

John D Tovar

List of Publications by Year in descending order

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96
papers

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citations

147566

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107
docs citations

107
times ranked

3475
citing authors

#	ARTICLE	IF	CITATIONS
1	Supramolecular Construction of Optoelectronic Biomaterials. <i>Accounts of Chemical Research</i> , 2013, 46, 1527-1537.	7.6	208
2	One-Dimensional Optoelectronic Nanostructures Derived from the Aqueous Self-Assembly of π -Conjugated Oligopeptides. <i>Journal of the American Chemical Society</i> , 2008, 130, 13840-13841.	6.6	154
3	Aligned Macroscopic Domains of Optoelectronic Nanostructures Prepared via Shear-Flow Assembly of Peptide Hydrogels. <i>Advanced Materials</i> , 2011, 23, 5009-5014.	11.1	128
4	Synthesis and Alignment of Discrete Polydiacetylene-Peptide Nanostructures. <i>Journal of the American Chemical Society</i> , 2012, 134, 2028-2031.	6.6	123
5	Synthesis of Functionalizable Boron-Containing π -Electron Materials that Incorporate Formally Aromatic Fused Borepin Rings. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 4213-4217.	7.2	110
6	Thiophene-Fused Borepins As Directly Functionalizable Boron-Containing π -Electron Systems. <i>Journal of the American Chemical Society</i> , 2014, 136, 7132-7139.	6.6	106
7	Peptide π -Electron Conjugates: Organic Electronics for Biology?. <i>Bioconjugate Chemistry</i> , 2015, 26, 2290-2302.	1.8	104
8	Kinetically Controlled Coassembly of Multichromophoric Peptide Hydrogelators and the Impacts on Energy Transport. <i>Journal of the American Chemical Society</i> , 2017, 139, 8685-8692.	6.6	104
9	Pyrylium Salts via Electrophilic Cyclization: Applications for Novel 3-Arylisoquinoline Syntheses. <i>Journal of Organic Chemistry</i> , 1999, 64, 6499-6504.	1.7	99
10	Probing the Interior of Peptide Amphiphile Supramolecular Aggregates. <i>Journal of the American Chemical Society</i> , 2005, 127, 7337-7345.	6.6	96
11	On-resin dimerization incorporates a diverse array of π -conjugated functionality within aqueous self-assembling peptide backbones. <i>Chemical Communications</i> , 2010, 46, 3947.	2.2	89
12	Solid-state electrical applications of protein and peptide based nanomaterials. <i>Chemical Society Reviews</i> , 2018, 47, 3640-3658.	18.7	84
13	Functionalizable Polycyclic Aromatics through Oxidative Cyclization of Pendant Thiophenes. <i>Journal of the American Chemical Society</i> , 2002, 124, 7762-7769.	6.6	83
14	Discovery of Self-Assembling π -Conjugated Peptides by Active Learning-Directed Coarse-Grained Molecular Simulation. <i>Journal of Physical Chemistry B</i> , 2020, 124, 3873-3891.	1.2	76
15	Photoinduced Electron Transfer within Supramolecular Donor-Acceptor Peptide Nanostructures under Aqueous Conditions. <i>Journal of the American Chemical Society</i> , 2016, 138, 3362-3370.	6.6	67
16	Conjugated π -Entacenes Polycyclic Aromatics Containing Two Borepin Rings. <i>Organic Letters</i> , 2011, 13, 3106-3109.	2.4	65
17	Supramolecular Polymorphism: Tunable Electronic Interactions within π -Conjugated Peptide Nanostructures Dictated by Primary Amino Acid Sequence. <i>Langmuir</i> , 2014, 30, 5946-5956.	1.6	62
18	Energy transfer within responsive π -conjugated coassembled peptide-based nanostructures in aqueous environments. <i>Chemical Science</i> , 2015, 6, 1474-1484.	3.7	60

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19	Peptide-Based Supramolecular Semiconductor Nanomaterials via Pd-Catalyzed Solid-Phase α -Dimerizations. ACS Macro Letters, 2012, 1, 1326-1329.	2.3	59
20	Demonstration of Hole Transport and Voltage Equilibration in Self-Assembled π -Conjugated Peptide Nanostructures Using Field-Effect Transistor Architectures. ACS Nano, 2015, 9, 12401-12409.	7.3	57
21	Functionalized Dibenzoborepins as Components of Small Molecule and Polymeric π -Conjugated Electronic Materials. Journal of Organic Chemistry, 2011, 76, 2227-2239.	1.7	48
22	Exploiting the versatility of organometallic cross-coupling reactions for entry into extended aromatic systems. Journal of Organometallic Chemistry, 2002, 653, 215-222.	0.8	47
23	Sequence-dependent mechanical, photophysical and electrical properties of π -conjugated peptide hydrogelators. Journal of Materials Chemistry C, 2015, 3, 6505-6514.	2.7	43
24	Conducting Polymers Confined Within Bioactive Peptide Amphiphile Nanostructures. Small, 2007, 3, 2024-2028.	5.2	42
25	Expanding the Realm of Furan-Based Conducting Polymers through Conjugation with 1,6-Methano[10]annulene. Macromolecules, 2009, 42, 4449-4455.	2.2	40
26	Comparative Survey of Conducting Polymers Containing Benzene, Naphthalene, and Anthracene Cores: Interplay of Localized Aromaticity and Polymer Electronic Structures. Journal of Physical Chemistry B, 2010, 114, 3104-3116.	1.2	40
27	Polydiacetylene-peptide 1D Nanomaterials. Macromolecular Rapid Communications, 2013, 34, 1343-1350.	2.0	37
28	Benzo[<i>b</i>]thiophene Fusion Enhances Local Borepin Aromaticity in Polycyclic Heteroaromatic Compounds. Journal of Organic Chemistry, 2017, 82, 13440-13448.	1.7	37
29	Carbonyl-Directed Aliphatic Fluorination: A Special Type of Hydrogen Atom Transfer Beats Out Norrish II. Journal of the American Chemical Society, 2020, 142, 14710-14724.	6.6	37
30	Main-chain photochromic conducting polymers. Polymer Chemistry, 2011, 2, 2699.	1.9	34
31	Pendant Photochromic Conjugated Polymers Incorporating a Highly Functionalizable Thieno[3,4- <i>b</i>]thiophene Switching Motif. Journal of the American Chemical Society, 2019, 141, 3146-3152.	6.6	33
32	Linear and Radial Conjugation in Extended π -Electron Systems. Journal of the American Chemical Society, 2020, 142, 2293-2300.	6.6	32
33	Fluidic-Directed Assembly of Aligned Oligopeptides with π -Conjugated Cores. Advanced Materials, 2013, 25, 6398-6404.	11.1	31
34	Assessment of the aromaticity of borepin rings by spectroscopic, crystallographic and computational methods: a historical overview. Journal of Physical Organic Chemistry, 2015, 28, 378-387.	0.9	31
35	Aromaticity Competition in Differentially Fused Borepin-Containing Polycyclic Aromatics. Journal of Organic Chemistry, 2016, 81, 5595-5605.	1.7	30
36	An Unusually Small Singlet-Triplet Gap in a Quinoidal 1,6-Methano[10]annulene Resulting from Baird's π -Electron Triplet Stabilization. Angewandte Chemie - International Edition, 2015, 54, 5888-5893.	7.2	29

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37	Thermodynamics, morphology, and kinetics of early-stage self-assembly of π -conjugated oligopeptides. <i>Molecular Simulation</i> , 2016, 42, 955-975.	0.9	29
38	Variation of Formal Hydrogen-Bonding Networks within Electronically Delocalized π -Conjugated Oligopeptide Nanostructures. <i>Langmuir</i> , 2014, 30, 11375-11385.	1.6	28
39	Concentration-Driven Assembly and Sol-Gel Transition of π -Conjugated Oligopeptides. <i>ACS Central Science</i> , 2017, 3, 986-994.	5.3	28
40	Methano[10]annulene Revisited: Extended Delocalization through Conjugated Polymers Bearing Larger Hückel Aromatics. <i>Organic Letters</i> , 2007, 9, 3041-3044.	2.4	26
41	Nonequilibrium Self-Assembly of π -Conjugated Oligopeptides in Solution. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 3977-3984.	4.0	26
42	Controlling Supramolecular Chirality in Peptide- π -Peptide Networks by Variation of the Alkyl Spacer Length. <i>Langmuir</i> , 2019, 35, 14060-14073.	1.6	26
43	Charge Delocalization through Benzene, Naphthalene, and Anthracene Bridges in π -Conjugated Oligomers: An Experimental and Quantum Chemical Study. <i>Journal of Physical Chemistry B</i> , 2013, 117, 6304-6317.	1.2	23
44	Synthesis and characterization of π -conjugated peptide-based supramolecular materials. <i>Pure and Applied Chemistry</i> , 2012, 84, 1039-1045.	0.9	22
45	Two-electron transfer stabilized by excited-state aromatization. <i>Nature Communications</i> , 2019, 10, 4983.	5.8	21
46	Emerging Prospects for Unusual Aromaticity in Organic Electronic Materials: The Case for Methano[10]annulene. <i>European Journal of Organic Chemistry</i> , 2008, 2008, 2193-2206.	1.2	19
47	Unusually Conductive Organic-Inorganic Hybrid Nanostructures Derived from Bio-Inspired Mineralization of Peptide/ π -Electron Assemblies. <i>ACS Nano</i> , 2020, 14, 1846-1855.	7.3	19
48	Solid-Phase Synthesis of Self-Assembling Multivalent π -Conjugated Peptides. <i>ACS Omega</i> , 2017, 2, 409-419.	1.6	18
49	Quantum Interference Enhanced Chemical Responsivity in Single-Molecule Dithienoborepin Junctions. <i>Chemistry - A European Journal</i> , 2019, 25, 15141-15146.	1.7	18
50	Manifestations of Antiaromaticity in Organic Materials: Case Studies of Cyclobutadiene, Borole, and Pentalene. <i>European Journal of Organic Chemistry</i> , 2022, 2022, .	1.2	18
51	Cross-Linking Approaches to Tuning the Mechanical Properties of Peptide π -Electron Hydrogels. <i>Bioconjugate Chemistry</i> , 2017, 28, 751-759.	1.8	17
52	Cofacially constrained organic semiconductors. <i>Journal of Polymer Science Part A</i> , 2003, 41, 3693-3702.	2.5	16
53	Conformation as a Protecting Group: A Regioselective Aromatic Bromination En Route to Complex π -Electron Systems. <i>Organic Letters</i> , 2008, 10, 4323-4326.	2.4	13
54	Poly(cyclopropenone)s: Formal Inclusion of the Smallest Hückel Aromatic into π -Conjugated Polymers. <i>Journal of Organic Chemistry</i> , 2010, 75, 5689-5696.	1.7	13

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55	A New Polystyrene-Poly(vinylpyridinium) Ionic Copolymer Dopant for n-Type All-Polymer Thermoelectrics with High and Stable Conductivity Relative to the Seebeck Coefficient giving High Power Factor. <i>Advanced Materials</i> , 2022, 34, e2201062.	11.1	13
56	Ring fusion isomers of dithienoborepins: perturbations of electronic structure, aromaticity, and reactivity in boron-containing polycyclic heteroaromatics. <i>Canadian Journal of Chemistry</i> , 2017, 95, 381-389.	0.6	12
57	Splitting the Ring: Impact of <i>Ortho</i> and <i>Meta</i> Pi Conjugation Pathways through Disjointed [8]Cycloparaphenylene Electronic Materials. <i>Journal of the American Chemical Society</i> , 2022, 144, 4611-4622.	6.6	12
58	Torsional Influences within Disordered Organic Electronic Materials Based upon Non-Benzenoid 1,6-Methano[10]annulene Rings. <i>Macromolecules</i> , 2012, 45, 7339-7349.	2.2	11
59	Nonresonant and Local Field Effects in Peptidic Nanostructures Bearing Oligo(<i>p</i> -phenylenevinylene) Units. <i>Langmuir</i> , 2017, 33, 7435-7445.	1.6	11
60	Borepin Rings as σ -Free Reporters of Aromaticity within Polycyclic Aromatic Scaffolds. <i>Journal of Physical Chemistry A</i> , 2019, 123, 881-888.	1.1	10
61	Torsional Impacts on Quaterthiophene Segments Confined within Peptidic Nanostructures. <i>Langmuir</i> , 2019, 35, 2270-2282.	1.6	10
62	A Tale of Three Hydrophobicities: Impact of Constitutional Isomerism on Nanostructure Evolution and Electronic Communication in π -Conjugated Peptides. <i>Macromolecules</i> , 2020, 53, 7263-7273.	2.2	10
63	Core structure dependence of cycloreversion dynamics in diarylethene analogs. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 3314-3328.	1.3	9
64	Computationally Guided Tuning of Peptide-Conjugated Perylene Diimide Self-Assembly. <i>Langmuir</i> , 2021, 37, 8594-8606.	1.6	9
65	Solid-phase Pd-catalysed cross-coupling methods for the construction of π -conjugated peptide nanomaterials. <i>Supramolecular Chemistry</i> , 2014, 26, 259-266.	1.5	8
66	Prospecting in H^3 ckel space: From Hinokitiol to Non-Benzenoid Organic Electronics. <i>Chemical Record</i> , 2014, 14, 214-225.	2.9	8
67	Heteroaromatic variation in amorphous 1,6-methano[10]annulene-based charge-transporting organic semiconductors. <i>Journal of Materials Chemistry C</i> , 2014, 2, 7851.	2.7	8
68	Self-Assembly and Associated Photophysics of Dendron-Appended Peptide- π -Peptide Triblock Macromolecules. <i>Macromolecules</i> , 2017, 50, 5315-5322.	2.2	8
69	A Heptacyclic Heptacycle: A Doubly Naphtho[b]thiophene Fused Borepin. <i>Synlett</i> , 2018, 29, 2499-2502.	1.0	8
70	Revealing the Sequence-Structure-Electronic Property Relation of Self-Assembling π -Conjugated Oligopeptides by Molecular and Quantum Mechanical Modeling. <i>Langmuir</i> , 2019, 35, 15221-15231.	1.6	8
71	Computationally Guided Tuning of Amino Acid Configuration Influences the Chiroptical Properties of Supramolecular Peptide- π -Peptide Nanostructures. <i>Langmuir</i> , 2020, 36, 6782-6792.	1.6	8
72	Computational discovery of high charge mobility self-assembling π -conjugated peptides. <i>Molecular Systems Design and Engineering</i> , 2022, 7, 447-459.	1.7	8

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73	Conformationally Complex π -Conjugated Molecular and Polymeric Materials: New Challenges for Organic Synthesis. <i>Chemistry - A European Journal</i> , 2009, 15, 5176-5185.	1.7	7
74	π -Conjugated chain extenders for the synthesis of optoelectronic segmented polyurethanes. <i>Journal of Polymer Science Part A</i> , 2011, 49, 4861-4874.	2.5	7
75	Peptide Nanostructures with π -Ways: Photophysical Consequences of Peptide/ π -Electron Molecular Self-Assembly. <i>Israel Journal of Chemistry</i> , 2015, 55, 622-627.	1.0	7
76	Torsional Bias as a Strategy To Tune Singlet-Triplet Gaps in Organic Diradicals. <i>Journal of Physical Chemistry C</i> , 2018, 122, 12148-12157.	1.5	7
77	Hybrid computational-experimental data-driven design of self-assembling π -conjugated peptides. , 2022, 1, 448-462.		7
78	Block copolymer supramolecular assembly using a precursor to a novel conjugated polymer. <i>Polymer Chemistry</i> , 2013, 4, 1482-1490.	1.9	6
79	Photon management in supramolecular peptide nanomaterials. <i>Bioinspiration and Biomimetics</i> , 2018, 13, 015004.	1.5	6
80	Effect of Core Oligomer Length on the Phase Behavior and Assembly of π -Conjugated Peptides. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 20722-20732.	4.0	6
81	Influence of Annulene Ratio on the Electrochemical and Spectroscopic Properties of Methano[10]Annulene-Thiophene Random Copolymers. <i>ACS Applied Materials & Interfaces</i> , 2011, 3, 2551-2556.	4.0	5
82	Regulation of peptide-peptide nanostructure bundling: the impact of π -cruciform π -electron segments. <i>Tetrahedron</i> , 2016, 72, 6084-6090.	1.0	5
83	Quinonoid <i>vs.</i> aromatic structures of heteroconjugated polymers from oligomer calculations. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 11431-11439.	1.3	5
84	Organic Halogenation Chemistry as a Vital Tool for the Construction of Functional π -Conjugated Materials. <i>Synthesis</i> , 2011, 2011, 2387-2391.	1.2	4
85	A Dichlorinated Dithienylethene-Diketopyrrolopyrrole-Based Copolymer with Pronounced π -N Crossover: Evidence for Anionic Seebeck Contribution. , 2022, 4, 1139-1145.		4
86	Non-Traditional Aromatic Topologies and Biomimetic Assembly Motifs as Components of Functional π -Conjugated Oligomers. <i>Materials</i> , 2010, 3, 1269-1280.	1.3	3
87	Chain Dynamics, Relaxation Times, and Conductivities of Bithiophene-Acene Copolymers Measured Using High Frequency Saturation Transfer EPR. <i>Journal of Physical Chemistry B</i> , 2016, 120, 1033-1039.	1.2	3
88	Energy- and conformer-dependent excited-state relaxation of an <i>E/Z</i> photoswitchable thienyl-ethene. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 14440-14452.	1.3	3
89	Quinonoid versus Aromatic π -Conjugated Oligomers and Polymers and Their Diradical Characters. <i>Journal of Physical Chemistry C</i> , 2022, 126, 5302-5310.	1.5	3
90	In Vivo Formation and Tracking of π -Peptide Nanostructures. <i>ACS Applied Materials & Interfaces</i> , 0, ,.	4.0	3

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91	Optical and electrical properties of π -conjugated polymers built with the 10 π -electron methano[10]annulene ring system. <i>Pure and Applied Chemistry</i> , 2010, 82, 1045-1053.	0.9	1
92	Synthesis and Evaluation of Self-Assembled Nanostructures of Peptide- π Chromophore Conjugates. <i>Methods in Molecular Biology</i> , 2018, 1777, 209-220.	0.4	1
93	Synthesis of Tunable Electrochromic and Fluorescent Polymers. <i>ACS Symposium Series</i> , 2004, , 368-376.	0.5	0
94	Innentitelbild: An Unusually Small Singlet-Triplet Gap in a Quinoidal 1,6-Methano[10]annulene Resulting from Baird's 4 π -Electron Triplet Stabilization (<i>Angew. Chem.</i> 20/2015). <i>Angewandte Chemie</i> , 2015, 127, 5890-5890.	1.6	0
95	Aqueous Self-assembly of Peptide-Diketopyrrolopyrrole Conjugates with Variation of N-alkyl Side Chain and π -Core Lengths. <i>Organic Materials</i> , 0, 03, .	1.0	0
96	Repurposing aromaticity for organic electronics: Making, breaking, and stacking π -circuits. <i>Journal of the Chinese Chemical Society</i> , 2021, 68, 51-58.	0.8	0