to Four <i>meso</i> -Phenyl Substituents: New Insights into Seemingly Well Understood Tetrapyrroles. <i>Journal of Physical Chemistry A</i> , 2016, 120, 9719-9731.	1.1	75
16	Regioselective 15-Bromination and Functionalization of a Stable Synthetic Bacteriochlorin. <i>Journal of Organic Chemistry</i> , 2007, 72, 5350-5357.	1.7	68
17	Effects of Substituents on Synthetic Analogs of Chlorophylls. Part 1: Synthesis, Vibrational Properties and Excited-state Decay Characteristics. <i>Photochemistry and Photobiology</i> , 2007, 83, 1110-1124.	1.3	68
18	Sparsely substituted chlorins as core constructs in chlorophyll analogue chemistry. Part 3: Spectral and structural properties. <i>Tetrahedron</i> , 2007, 63, 3850-3863.	1.0	63

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19	Synthesis of phenylethyne-linked porphyrin dyads. <i>Tetrahedron</i> , 2004, 60, 2011-2023.	1.0	62
20	Synthesis and Electronic Properties of Regioisomerically Pure Oxochlorins. <i>Journal of Organic Chemistry</i> , 2002, 67, 7329-7342.	1.7	59
21	Alkylthio Unit as an $\alpha$ -Pyrrole Protecting Group for Use in Dipyrromethane Synthesis. <i>Journal of Organic Chemistry</i> , 2006, 71, 903-910.	1.7	59
22	PhotochemCAD 2: A Refined Program with Accompanying Spectral Databases for Photochemical Calculations. <i>Photochemistry and Photobiology</i> , 2005, 81, 212-213.	1.3	58
23	Absorption and Fluorescence Spectral Database of Chlorophylls and Analogues. <i>Photochemistry and Photobiology</i> , 2021, 97, 136-165.	1.3	58
24	Introduction of a Third Meso Substituent into 5,10-Diaryl Chlorins and Oxochlorins. <i>Journal of Organic Chemistry</i> , 2005, 70, 275-285.	1.7	56
25	Sparsely substituted chlorins as core constructs in chlorophyll analogue chemistry. Part 1: Synthesis. <i>Tetrahedron</i> , 2007, 63, 3826-3839.	1.0	56
26	Hydrogen Evolution Catalysis by a Sparsely Substituted Cobalt Chlorin. <i>ACS Catalysis</i> , 2017, 7, 3597-3606.	5.5	56
27	Extending the Short and Long Wavelength Limits of Bacteriochlorin Near-Infrared Absorption via Dioxo- and Bisimide-Functionalization. <i>Journal of Physical Chemistry B</i> , 2015, 119, 4382-4395.	1.2	55
28	Refined Synthesis of 2,3,4,5-Tetrahydro-1,3,3-trimethyldipyrin, a Deceptively Simple Precursor to Hydroporphyrins. <i>Organic Process Research and Development</i> , 2005, 9, 651-659.	1.3	54
29	Masked Imidazolyl-Dipyrromethanes in the Synthesis of Imidazole-Substituted Porphyrins. <i>Journal of Organic Chemistry</i> , 2006, 71, 8807-8817.	1.7	50
30	Sparsely substituted chlorins as core constructs in chlorophyll analogue chemistry. Part 2: Derivatization. <i>Tetrahedron</i> , 2007, 63, 3840-3849.	1.0	48
31	Synthesis of oligo( <i>p</i> -phenylene)-linked dyads containing free base, zinc(II) or thallium(III) porphyrins for studies in artificial photosynthesis. <i>Tetrahedron</i> , 2010, 66, 5549-5565.	1.0	48
32	Synthesis and Excited-State Photodynamics of Perylene-Bis(Imide)-Oxochlorin Dyads. A Charge-Separation Motif. <i>Journal of Physical Chemistry B</i> , 2003, 107, 3443-3454.	1.2	44
33	A New Route for Installing the Isocyclic Ring on Chlorins Yielding 131-Oxophorbines. <i>Journal of Organic Chemistry</i> , 2006, 71, 7049-7052.	1.7	43
34	1,9-Bis( <i>N,N</i> -dimethylaminomethyl)dipyrromethanes in the synthesis of porphyrins bearing one or two meso substituents. <i>Tetrahedron</i> , 2005, 61, 10291-10302.	1.0	42
35	Imine-substituted dipyrromethanes in the synthesis of porphyrins bearing one or two meso substituents. <i>Journal of Porphyrins and Phthalocyanines</i> , 2005, 09, 554-574.	0.4	41
36	Simple Formation of an Abiotic Porphyrinogen in Aqueous Solution. <i>Origins of Life and Evolution of Biospheres</i> , 2009, 39, 495-515.	0.8	40

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37	Structural characteristics that make chlorophylls green: interplay of hydrocarbon skeleton and substituents. <i>New Journal of Chemistry</i> , 2011, 35, 76-88.	1.4	40
38	Refined syntheses of hydrodipyrin precursors to chlorin and bacteriochlorin building blocks. <i>Journal of Porphyrins and Phthalocyanines</i> , 2009, 13, 1098-1110.	0.4	39
39	Comparison of Excited-State Energy Transfer in Arrays of Hydroporphyrins (Chlorins, Oxochlorins) versus Porphyrins: Rates, Mechanisms, and Design Criteria. <i>Journal of the American Chemical Society</i> , 2003, 125, 13461-13470.	6.6	37
40	Photophysical Properties of Phenylethyne-Linked Porphyrin and Oxochlorin Dyads. <i>Journal of Physical Chemistry B</i> , 2004, 108, 8190-8200.	1.2	37
41	Abiotic formation of uroporphyrinogen and coproporphyrinogen from acyclic reactants. <i>New Journal of Chemistry</i> , 2011, 35, 65-75.	1.4	36
42	PhotochemCAD 2. A Refined Program with Accompanying Spectral Database for Photochemical Calculations. <i>Photochemistry and Photobiology</i> , 2004, 81, 212-3.	1.3	36
43	Synthesis and Photophysical Characterization of Porphyrin, Chlorin and Bacteriochlorin Molecules Bearing Tethers for Surface Attachment. <i>Photochemistry and Photobiology</i> , 2007, 83, 1513-1528.	1.3	32
44	Synthesis and Photochemical Properties of 12-Substituted versus 13-Substituted Chlorins. <i>Journal of Organic Chemistry</i> , 2009, 74, 5276-5289.	1.7	32
45	Versatile design of biohybrid light-harvesting architectures to tune location, density, and spectral coverage of attached synthetic chromophores for enhanced energy capture. <i>Photosynthesis Research</i> , 2014, 121, 35-48.	1.6	32
46	Synthesis and photophysical properties of chlorins bearing 0-4 distinct meso-substituents. <i>Photochemical and Photobiological Sciences</i> , 2013, 12, 2089-2109.	1.6	29
47	Regioselective Bromination Tactics in the de Novo Synthesis of Chlorophyll <i>b</i> Analogues. <i>Journal of Organic Chemistry</i> , 2009, 74, 3237-3247.	1.7	28
48	Linker Dependence of Energy and Hole Transfer in Neutral and Oxidized Multiporphyrin Arrays. <i>Journal of Physical Chemistry B</i> , 2009, 113, 16483-16493.	1.2	28
49	Photophysical Properties and Electronic Structure of Zinc(II) Porphyrins Bearing $\text{C}_4$ meso-Phenyl Substituents: Zinc Porphine to Zinc Tetraphenylporphyrin (ZnTPP). <i>Journal of Physical Chemistry A</i> , 2020, 124, 7776-7794.	1.1	28
50	Self-organization of tetrapyrrole constituents to give a photoactive protocell. <i>Chemical Science</i> , 2012, 3, 1963.	3.7	27
51	Photophysical Properties and Electronic Structure of Chlorin-Imides: Bridging the Gap between Chlorins and Bacteriochlorins. <i>Journal of Physical Chemistry B</i> , 2015, 119, 7503-7515.	1.2	27
52	Quadruple Decker [3.3][3.3][3.3]Orthocyclophane Acetal—An Orthocyclophane Ladder. <i>Angewandte Chemie - International Edition</i> , 1998, 37, 2532-2534.	7.2	26
53	Diversity, isomer composition, and design of combinatorial libraries of tetrapyrrole macrocycles. <i>Journal of Porphyrins and Phthalocyanines</i> , 2012, 16, 1-13.	0.4	24
54	A tandem combinatorial model for the prebiogenesis of diverse tetrapyrrole macrocycles. <i>New Journal of Chemistry</i> , 2012, 36, 1057.	1.4	24

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55	Virtual Libraries of Tetrapyrrole Macrocycles. Combinatorics, Isomers, Product Distributions, and Data Mining. <i>Journal of Chemical Information and Modeling</i> , 2011, 51, 2233-2247.	2.5	23
56	Heuristics from Modeling of Spectral Overlap in Förster Resonance Energy Transfer (FRET). <i>Journal of Chemical Information and Modeling</i> , 2019, 59, 652-667.	2.5	22
57	Determination of Ground-State Hole-Transfer Rates Between Equivalent Sites in Oxidized Multiporphyrin Arrays Using Time-Resolved Optical Spectroscopy. <i>Journal of the American Chemical Society</i> , 2008, 130, 15636-15648.	6.6	21
58	Structural studies of sparsely substituted synthetic chlorins and phorbins establish benchmarks for changes in the ligand core and framework of chlorophyll macrocycles. <i>Journal of Molecular Structure</i> , 2010, 979, 27-45.	1.8	21
59	The fluorescence quantum yield parameter in Förster resonance energy transfer (FRET) – Meaning, misperception, and molecular design. <i>Chemical Physics Reviews</i> , 2021, 2, 011302.	2.6	20
60	Primordial Oil Slick and the Formation of Hydrophobic Tetrapyrrole Macrocycles. <i>Astrobiology</i> , 2012, 12, 1055-1068.	1.5	19
61	Expanded combinatorial formation of porphyrin macrocycles in aqueous solution containing vesicles. A prebiotic model. <i>New Journal of Chemistry</i> , 2013, 37, 1073.	1.4	19
62	Competing Knorr and Fischer–Fink pathways to pyrroles in neutral aqueous solution. <i>Tetrahedron</i> , 2012, 68, 6957-6967.	1.0	18
63	Excited-State Energy Flow in Phenylene-Linked Multiporphyrin Arrays. <i>Journal of Physical Chemistry B</i> , 2009, 113, 8011-8019.	1.2	17
64	Aqueous membrane partitioning of $\beta^2$ -substituted porphyrins encompassing diverse polarity. <i>New Journal of Chemistry</i> , 2013, 37, 1087.	1.4	16
65	Synthesis, photophysics and electronic structure of oxobacteriochlorins. <i>New Journal of Chemistry</i> , 2017, 41, 3732-3744.	1.4	16
66	Phenylene-linked tetrapyrrole arrays containing free base and diverse metal chelate forms – Versatile synthetic architectures for catalysis and artificial photosynthesis. <i>Coordination Chemistry Reviews</i> , 2022, 456, 214278.	9.5	16
67	Bioconjugatable, PEGylated hydroporphyrins for photochemistry and photomedicine. Narrow-band, near-infrared-emitting bacteriochlorins. <i>New Journal of Chemistry</i> , 2016, 40, 7750-7767.	1.4	15
68	A perspective on the redox properties of tetrapyrrole macrocycles. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 19130-19140.	1.3	15
69	The Study of $\pi$ - $\pi$ Interaction in Layered [3.3]Orthocyclophanes. Charge-Transfer Complexes of [3.3]Orthocyclophanes with Tetracyanoethylene. <i>Bulletin of the Chemical Society of Japan</i> , 1998, 71, 2661-2668.	2.0	14
70	Tolyporphins A – R, unusual tetrapyrrole macrocycles in a cyanobacterium from Micronesia, assessed quantitatively from the culture HT-58-2. <i>New Journal of Chemistry</i> , 0, , .	1.4	14
71	Near-infrared tunable bacteriochlorins equipped for bioorthogonal labeling. <i>New Journal of Chemistry</i> , 2015, 39, 4534-4550.	1.4	13
72	Photophysical properties and electronic structure of retinylidene-chlorin-chalcones and analogues. <i>Photochemical and Photobiological Sciences</i> , 2014, 13, 634-650.	1.6	12

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73	Paley's watchmaker analogy and prebiotic synthetic chemistry in surfactant assemblies. Formaldehyde scavenging by pyrroles leading to porphyrins as a case study. <i>Organic and Biomolecular Chemistry</i> , 2015, 13, 10025-10031.	1.5	12
74	Beyond green with synthetic chlorophylls – Connecting structural features with spectral properties. <i>Journal of Photochemistry and Photobiology C: Photochemistry Reviews</i> , 2022, 52, 100513.	5.6	12
75	Progress towards synthetic chlorins with graded polarity, conjugatable substituents, and wavelength tunability. <i>Journal of Porphyrins and Phthalocyanines</i> , 2015, 19, 547-572.	0.4	10
76	Bisacetals of aromatic ring-annelated . [3.3][3.3]Orthocyclophanes with triple-layered benzo/benzo/benzo- and naphtho/benzo/naphtho-system. <i>Tetrahedron</i> , 1997, 53, 3015-3026.	1.0	9
77	Probing Ground-State Hole Transfer Between Equivalent, Electrochemically Inaccessible States in Multiporphyrin Arrays Using Time-Resolved Optical Spectroscopy. <i>Photochemistry and Photobiology</i> , 2009, 85, 693-704.	1.3	9
78	Statistical considerations on the formation of circular photosynthetic light-harvesting complexes from <i>Rhodospseudomonas palustris</i> . <i>Photosynthesis Research</i> , 2014, 121, 49-60.	1.6	9
79	Synthesis of diverse acyclic precursors to pyrroles for studies of prebiotic routes to tetrapyrrole macrocycles. <i>New Journal of Chemistry</i> , 2016, 40, 8786-8808.	1.4	9
80	Comparison of Electron-Transfer Rates for Metal- versus Ring-Centered Redox Processes of Porphyrins in Monolayers on Au(111). <i>Langmuir</i> , 2008, 24, 12047-12053.	1.6	8
81	Probing the Rate of Hole Transfer in Oxidized Porphyrin Dyads Using Thallium Hyperfine Clocks. <i>Journal of the American Chemical Society</i> , 2010, 132, 12121-12132.	6.6	8
82	Encoding isotopic watermarks in molecular electronic materials as an anti-counterfeiting strategy: Application to porphyrins for information storage. <i>Journal of Porphyrins and Phthalocyanines</i> , 2011, 15, 505-516.	0.4	8
83	Complexity in structure-directed prebiotic chemistry. Unexpected compositional richness from competing reactants in tetrapyrrole formation. <i>New Journal of Chemistry</i> , 2016, 40, 6421-6433.	1.4	8
84	Enumeration of Virtual Libraries of Combinatorial Modular Macrocyclic (Bracelet, Necklace) Architectures and Their Linear Counterparts. <i>Journal of Chemical Information and Modeling</i> , 2013, 53, 2203-2216.	2.5	7
85	Integration of Cyanine, Merocyanine and Styryl Dye Motifs with Synthetic Bacteriochlorins. <i>Photochemistry and Photobiology</i> , 2016, 92, 111-125.	1.3	7
86	The Porphobilinogen Conundrum in Prebiotic Routes to Tetrapyrrole Macrocycles. <i>Origins of Life and Evolution of Biospheres</i> , 2017, 47, 93-119.	0.8	7
87	Synthesis and Spectral Properties of meso-Arylbacteriochlorins, Including Insights into Essential Motifs of their Hydrodipyrin Precursors. <i>Molecules</i> , 2017, 22, 634.	1.7	7
88	Fluorescence Assay for Tolyporphins Amidst Abundant Chlorophyll in Crude Cyanobacterial Extracts. <i>Photochemistry and Photobiology</i> , 2021, , .	1.3	7
89	Electronic Structure and Excited-State Dynamics of Rylene-Tetrapyrrole Panchromatic Absorbers. <i>Journal of Physical Chemistry A</i> , 2021, 125, 7900-7919.	1.1	7
90	Benzo[3.3]benzo[3.3]benzo- and naphtho[3.3]benzo[3.3]naphtho-orthocyclophane bis(alcohol)s. Preparations and structures. <i>Tetrahedron</i> , 1998, 54, 5171-5186.	1.0	6

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91	Thieno[3.3]orthocyclophanes: preparations and structures. <i>New Journal of Chemistry</i> , 1999, 23, 675-678.	1.4	6
92	Probing the Rate of Hole Transfer in Oxidized Synthetic Chlorin Dyads via Site-Specific <sup>13</sup> C-Labeling. <i>Journal of Organic Chemistry</i> , 2010, 75, 3193-3202.	1.7	6
93	Elaboration of an unexplored substitution site in synthetic bacteriochlorins. <i>Journal of Porphyrins and Phthalocyanines</i> , 2015, 19, 887-902.	0.4	6
94	Bioconjugatable synthetic chlorins rendered water-soluble with three PEG-12 groups via click chemistry. <i>Journal of Porphyrins and Phthalocyanines</i> , 2020, 24, 362-378.	0.4	6
95	Enumeration of Isomers of Substituted Tetrapyrrole Macrocycles: From Classical Problems in Biology to Modern Combinatorial Libraries. <i>Handbook of Porphyrin Science</i> , 2012, , 1-80.	0.3	5
96	Complexity in structure-directed prebiotic chemistry. Effect of a defective competing reactant in tetrapyrrole formation. <i>New Journal of Chemistry</i> , 2015, 39, 8273-8281.	1.4	5
97	Conformational Analysis of Spirocyclopropane- and Spirooxirane-annulated Dibenzobicyclo[4.4.1]undecanes by <sup>1</sup> H NMR Spectroscopy and X-Ray Crystallography. <i>Journal of Chemical Research Synopses</i> , 1997, , 48-49.	0.3	4
98	Radiosynthesis of [ <sup>18</sup> F]N-(4-phenylbutyl)-4-(4-fluorobenzoyl)piperidine for studying serotonin 5-HT <sub>2a</sub> receptors. <i>Journal of Labelled Compounds and Radiopharmaceuticals</i> , 1998, 41, 941-949.	0.5	4
99	Activation Energies for Oxidation of Porphyrin Monolayers Anchored to Au(111). <i>Langmuir</i> , 2010, 26, 15718-15721.	1.6	4
100	NMR spectral properties of 16 synthetic bacteriochlorins with site-specific <sup>13</sup> C or <sup>15</sup> N substitution. <i>Journal of Porphyrins and Phthalocyanines</i> , 2014, 18, 433-456.	0.4	4
101	Scope and limitations of two model prebiotic routes to tetrapyrrole macrocycles. <i>New Journal of Chemistry</i> , 2016, 40, 7445-7455.	1.4	4
102	Developing a user community in the photosciences: a website for spectral data and PhotochemCAD. , 2019, , .		4
103	Absorption and fluorescence spectra of organic compounds from 40 sources “ archives, repositories, databases, and literature search engines. , 2020, , .		4
104	Layered [3.3]Orthocyclophane Tricarbonylchromium Complexes. <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 1999, 625, 1249-1251.	0.6	3
105	Complexity in structure-directed prebiotic chemistry. Reaction bifurcation from a $\hat{1}^2$ -diketone in tetrapyrrole formation. <i>New Journal of Chemistry</i> , 2016, 40, 6434-6440.	1.4	3
106	Synthesis of 8,16-dimethyl- and 8,16-dimethoxy-5,13-di-t-butyl[2.2]metacyclophane-1,2,9,10-tetraone. <i>Tetrahedron Letters</i> , 1999, 40, 4691-4692.	0.7	2
107	Analysis of Wikipedia pageviews to identify popular chemicals. , 2020, , .		2
108	Novel rearrangement of conformationally restrained [3.3]orthocyclophanes. <i>Journal of the Chemical Society Perkin Transactions 1</i> , 1999, , 2101-2108.	0.9	1

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109	Red and near-infrared fluorophores inspired by chlorophylls: consideration of practical brightness in multicolor flow cytometry and biomedical sciences. , 2018, , .		1
110	Crystal Structure of 1,9-Dibromo-5-phenyldipyrin, Tetrapyrrole Synthesis Derivative and Free Base Ligand of BODIPY Building Blocks. X-ray Structure Analysis Online, 2020, 36, 21-22.	0.1	1
111	A Tin-Complexation Strategy for Use with Diverse Acylation Methods in the Preparation of 1,9-Diacyldipyrromethanes.. ChemInform, 2004, 35, no.	0.1	0