

# Dithienothiophenes at Work: Access to Mechanosensitive Chalcogen-Bonding Catalysis, and Beyond

Chemical Reviews

119, 10977-11005

DOI: [10.1021/acs.chemrev.9b00279](https://doi.org/10.1021/acs.chemrev.9b00279)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Microscopic Viscosity of Neuronal Plasma Membranes Measured Using Fluorescent Molecular Rotors: Effects of Oxidative Stress and Neuroprotection. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 36307-36315.	4.0	33
2	Methyl Scanning for Mechanochemical Chalcogen-Bonding Cascade Switches. <i>ChemistryOpen</i> , 2020, 9, 18-22.	0.9	4
3	Concurring Chalcogen- and Halogen-Bonding Interactions in Supramolecular Polymers for Crystal Engineering Applications. <i>Chemistry - A European Journal</i> , 2020, 26, 2904-2913.	1.7	55
4	Fundamental Insights into Photoelectrocatalytic Hydrogen Production with a Hole-Transport Bismuth Metal-Organic Framework. <i>Journal of the American Chemical Society</i> , 2020, 142, 318-326.	6.6	60
5	Halogen and Chalcogen Bond Energies Evaluated Using Electron Density Properties. <i>ChemPhysChem</i> , 2020, 21, 26-31.	1.0	61
6	HaloFlippers: A General Tool for the Fluorescence Imaging of Precisely Localized Membrane Tension Changes in Living Cells. <i>ACS Central Science</i> , 2020, 6, 1376-1385.	5.3	44
7	The Nature of Strong Chalcogen Bonds Involving Chalcogen-Containing Heterocycles. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 21236-21243.	7.2	50
8	Static- and frequency-dependent NLO properties of dithienothiophene and thienothiophene bridges – A computational investigation. <i>Journal of Theoretical and Computational Chemistry</i> , 2020, 19, 2050018.	1.8	1
9	Die Natur starker Chalkogenbindungen unter Beteiligung chalkogenhaltiger Heterocyclen. <i>Angewandte Chemie</i> , 2020, 132, 21423-21430.	1.6	3
10	Lewis acid-assisted Ir(III) reductive elimination enables construction of seven-membered-ring sulfoxides. <i>Chemical Science</i> , 2020, 11, 10149-10158.	3.7	9
11	Activating Chalcogen Bonding (ChB) in Alkylseleno/Alkyltelluroacetylenes toward Chalcogen Bonding Directionality Control. <i>Angewandte Chemie</i> , 2020, 132, 23789-23793.	1.6	10
12	Redox-controlled chalcogen and pnictogen bonding: the case of a sulfonium/stibonium dication as a preanionophore for chloride anion transport. <i>Chemical Science</i> , 2020, 11, 10107-10112.	3.7	50
13	Diastereodivergent synthesis of dispiroheterocyclic structures comprising pyrrolidinyloxindole and imidazothiazolotriazine moieties. <i>Organic and Biomolecular Chemistry</i> , 2020, 18, 6905-6911.	1.5	14
14	Activating Chalcogen Bonding (ChB) in Alkylseleno/Alkyltelluroacetylenes toward Chalcogen Bonding Directionality Control. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 23583-23587.	7.2	20
15	Mechanosensitive Fluorescent Probes, Changing Color Like Lobsters during Cooking: Cascade Switching Variations. <i>Bulletin of the Chemical Society of Japan</i> , 2020, 93, 1401-1411.	2.0	16
16	Radical-radical chalcogen bonds: CSD analysis and DFT calculations. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 12757-12765.	1.3	10
17	Tetraphenylethylene substituted thienothiophene and dithienothiophene derivatives: synthesis, optical properties and OLED applications. <i>Journal of Materials Chemistry C</i> , 2020, 8, 7908-7915.	2.7	42
18	Chalcogen Bonding Induced Tetraselenides from Twisted Diselenides. <i>European Journal of Inorganic Chemistry</i> , 2020, 2020, 2403-2407.	1.0	13

#	ARTICLE	IF	CITATIONS
19	Photoinduced Forward and Backward Pedalo-Type Motion of a Molecular Switch. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 4741-4746.	2.1	3
20	Spodium Bonds: Noncovalent Interactions Involving Groupâ€¦12 Elements. <i>Angewandte Chemie</i> , 2020, 132, 17635-17640.	1.6	21
21	Spodium Bonds: Noncovalent Interactions Involving Groupâ€¦12 Elements. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 17482-17487.	7.2	136
22	Die Carbonylâ€¦â€¦Tellurazolâ€¦Chalkogenbindung als molekulare Erkennungseinheit: Von Modellstudien zu supramolekularen organischen GerÃ¼stverbindungen. <i>Angewandte Chemie</i> , 2020, 132, 17303-17311.	1.6	8
23	Tuning the molecular geometry and packing mode of non-fullerene acceptors by altering the bridge atoms towards efficient organic solar cells. <i>Materials Chemistry Frontiers</i> , 2020, 4, 2462-2471.	3.2	18
24	Engineering Crystals Using sp <sup>3</sup> â€¦ Centred Tetrel Bonding Interactions. <i>Chemistry - A European Journal</i> , 2020, 26, 10126-10132.	1.7	28
25	Ïƒâ€¦Hole Interactions in Catalysis. <i>European Journal of Organic Chemistry</i> , 2020, 2020, 5473-5487.	1.2	131
26	The Carbonylâ€¦â€¦Tellurazole Chalcogen Bond as a Molecular Recognition Unit: From Model Studies to Supramolecular Organic Frameworks. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 17154-17161.	7.2	28
27	Not Only Hydrogen Bonds: Other Noncovalent Interactions. <i>Crystals</i> , 2020, 10, 180.	1.0	289
28	Noncovalent Chalcogenâ€¦Bonding Catalysis Using ppmâ€¦Level Catalyst Loading to Achieve Cyanosilylation of Ketones. <i>Asian Journal of Organic Chemistry</i> , 2020, 9, 757-760.	1.3	23
29	Chalcogen-bond driven molecular recognition at work. <i>Coordination Chemistry Reviews</i> , 2020, 413, 213243.	9.5	179
30	Fluorescent Membrane Tension Probes for Super-Resolution Microscopy: Combining Mechanosensitive Cascade Switching with Dynamic-Covalent Ketone Chemistry. <i>Journal of the American Chemical Society</i> , 2020, 142, 12034-12038.	6.6	53
31	One-Pot Synthesis of 2,4-Diacyl Thiophenes from Î±-Oxo Ketene Dithioacetals and Propargylic Alcohols. <i>Journal of Organic Chemistry</i> , 2020, 85, 9761-9775.	1.7	16
32	Pnictogen-bonding catalysis: brevetoxin-type polyether cyclizations. <i>Chemical Science</i> , 2020, 11, 7086-7091.	3.7	62
33	Redox-controlled chalcogen-bonding at tellurium: impact on Lewis acidity and chloride anion transport properties. <i>Chemical Science</i> , 2020, 11, 7495-7500.	3.7	55
34	Effect of donorâ€¦acceptor structure on photochromism of dithienylethene-based dyes. <i>Dyes and Pigments</i> , 2020, 177, 108315.	2.0	10
35	Chargeâ€¦Assisted Chalcogen Bonds: CSD and DFT Analyses and Biological Implication in Glucosidase Inhibitors. <i>Chemistry - A European Journal</i> , 2020, 26, 4599-4606.	1.7	42
36	Construction of 2,3-disubstituted benzo[ <i>c</i> ]thieno[2,3- <i>d</i> ]thiophenes and benzo[4,5]selenopheno[3,2- <i>c</i> ]thiophenes using the Fiessemann thiophene synthesis. <i>Organic and Biomolecular Chemistry</i> , 2020, 18, 3164-3168.	1.5	5

#	ARTICLE	IF	CITATIONS
37	Microviscosity and temperature sensors: The twists and turns of the photophysics of conjugated porphyrin dimers – a SPP/JPP Young Investigator Award paper. <i>Journal of Porphyrins and Phthalocyanines</i> , 2020, 24, 1372-1386.	0.4	2
38	DFT and IsoStar Analyses to Assess the Utility of $\pi$ - and $\sigma$ -Hole Interactions for Crystal Engineering. <i>ChemPhysChem</i> , 2021, 22, 141-153.	1.0	9
39	A Bidentate Iodine(III)-Based Halogen-Bond Donor as a Powerful Organocatalyst**. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 5069-5073.	7.2	85
40	Strong $\pi$ -Hole Activation on Icosahedral Carborane Derivatives for a Directional Halide Recognition. <i>Angewandte Chemie</i> , 2021, 133, 370-374.	1.6	4
41	Ein zweizähniger Iod(III)-basierter Halogenbrückenendonator als leistungsfähiger Organokatalysator**. <i>Angewandte Chemie</i> , 2021, 133, 5127-5132.	1.6	12
42	Strong $\pi$ -Hole Activation on Icosahedral Carborane Derivatives for a Directional Halide Recognition. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 366-370.	7.2	20
43	Genetically Encoded Supramolecular Targeting of Fluorescent Membrane Tension Probes within Live Cells: Precisely Localized Controlled Release by External Chemical Stimulation. <i>Jacs Au</i> , 2021, 1, 221-232.	3.6	19
44	A Quantitative Molecular Orbital Perspective of the Chalcogen Bond. <i>ChemistryOpen</i> , 2021, 10, 391-401.	0.9	32
45	Synthesis of All Thiophene-Based [7]Helicenes and Trithienothiepinines with Isomeric Location of Sulfur Atoms Based on Intramolecular Selectivity of Deprotonation. <i>Journal of Organic Chemistry</i> , 2021, 86, 4413-4422.	1.7	12
46	Chalcogen... Bonding Catalysis. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 9395-9400.	7.2	42
47	Synthesis, Photophysical and Electrochemical Properties of 1-, 2-, and 6-(2-Benzofuryl)azulenes. <i>Bulletin of the Chemical Society of Japan</i> , 2021, 94, 1000-1009.	2.0	6
48	Chalcogen... Bonding Catalysis. <i>Angewandte Chemie</i> , 2021, 133, 9481-9486.	1.6	13
49	Fluorescent Membrane Tension Probes for Early Endosomes. <i>Angewandte Chemie</i> , 2021, 133, 12366-12371.	1.6	8
50	Visible-Light-Induced Formation of Thiavinyl 1,3-Dipoles: A Metal-Free [3+2] Oxidative Cyclization with Alkynes as Easy Access to Thiophenes. <i>Organic Letters</i> , 2021, 23, 3453-3459.	2.4	13
51	Fluorescent Membrane Tension Probes for Early Endosomes. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 12258-12263.	7.2	28
52	Thiol-Mediated Uptake. <i>Jacs Au</i> , 2021, 1, 710-728.	3.6	77
53	Anion Chelation via Double Chalcogen Bonding: The Case of a Bis-telluronium Dication and Its Application in Electrophilic Catalysis via Metal-Chloride Bond Activation. <i>Journal of the American Chemical Society</i> , 2021, 143, 8625-8630.	6.6	53
54	Competing Effects of Chlorination on the Strength of Te...O Chalcogen Bonds Select the Structure of Mixed Supramolecular Macrocyclic Aggregates of Iso-Tellurazole Oxides. <i>Chemistry - A European Journal</i> , 2021, 27, 10849-10853.	1.7	8

#	ARTICLE	IF	CITATIONS
55	Switchable Mono- and Dipropargylation of Amino Alcohols: A Unique Property of the Iodide Anion in Controlling Ring-Opening Alkynylation. <i>European Journal of Organic Chemistry</i> , 2021, 2021, 3676-3680.	1.2	7
56	Inhibition of Thiol-Mediated Uptake with Irreversible Covalent Inhibitors. <i>Helvetica Chimica Acta</i> , 2021, 104, e2100085.	1.0	17
57	Development of a Fluorophore with Enhanced Unorthodox Chalcogen Bonding for Highly Sensitive Detection of Trimethyl Arsine Vapor. <i>ACS Sensors</i> , 2021, 6, 2851-2857.	4.0	8
58	Harnessing noncovalent interaction of chalcogen bond in organocatalysis: From the catalyst point of view. <i>Green Synthesis and Catalysis</i> , 2021, 2, 329-336.	3.7	33
59	Charge Assisted S/Se Chalcogen Bonds in SAM Riboswitches: A Combined PDB and ab Initio Study. <i>ACS Chemical Biology</i> , 2021, 16, 1701-1708.	1.6	13
60	Computational Evaluation of Me <sub>2</sub> TCCP as Lewis acid. <i>ChemPhysChem</i> , 2021, 22, 2099-2106.	1.0	2
61	Red-Emitting Fluorophores as Local Water-Sensing Probes. <i>Journal of Physical Chemistry B</i> , 2021, 125, 9727-9737.	1.2	8
62	Azine based fluorescent rapid "off-on" chemosensor for detecting Th <sup>4+</sup> and Fe <sup>3+</sup> ions and its real-time application. <i>Dyes and Pigments</i> , 2021, 196, 109755.	2.0	16
63	The primary dipole of flipper probes. <i>Chemical Communications</i> , 2021, 57, 3913-3916.	2.2	9
64	A combined theoretical and CSD perspective on $\sigma$ -hole interactions with tetrels, pnictogens, chalcogens, halogens, and noble gases. , 2021, , 119-155.		4
66	Conformational Control in Dirhodium(II) Paddlewheel Catalysts Supported by Chalcogen-Bonding Interactions for Stereoselective Intramolecular C-H Insertion Reactions. <i>ACS Catalysis</i> , 2021, 11, 568-578.	5.5	15
67	Triptycene-Based Porous Chalcogen-Bonded Organic Frameworks. <i>Crystal Growth and Design</i> , 2021, 21, 6497-6503.	1.4	11
68	Design of Azobenzene beyond Simple On-Off Behavior. <i>Journal of the American Chemical Society</i> , 2021, 143, 19856-19864.	6.6	26
69	Inter-anion chalcogen bonds: Are they anti-electrostatic in nature?. <i>Journal of Chemical Physics</i> , 2021, 155, 234302.	1.2	8
70	Supramolecular systems chemistry through advanced analytical techniques. <i>Analytical and Bioanalytical Chemistry</i> , 2022, 414, 5105-5119.	1.9	4
71	Planarizable Push-Pull Probes with Sulfoximine-Bridged Dithienothiophene Acceptors. <i>Helvetica Chimica Acta</i> , 2022, 105, .	1.0	10
72	Rational design of a large Stokes shift xanthene-benzothiazolium dyad for probing cysteine in mitochondria. <i>Journal of Materials Chemistry B</i> , 2022, 10, 1265-1271.	2.9	3
73	Coherently degenerate state engineering of organic small molecule materials to generate Wannier excitons. <i>Chemical Physics Impact</i> , 2022, 4, 100062.	1.7	3

#	ARTICLE	IF	CITATIONS
74	Alkynyl Sulfonium Salts Can Be Employed as Chalcogen-Bonding Catalysts and Generate Alkynyl Radicals under Blue-Light Irradiation. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	36
75	Alkynyl Sulfonium Salts Can Be Employed as Chalcogen-Bonding Catalysts and Generate Alkynyl Radicals under Blue-Light Irradiation. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	8
76	Flipper Probes for the Community. <i>Chimia</i> , 2021, 75, 1004.	0.3	9
77	The mechanism and impact of mono/bis(iodoimidazolium) halogen bond donor catalysts on Michael addition of indole with <i>cis</i> -crotonophenone: DFT calculations. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 6690-6698.	1.3	5
78	The literature of heterocyclic chemistry, Part XIX, 2019. <i>Advances in Heterocyclic Chemistry</i> , 2022, , 225-295.	0.9	6
79	Diaryliodoniums as Hybrid Hydrogen- and Halogen-Bond-Donating Organocatalysts for the Groebke-Blackburn-Bienaymé Reaction. <i>Journal of Organic Chemistry</i> , 2022, 87, 4569-4579.	1.7	27
80	Copolymers of 3-arylthieno[3,2-b]thiophenes bearing different substituents: Synthesis, electronic, optical, sensor and memory properties. <i>European Polymer Journal</i> , 2022, 170, 111167.	2.6	14
81	Halogen bonding and chalcogen bonding mediated sensing. <i>Chemical Science</i> , 2022, 13, 7098-7125.	3.7	43
82	Pd-Free synthesis of dithienothiophene-based oligoaryls for effective hole-transporting materials by optimized Cu-catalyzed annulation and direct C-H arylation. <i>Organic Chemistry Frontiers</i> , 2022, 9, 2821-2829.	2.3	5
83	The Von Willebrand factor-ADAMTS-13 axis: a two-faced Janus in bleeding and thrombosis. , 2022, 1, .		0
84	Chalcogen and Hydrogen Bonds at the Periphery of Arylhydrazone Metal Complexes. <i>Crystal Growth and Design</i> , 2022, 22, 3932-3940.	1.4	12
85	Noncovalent Interactions Involving Group 6%in Biological Systems: The Case of Molybdopterin and Tungstopterin Cofactors. <i>Chemistry - A European Journal</i> , 2022, 28, .	1.7	21
86	Bifurcated Chalcogen Bonds Based on One f-Hole. <i>Organic Materials</i> , 2022, 4, 43-52.	1.0	5
87	Xenon Derivatives as Aerogen Bond-Donating Catalysts for Organic Transformations: A Theoretical Study on the Metaphorical "Spherical Cow in a Vacuum" Provides Insights into Noncovalent Organocatalysis. <i>Journal of Organic Chemistry</i> , 0, , .	1.7	8
88	Topochemical, Single-Crystal-to-Single-Crystal [2+2] Photocycloadditions Driven by Chalcogen-Bonding Interactions. <i>Angewandte Chemie</i> , 0, , .	1.6	0
89	Topochemical, Single-Crystal-to-Single-Crystal [2+2] Photocycloadditions Driven by Chalcogen-Bonding Interactions. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	13
90	Design of a Fluorogenic Probe Based on Intramolecular Condensation for Specific Detection of HDAC3. <i>Chemistry - an Asian Journal</i> , 0, , .	1.7	0
91	Sulfonium and Selenonium Salts as Noncovalent Organocatalysts for the Multicomponent Groebke-Blackburn-Bienaymé Reaction. <i>Journal of Organic Chemistry</i> , 2022, 87, 10199-10207.	1.7	20

#	ARTICLE	IF	CITATIONS
92	Two-Step Construction of Thiopheneâ€“Oxazole Dyads with Fluorescent Properties by the Ring Expansion of Aziridines. <i>Journal of Organic Chemistry</i> , 2022, 87, 11121-11130.	1.7	3
93	Isomeric Dithienothiopheneâ€“Based Hole Transport Materials: Role of Sulphur Atoms Positions on Photovoltaic Performance of Inverted Perovskite Solar Cells. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	15
94	Enhancement of Energetic Performance through the Construction of Trinitromethyl Substituted Î²-Bis(1,2,4-oxadiazole). <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 7824-7830.	2.1	9
95	Heterovalent chalcogen bonding: supramolecular assembly driven by the occurrence of a tellurium( <i>ii</i> )â€“Ch( <i>i</i> ) (Ch = S, Se, Te) linkage. <i>Inorganic Chemistry Frontiers</i> , 2022, 9, 5635-5644.	3.0	5
96	Halonium, chalconium, and pnictonium salts as noncovalent organocatalysts: a computational study on relative catalytic activity. <i>Organic and Biomolecular Chemistry</i> , 2022, 20, 7632-7639.	1.5	8
97	Crystallographic evidence for a continuum and reversal of roles in primaryâ€“secondary interactions in antimony Lewis acids: applications in carbonyl activation. <i>Chemical Communications</i> , 2022, 58, 11009-11012.	2.2	6
98	Two-Fold Intramolecular Phosphacyclization: From Fluorescent Diphosphapyrene Salts to Pentavalent Derivatives. <i>Organic Letters</i> , 2022, 24, 6391-6396.	2.4	1
99	Crystallographic and Theoretical Study of Osme Bonds in Nitrido-Osmium(VI) Complexes. <i>Inorganics</i> , 2022, 10, 133.	1.2	4
100	Syntheses, and Structural and Physical Properties of Axially Chiral Biaryl Dicarboxylic Acids Bearing Chalcogen Atoms. <i>Chemical and Pharmaceutical Bulletin</i> , 2022, 70, 605-615.	0.6	1
101	Chalcogen Bonds: How to Characterize Them in Solution?. <i>ChemPhysChem</i> , 2023, 24, .	1.0	7
102	Chalcogen bonding in supramolecular structures, anion recognition, and catalysis. , 2022, , .		4
103	Visibleâ€“Lightâ€“Switchable Telluriumâ€“Based Chalcogen Bonding: Photocontrolled Anion Binding and Anion Abstraction Catalysis. <i>Angewandte Chemie</i> , 0, , .	1.6	0
104	Visibleâ€“Lightâ€“Switchable Telluriumâ€“Based Chalcogen Bonding: Photocontrolled Anion Binding and Anion Abstraction Catalysis. <i>Angewandte Chemie - International Edition</i> , 2023, 62, .	7.2	10
105	Conjugation Extension and Halochromic Behaviors of Sâ€“Fused Polycyclic Aromatic Hydrocarbons Bearing Cyclopenta[b]thiopyran Moieties. <i>Chemistry - A European Journal</i> , 0, , .	1.7	2
106	(Pre)association as a crucial step for computational prediction and analysis of the catalytic activity of Î¶f-hole donating organocatalysts. <i>Organic Chemistry Frontiers</i> , 2022, 10, 169-180.	2.3	8
107	Dithieno[3,2- <i>b</i> : <i>i</i> :2â€“3â€“ <i>d</i> ]thiophene (DTT): an emerging heterocyclic building block for future organic electronic materials & functional supramolecular chemistry. <i>RSC Advances</i> , 2022, 12, 36073-36102.	1.7	6
108	Facile dione protection to benzo[1,2- <i>b</i> : <i>i</i> :6,5- <i>b</i> ]â€“dithiophene-4,5-dione (BDTD) in triggering ultraviolet emission â€“ A new member of the emissive 3,3â€“bridged dithiophenes. <i>RSC Advances</i> , 2023, 13, 4713-4720.	1.7	0
109	Fluorescent Flippers: Smallâ€“Molecule Probes to Image Membrane Tension in Living Systems. <i>Angewandte Chemie</i> , 2023, 135, .	1.6	1

#	ARTICLE	IF	CITATIONS
110	Catalysis by tertiary chalcogenonium salts. , 2023, 6, 100037.		3
111	Fabricating a photochromic benzonitrile Schiff base into a low-cost reusable paper-based wearable sensor for naked-eye dosimetry of UV radiations. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2023, 295, 122586.	2.0	2
112	Fluorescent Flippers: Small Molecule Probes to Image Membrane Tension in Living Systems. Angewandte Chemie - International Edition, 2023, 62, .	7.2	14
113	Supramolecular Chemistry via Chalcogen Bonding Interactions. , 2023, , 494-528.		1
114	Chalcogen Bonding Catalysis with Phosponium Chalcogenide (PCH). Accounts of Chemical Research, 2023, 56, 608-621.	7.6	14
115	Solvent-modulated binding selectivity of reaction substrates to onium-based $\pi$ -hole donors. Catalysis Science and Technology, 2023, 13, 3375-3385.	2.1	6