

Supporting Information

for the paper

Designing stable π -radicals

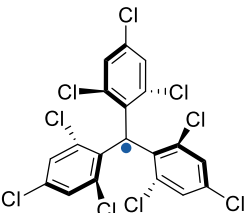
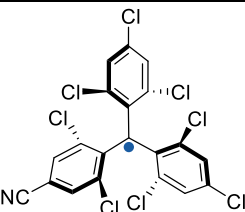
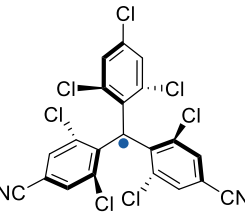
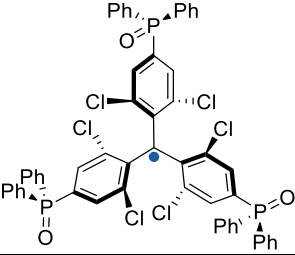
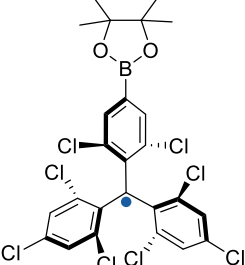
Arthur Houplin,^{a,†} Cheng-Hao Liu,^{a,b,†} and Dmytro F. Perepichka^{a,*}

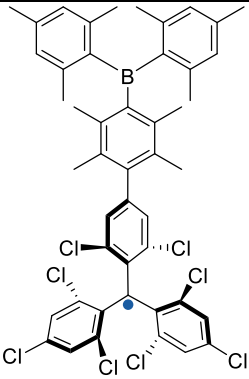
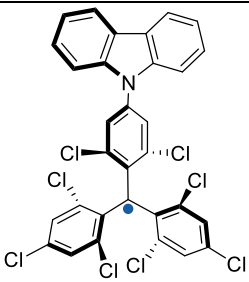
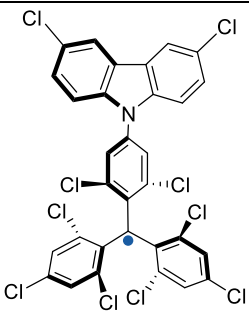
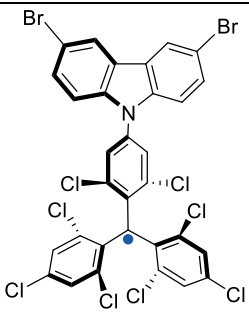
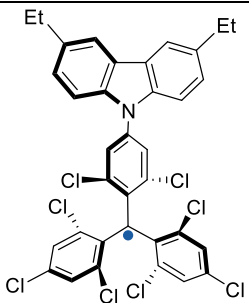
^a Department of Chemistry, McGill University, Montreal, Qc, Canada

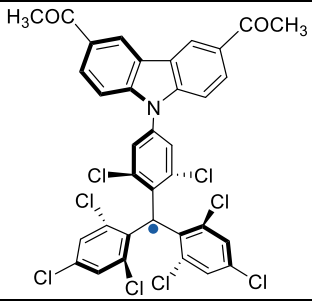
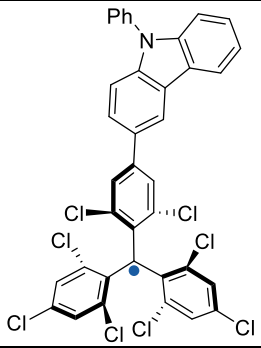
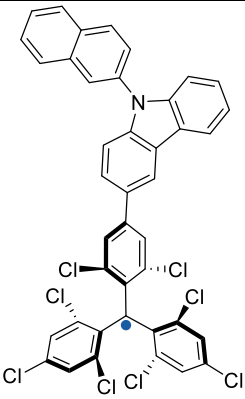
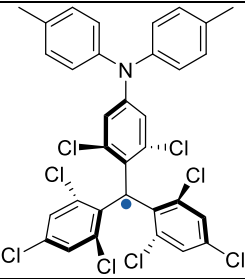
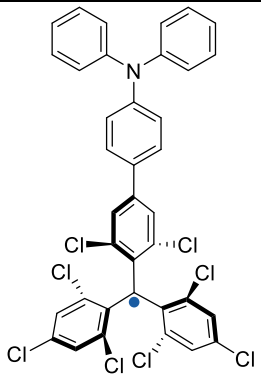
^b Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, CA, USA

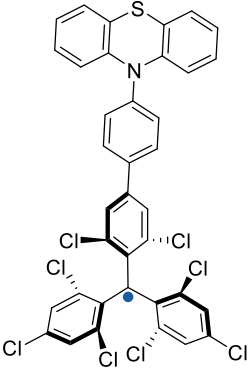
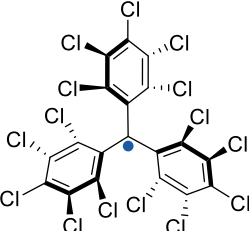
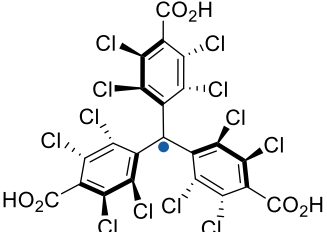
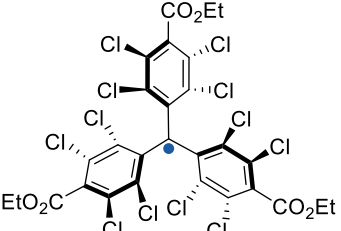
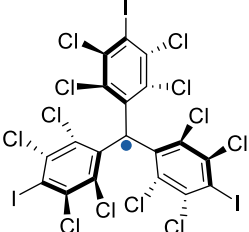
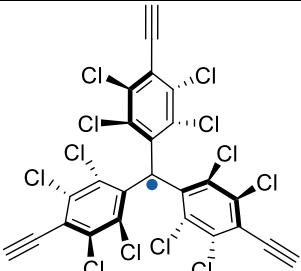
[†] These authors contributed equally

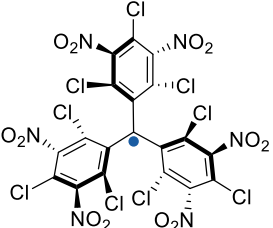
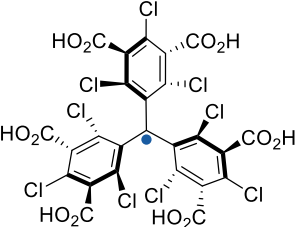
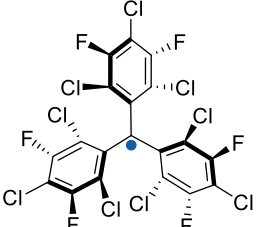
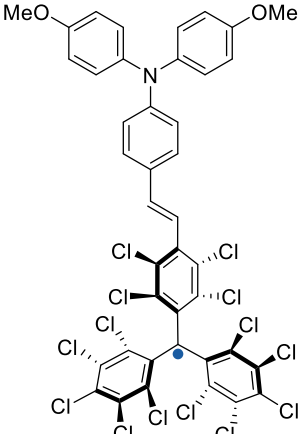
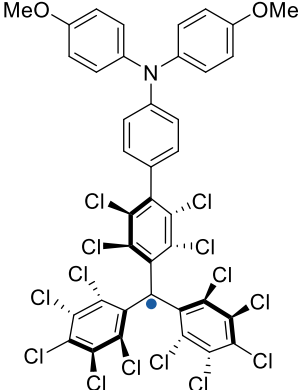
Table 1 : Reported halogenated trityl radicals.

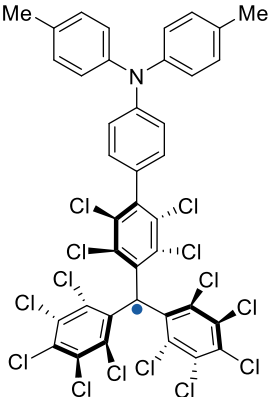
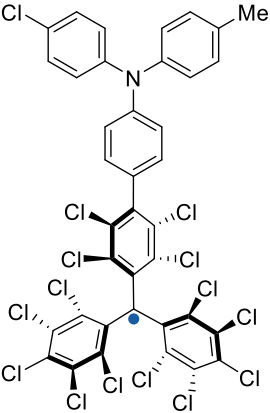
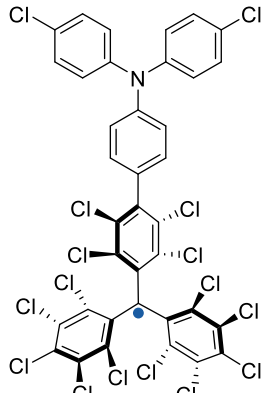
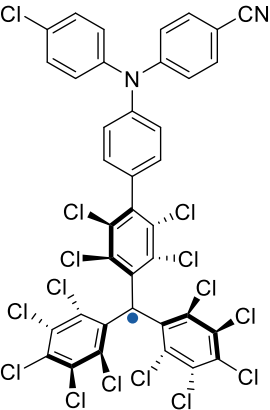
Entry	Structure	Reference
1		M. Ballester, <i>Acc. Chem. Res.</i> , 1985, 18 , 380–387.
2		K. Lv, et al., <i>Chem. Commun.</i> , 2024, 60 , 4846–4849.
3		K. Lv, et al., <i>Chem. Commun.</i> , 2024, 60 , 4846–4849.
4		N. Sun, et al., <i>Org. Lett.</i> , 2025, 27 , 905–908.
5		Z. Li, et al., <i>Angew. Chem. Int. Ed.</i> , 2023, 62 , e202302835

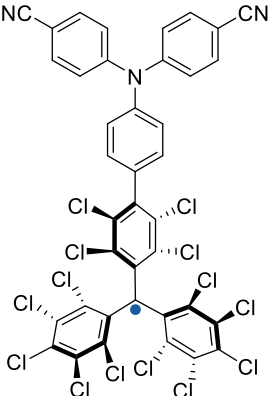
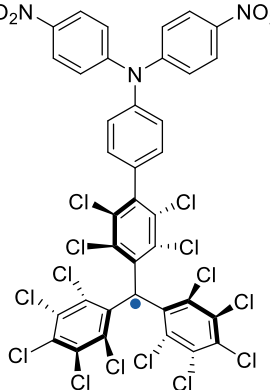
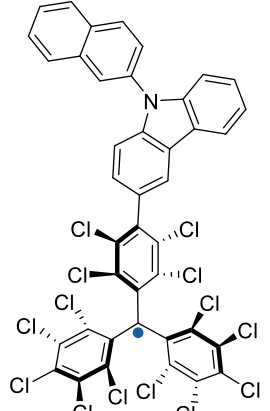
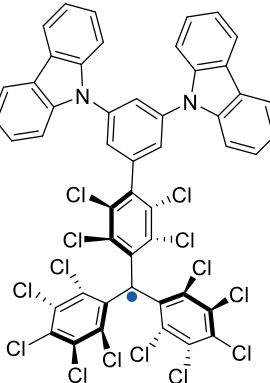
6		<p>Z. Li, et al., <i>Angew. Chem. Int. Ed.</i>, 2023, 62, e202302835</p>
7		<p>V. Gamero, et al., <i>Tetrahedron Lett.</i>, 2006, 47, 2305–2309.</p>
8		<p>D. Velasco, et al., <i>J. Org. Chem.</i>, 2007, 72, 7523–7532.</p>
9		<p>D. Velasco, et al., <i>J. Org. Chem.</i>, 2007, 72, 7523–7532.</p>
10		<p>D. Velasco, et al., <i>J. Org. Chem.</i>, 2007, 72, 7523–7532.</p>

11		<p>D. Velasco, et al., <i>J. Org. Chem.</i>, 2007, 72, 7523–7532.</p>
12		<p>X. Ai, et al., <i>Nature</i>, 2018, 563, 536–540.</p>
13		<p>X. Ai, et al., <i>Nature</i>, 2018, 563, 536–540.</p> <p>H. Guo, et al., <i>Nat. Mater.</i>, 2019, 18, 977–984.</p>
14		<p>Z. Tong, et al., <i>J. Am. Chem. Soc.</i>, 2025, 147, 39232–39246.</p>
15		<p>H.-H. Cho, et al., <i>Nat. Photon.</i>, 2024, 18, 905–912.</p>

16		<p>H. Guo, et al., <i>Nat. Mater.</i>, 2019, 18, 977–984.</p>
17		<p>O. Armet, et al., <i>J. Phys. Chem.</i>, 1987, 91, 5608–5616.</p>
18		<p>D. MasPOCH et al., <i>Nature Mater</i>, 2003, 2, 190–195.</p>
19		<p>V. Dang, et al., <i>Bioorg. Med. Chem. Lett.</i>, 2007, 17, 4062–4065.</p>
20		<p>C.-H. Liu et al., <i>Cell Rep. Phys. Sci.</i>, 2022, 3, 100858.</p>
21		<p>S. Wu, et al., <i>Angew. Chem. Int. Ed.</i>, 2018, 57, 8007–8011.</p>

22		<p>J. L. Torres, et al., <i>Chem. Commun.</i>, 2003, 74–75.</p>
23		<p>N. Roques, et al., <i>Chem. Eur. J.</i>, 2006, 12, 9238–9253</p>
24		<p>J. Schlögl, et al., <i>J. Am. Chem. Soc.</i>, 2025, 147, 43105–43112.</p>
25		<p>A. Heckmann, et al., <i>J. Phys. Chem. C</i>, 2009, 113, 20958–20966.</p>
26		<p>A. Heckmann, et al., <i>J. Phys. Chem. C</i>, 2009, 113, 20958–20966.</p>

27		<p>A. Heckmann, et al., <i>J. Phys. Chem. C</i>, 2009, 113, 20958–20966.</p>
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34		<p>H. Guo, et al., <i>Nat. Mater.</i>, 2019, 18, 977–984.</p>

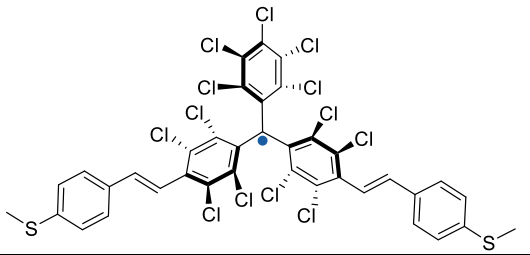
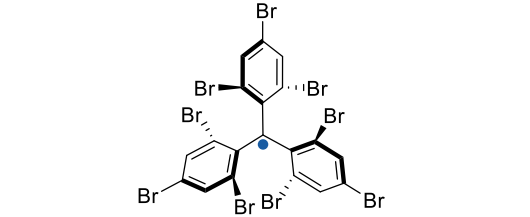
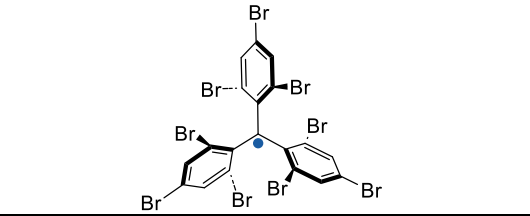
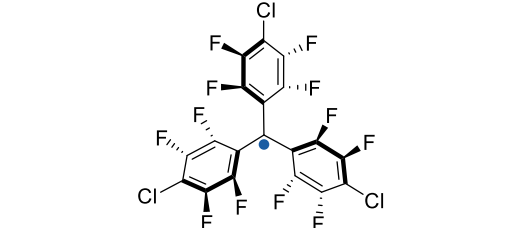
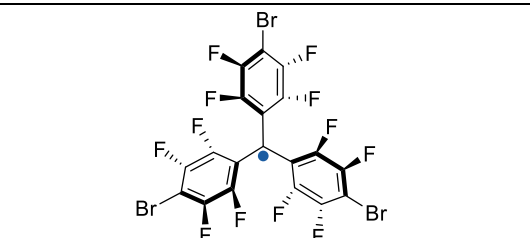
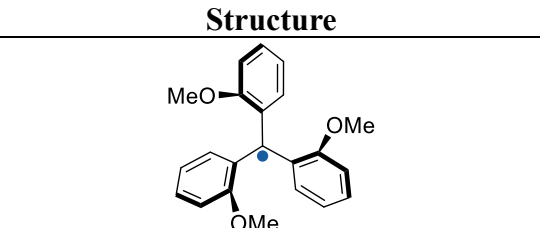
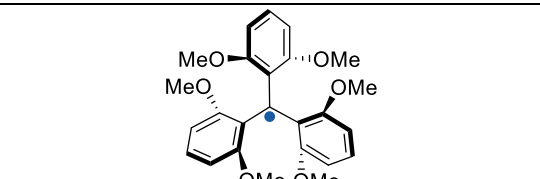
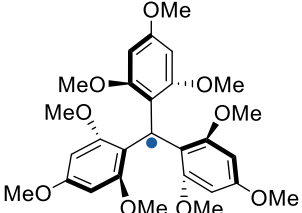
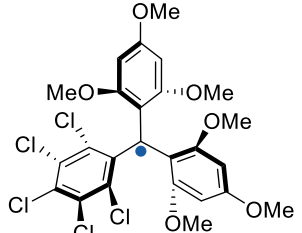
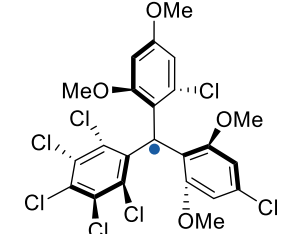
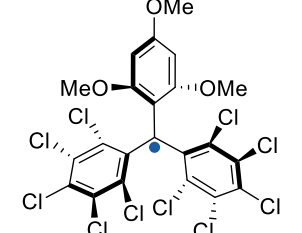
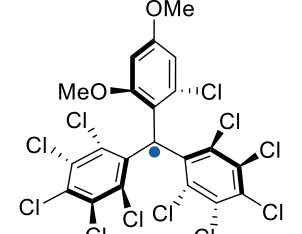
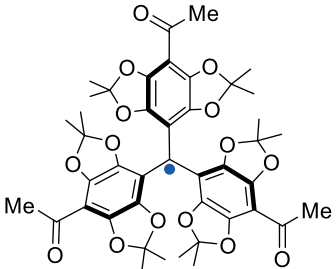
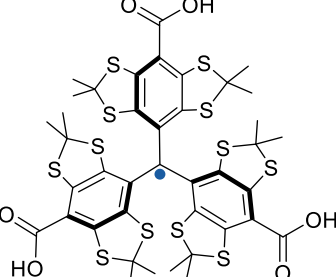
35		G. Mitra, et al., <i>Nano Lett.</i> , 2022, 22 , 5773–5779.
36		P. Mayorga-Burrezo et al., <i>Chem. Eur. J.</i> , 2020, 26 , 3776–3781.
37		P. Mayorga-Burrezo et al., <i>Chem. Eur. J.</i> , 2020, 26 , 3776–3781.
38		J. Schlögl, et al., <i>J. Am. Chem. Soc.</i> , 2025, 147 , 43105–43112.
39		J. Schlögl, et al., <i>J. Am. Chem. Soc.</i> , 2025, 147 , 43105–43112.

Table 2 : Reported alkoxyated and sulfonlated trityl radicals.

Entry	Structure	Reference
40		H. Lund, <i>J. Am. Chem. Soc.</i> , 1927, 49 , 1346–1360.
41		M. Sabacky, et al., <i>J. Am. Chem. Soc.</i> , 1967, 89 , 2054–2058.

42		<p>H. E. Hackney, et al., <i>Angew. Chem. Int. Ed.</i>, 2025, 64, e202512411.</p>
43		<p>H. E. Hackney, et al., <i>Angew. Chem. Int. Ed.</i>, 2025, 64, e202512411.</p>
44		<p>H. E. Hackney, et al., <i>Angew. Chem. Int. Ed.</i>, 2025, 64, e202512411.</p>
45		<p>H. E. Hackney, et al., <i>Angew. Chem. Int. Ed.</i>, 2025, 64, e202512411.</p>
46		<p>H. E. Hackney, et al., <i>Angew. Chem. Int. Ed.</i>, 2025, 64, e202512411.</p>
47		<p>T. J. Reddy, et al., <i>J. Org. Chem.</i>, 2002, 67, 4635–4639.</p>
48		<p>A. A. Bobko, et al., <i>J. Am. Chem. Soc.</i>, 2007, 129, 7240–7241.</p>

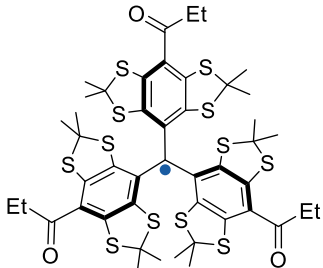
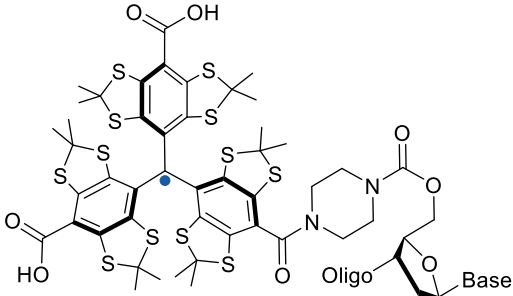
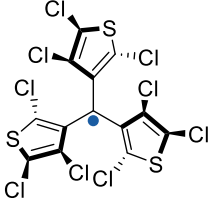
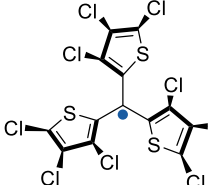
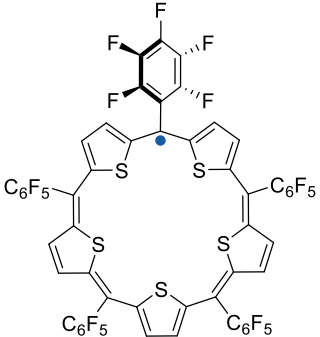
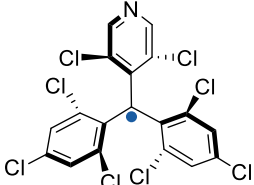
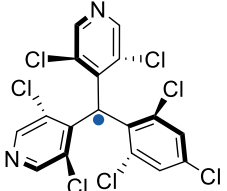
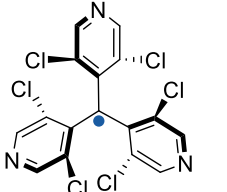
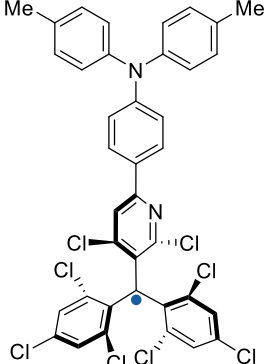
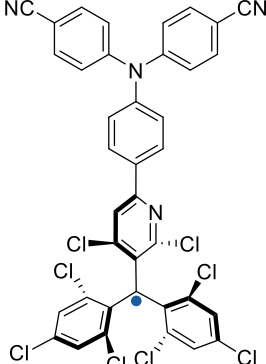
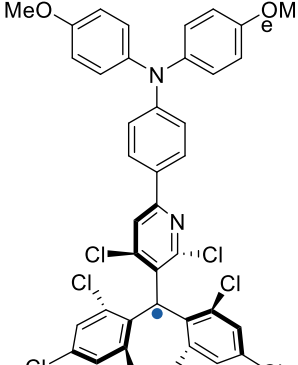
49		<p>T. J. Reddy, et al., <i>J. Org. Chem.</i>, 2002, 67, 4635–4639.</p>
50		<p>G. Y. Shevelev, et al., <i>J. Am. Chem. Soc.</i>, 2014, 136, 9874–9877.</p>

Table 3 : Reported tri(hetero)arylmethyl radicals.

Entry	Structure: Heteroatom	Reference
51		<p>S. Gronowitz, et al., <i>J. Heterocycl. Chem.</i>, 1995, 32, 65–67.</p>
52		<p>S. Gronowitz, et al., <i>J. Heterocycl. Chem.</i>, 1995, 32, 65–67.</p>
53		<p>T. Y. Gopalakrishna, et al., <i>Angew. Chem. Int. Ed.</i>, 2014, 53, 10984–10987.</p>
54		<p>S. Kimura, et al., <i>Angew. Chem. Int. Ed.</i>, 2018, 130, 12893–12897.</p>

55		<p>S. Kimura, et al., <i>J. Am. Chem. Soc.</i>, 2021, 143, 5610–5615.</p>
56		<p>S. Kimura, et al., <i>J. Am. Chem. Soc.</i>, 2021, 143, 4329–4338.</p>
57		<p>Y. Hattori, et al., <i>Chem. Eur. J.</i>, 2019, 25, 15463–15471.</p>
58		<p>Y. Hattori, et al., <i>Chem. Eur. J.</i>, 2019, 25, 15463–15471.</p>
59		<p>Y. Hattori, et al., <i>Chem. Eur. J.</i>, 2019, 25, 15463–15471.</p>

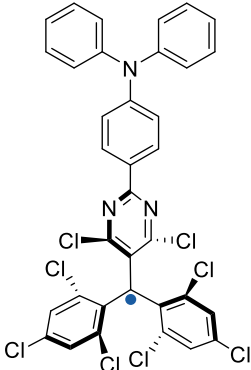
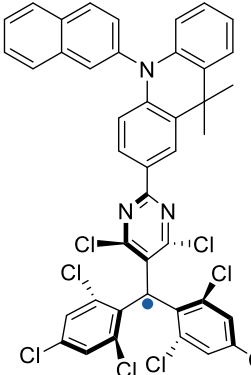
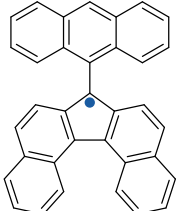
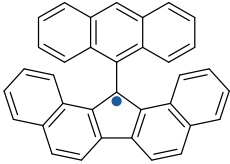
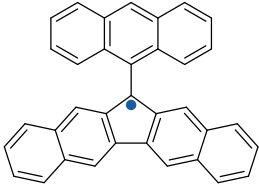
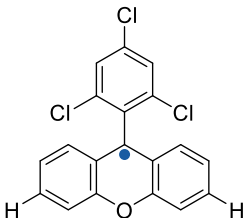
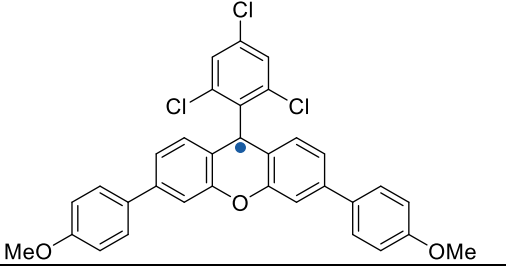
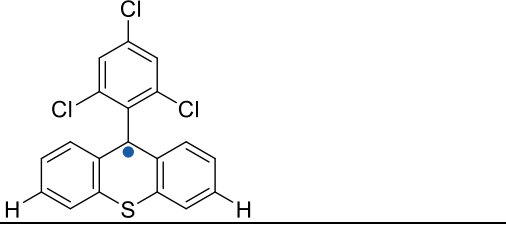
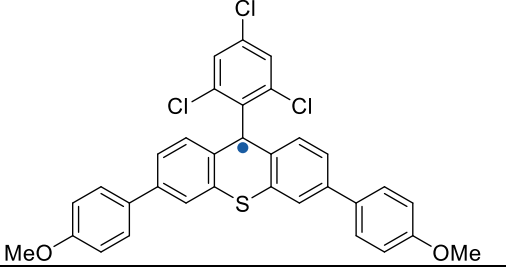
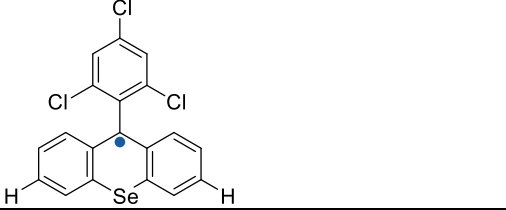
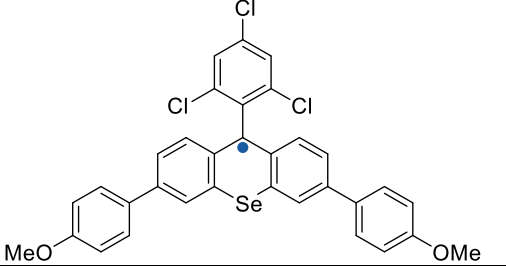
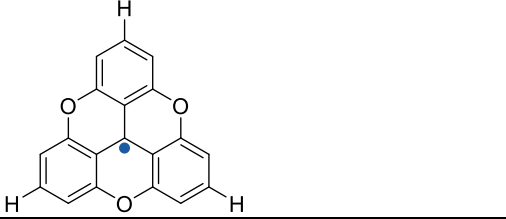
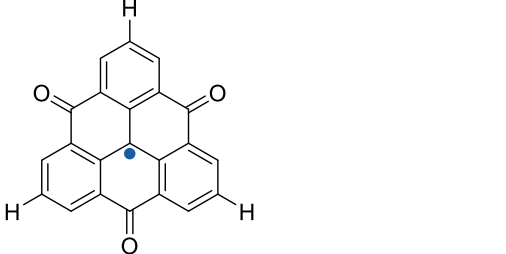
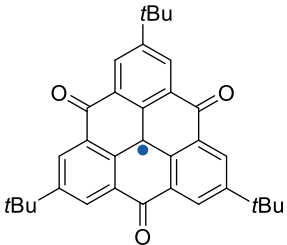
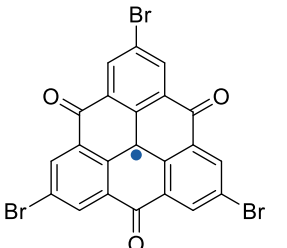
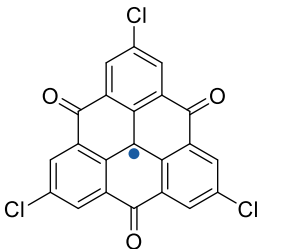
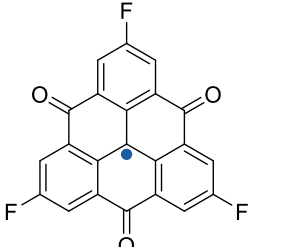
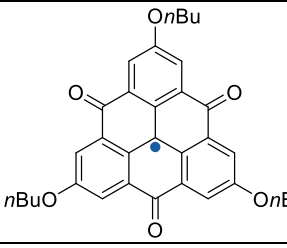
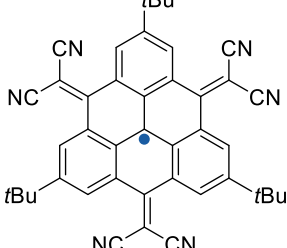
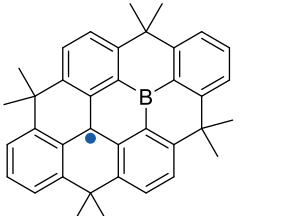
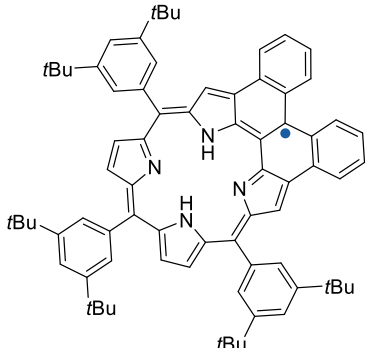
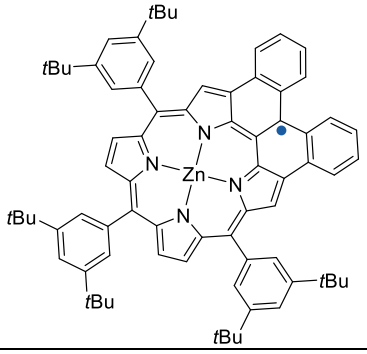
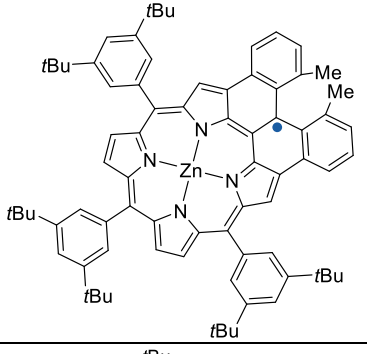
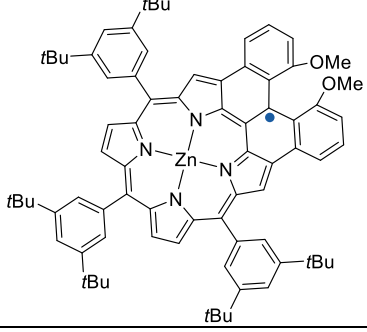
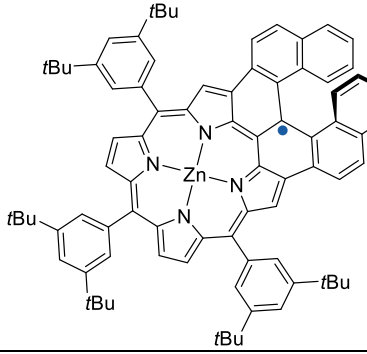
60		<p>M. Zhang, et al., <i>J. Am. Chem. Soc.</i>, 2025, 147, 45423–45431.</p>
61		<p>M. Zhang, et al., <i>J. Am. Chem. Soc.</i>, 2025, 147, 45423–45431.</p>

Table 4 : Reported fused triarylmethyl radicals.

Entry	Structure	Reference
62		<p>Y. Tian, et al., <i>J. Am. Chem. Soc.</i>, 2014, 136, 12784–12793.</p>
63		<p>Y. Tian, et al., <i>J. Am. Chem. Soc.</i>, 2014, 136, 12784–12793.</p>
64		<p>Y. Tian, et al., <i>J. Am. Chem. Soc.</i>, 2014, 136, 12784–12793.</p>
65		<p>W. Jiang, et al., <i>Angew. Chem. Int. Ed.</i>, 2025, 64, e202418762.</p>

66		<p>W. Jiang, et al., <i>Angew. Chem. Int. Ed.</i>, 2025, 64, e202418762.</p>
67		<p>W. Jiang, et al., <i>Angew. Chem. Int. Ed.</i>, 2025, 64, e202418762.</p>
68		<p>W. Jiang, et al., <i>Angew. Chem. Int. Ed.</i>, 2025, 64, e202418762.</p>
69		<p>W. Jiang, et al., <i>Angew. Chem. Int. Ed.</i>, 2025, 64, e202418762.</p>
70		<p>W. Jiang, et al., <i>Angew. Chem. Int. Ed.</i>, 2025, 64, e202418762.</p>
71		<p>E. Müller, et al., <i>Tetrahedron Lett.</i>, 1967, 8, 3877–3880.</p>
72		<p>Y. Morita, et al., <i>Bull. Chem. Soc. Jpn.</i>, 2018, 91, 922–931.</p>

73		<p>Y. Morita, et al., <i>Bull. Chem. Soc. Jpn.</i>, 2018, 91, 922–931.</p> <p>Y. Morita, et al., <i>Nat. Mater.</i>, 2011, 10, 947–951.</p>
74		<p>Y. Morita, et al., <i>Bull. Chem. Soc. Jpn.</i>, 2018, 91, 922–931.</p> <p>Y. Morita, et al., <i>Nat. Mater.</i>, 2011, 10, 947–951.</p>
75		<p>Y. Morita, et al., <i>Bull. Chem. Soc. Jpn.</i>, 2018, 91, 922–931.</p>
76		<p>Y. Morita, et al., <i>Bull. Chem. Soc. Jpn.</i>, 2018, 91, 922–931.</p>
77		<p>Y. Morita, et al., <i>Bull. Chem. Soc. Jpn.</i>, 2018, 91, 922–931.</p>
78		<p>A. Ueda, et al., <i>Chem. Eur. J.</i>, 2012, 18, 16272–16276.</p>
79		<p>T. Kushida, et al., <i>J. Am. Chem. Soc.</i>, 2017, 139, 14336–14339.</p>

80		<p>K. Kato, et al., <i>Angew. Chem. Int. Ed.</i>, 2016, 55, 8711–8714.</p>
81		<p>K. Kato, et al., <i>Angew. Chem. Int. Ed.</i>, 2016, 55, 8711–8714.</p>
82		<p>K. Kato, et al., <i>Chem. Eur. J.</i>, 2018, 24, 572–575.</p>
83		<p>K. Kato, et al., <i>Chem. Eur. J.</i>, 2018, 24, 572–575.</p>
84		<p>K. Kato, et al., <i>Chem. Eur. J.</i>, 2018, 24, 572–575.</p>

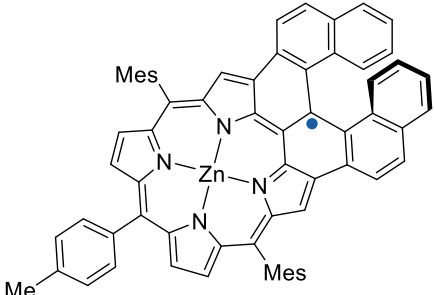
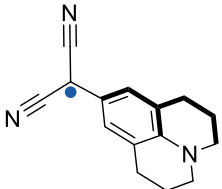
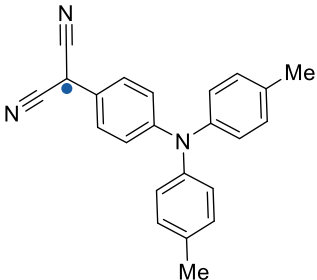
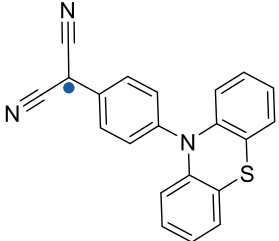
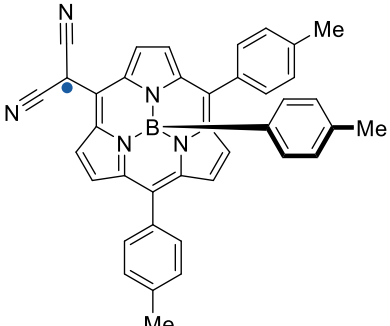
85		<p>K. Kato, et al., <i>Chem. Eur. J.</i>, 2018, 24, 572–575.</p>
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Table 5 : Reported dicyanoarylmethyl radicals.

Entry	Structure	Reference
86		<p>K. Okino, et al., <i>Angew. Chem. Int. Ed.</i>, 2017, 56, 16597–16601.</p>
87		<p>K. Okino, et al., <i>Angew. Chem. Int. Ed.</i>, 2017, 56, 16597–16601.</p>
88		<p>K. Okino, et al., <i>Angew. Chem. Int. Ed.</i>, 2017, 56, 16597–16601.</p>
89		<p>B. Adinarayana, et al., <i>Chem. Eur. J.</i>, 2019, 25, 1706–1710.</p>

90		B. Adinarayana, et al., <i>Chem. Eur. J.</i> , 2019, 25 , 1706–1710.
91		B. Adinarayana, et al., <i>Chem. Eur. J.</i> , 2019, 25 , 1706–1710.

Table 6 : Previously published reviews related to stable/persistent radicals.

Authors	Title	Citation
S. Hünig	Stable radical ions	<i>Pure Appl. Chem.</i> , 1967, 15 , 109–122.
E. R. Altwicker	The Chemistry of Stable Phenoxy Radicals	<i>Chem. Rev.</i> , 1967, 67 , 475–531.
L. Salem and C. Rowland	The Electronic Properties of Diradicals	<i>Angew. Chem. Int. Ed.</i> , 1972, 11 , 92–111.
F. A. Neugebauer,	Hydrazidinyl Radicals: 1,2,4,5-Tetraazapentenyls, Verdazyls, and Tetrazolinyls	<i>Angew. Chem. Int. Ed.</i> , 1973, 12 , 455–464.
W. C. Danen and F. A. Neugebauer	Aminyl Free Radicals	<i>Angew. Chem. Int. Ed.</i> , 1975, 14 , 783–789.
W. T. Borden and E. R. Davidson	Effects of electron repulsion in conjugated hydrocarbon diradicals	<i>J. Am. Chem. Soc.</i> , 1977, 99 , 4587–4594.
A. A. Ovchinnikov	Multiplicity of the ground state of large alternant organic molecules with conjugated bonds	<i>Theoret. Chim. Acta</i> , 1978, 47 , 297–304.
J. F. W. Keana	Newer aspects of the synthesis and chemistry of nitroxide spin labels	<i>Chem. Rev.</i> , 1978, 78 , 37–64.
V. Bonačić-Koutecký, J. Koutecký and J. Michl	Neutral and Charged Biradicals, Zwitterions, Funnels in S ₁ , and Proton Translocation: Their Role in Photochemistry, Photophysics, and Vision	<i>Angew. Chem. Int. Ed.</i> , 1987, 26 , 170–189.
D. A. Dougherty	Spin control in organic molecules	<i>Acc. Chem. Res.</i> , 1991, 24 , 88–94.
A. Rajca	Organic Diradicals and Polyradicals: From Spin Coupling to Magnetism?	<i>Chem. Rev.</i> , 1994, 94 , 871–893.
E. Coronado and P. Day	Magnetic Molecular Conductors	<i>Chem. Rev.</i> , 2004, 104 , 5419–5448.
D. Jérôme	Organic Conductors: From Charge Density Wave TTF–TCNQ to Superconducting (TMTSF) ₂ PF ₆	<i>Chem. Rev.</i> , 2004, 104 , 5565–5592.
B. D. Koivisto and R. G. Hicks	The magnetochemistry of verdazyl radical-based materials	<i>Coord. Chem. Rev.</i> , 2005, 249 , 2612–2630
N. M. Shishlov	From the Gomberg radical to organic magnets	<i>Russ. Chem. Rev.</i> , 2006, 75 , 863–884.
J. M. Rawson, A. Alberola and A. Whalley	Thiazyl radicals: old materials for new molecular devices	<i>J. Mater. Chem.</i> , 2006, 16 , 2560–2575
R. G. Hicks	What's new in stable radical chemistry?	<i>Org. Biomol. Chem.</i> , 2007, 5 , 1321.

L. Tebben and A. Studer	Nitroxides: Applications in Synthesis and in Polymer Chemistry	<i>Angew. Chem. Int. Ed.</i> , 2011, 50 , 5034–5068.
K. Nakahara, K. Oyaizu and H. Nishide	Organic Radical Battery Approaching Practical Use	<i>Chem. Lett.</i> , 2011, 40 , 222–227.
E. D. Commins	Electron Spin and Its History	<i>Annu. Rev. Nucl. Part. Sci.</i> , 2012, 62 , 133–157.
A. Heckmann and C. Lambert	Organic Mixed-Valence Compounds: A Playground for Electrons and Holes	<i>Angew. Chem. Int. Ed.</i> , 2012, 51 , 326–392.
T. Janoschka, M. D. Hager and U. S. Schubert	Powering up the Future: Radical Polymers for Battery Applications	<i>Adv. Mater.</i> , 2012, 24 , 6397–6409.
M. Abe	Diradicals	<i>Chem. Rev.</i> , 2013, 113 , 7011–7088
K. E. Preuss	Metal-radical coordination complexes of thiazyl and selenazyl ligands	<i>Coord. Chem. Rev.</i> , 2015, 289–290 , 49–61
Z. Zeng, X. Shi, C. Chi, J. T. L. Navarrete, J. Casado and J. Wu	Pro-aromatic and anti-aromatic π -conjugated molecules: an irresistible wish to be diradicals	<i>Chem. Soc. Rev.</i> , 2015, 44 , 6578–6596.
O. Krumkacheva and E. Bagryanskaya,	Triptyl radicals as spin labels	in <i>Electron Paramagnetic Resonance</i> , The Royal Society of Chemistry, 2016, 25 , 35–60.
Y. Li, L. Li, Y. Wu and Y. Li	A Review on the Origin of Synthetic Metal Radical: Singlet Open-Shell Radical Ground State?	<i>J. Phys. Chem. C.</i> , 2017, 121 , 8579–8588.
M. Nakano	Electronic Structure of Open-Shell Singlet Molecules: Diradical Character Viewpoint	<i>Top. Curr. Chem. (Z)</i> , 2017, 375 , 47.
M. M. Haugland, J. E. Lovett and E. A. Anderson	Advances in the synthesis of nitroxide radicals for use in biomolecule spin labelling	<i>Chem. Soc. Rev.</i> , 2018, 47 , 668–680.
J. Casado	Para-quinodimethanes: a unified review of the quinoidal-versus-aromatic competition and its implications,	<i>Top. Curr. Chem.</i> , 2018, 209–248.
D. Shimizu and A. Osuka	Porphyrinoids as a platform of stable radicals	<i>Chem. Sci.</i> , 2018, 9 , 1408–1423.
M. M. Roessler and E. Salvadori	Principles and applications of EPR spectroscopy in the chemical sciences	<i>Chem. Soc. Rev.</i> , 2018, 47 , 2534–2553.
T. Stuyver, B. Chen, T. Zeng, P. Geerlings, F. De Proft and R. Hoffmann	Do Diradicals Behave Like Radicals?	<i>Chem. Rev.</i> , 2019, 119 , 11291–11351.
M. Kertesz	Pancake Bonding: An Unusual Pi-Stacking Interaction	<i>Chem. Eur. J.</i> , 2019, 25 , 400–416.
G. N. Lipunova, T. G. Fedorchenko, A. N. Tsmokalyuk and O. N. Chupakhin	Advances in verdazyl chemistry	<i>Russ. Chem. Bull.</i> , 2020, 69 , 1203–1222
D. Luneau	Coordination Chemistry of Nitronyl Nitroxide Radicals Has Memory	<i>Eur. J. Inorg. Chem.</i> , 2020, 2020 , 597–604.
Y. Teki	Excited-State Dynamics of Non-Luminescent and Luminescent π -Radicals	<i>Chem. Eur. J.</i> , 2020, 26 , 980–996.
Y. Ji, L. Long and Y. Zheng	Recent advances of stable Blatter radicals: synthesis, properties and applications	<i>Mater. Chem. Front.</i> , 2020, 4 , 3433–3443.
D. Yuan, W. Liu and X. Zhu	Design and Applications of Single-Component Radical Conductors	<i>Chem</i> , 2021, 7 , 333–357.
M. G. F. Vaz and M. Andruh	Molecule-based magnetic materials constructed from paramagnetic organic ligands and two different metal ions	<i>Coord. Chem. Rev.</i> , 2021, 427 , 213611.
Z. X. Chen, Y. Li and F. Huang	Persistent and Stable Organic Radicals: Design, Synthesis, and Applications	<i>Chem</i> , 2021, 7 , 288–332.
R. Murata, Z. Wang and M. Abe	Singly Occupied Molecular Orbital-Highest Occupied Molecular Orbital (SOMO-HOMO) Conversion	<i>Aust. J. Chem.</i> , 2021, 74 , 827–837.

L. Mao, M. Zhou, X. Shi and H.-B. Yang	Triphenylamine (TPA) radical cations and related macrocycles	<i>Chin. Chem. Lett.</i> , 2021, 32 , 3331–3341
P. Murto and H. Bronstein	Electro-optical π -radicals: design advances, applications and future perspectives	<i>J. Mater. Chem. C</i> , 2022, 10 , 7368–7403.
Y. Tan, S.-N. Hsu, H. Tahir, L. Dou, B. M. Savoie and B. W. Boudouris	Electronic and Spintronic Open-Shell Macromolecules, Quo Vadis?	<i>J. Am. Chem. Soc.</i> , 2022, 144 , 626–647.
S. Kasemthaveechok, L. Abella, J. Crassous, J. Autschbach and L. Favereau	Organic radicals with inversion of SOMO and HOMO energies and potential applications in optoelectronics	<i>Chem. Sci.</i> , 2022, 13 , 9833–9847.
J. Ahmed and S. K. Mandal	Phenalenyl Radical: Smallest Polycyclic Odd Alternant Hydrocarbon Present in the Graphene Sheet	<i>Chem. Rev.</i> , 2022, 122 , 11369–11431.
C. Shu, Z. Yang and A. Rajca	From Stable Radicals to Thermally Robust High-Spin Diradicals and Triradicals	<i>Chem. Rev.</i> , 2023, 123 , 11954–12003.
A. Hinz, J. Bresien, F. Breher and A. Schulz	Heteroatom-Based Diradical(oid)s	<i>Chem. Rev.</i> , 2023, 123 , 10468–10526.
S. Gao and F. Li	Neutral Stable Nitrogen-Centered Radicals: Structure, Properties, and Recent Functional Application Progress	<i>Adv. Funct. Mater.</i> , 2023, 33 , 2304291.
D. Leifert and A. Studer	Organic Synthesis Using Nitroxides	<i>Chem. Rev.</i> , 2023, 123 , 10302–10380.
T. Quintes, M. Mayländer and S. Richert	Properties and applications of photoexcited chromophore–radical systems	<i>Nat. Rev. Chem.</i> , 2023, 7 , 75–90.
K. Hatakeyama-Sato and K. Oyaizu	Redox: Organic Robust Radicals and Their Polymers for Energy Conversion/Storage Devices	<i>Chem. Rev.</i> , 2023, 123 , 11336–11391.
T. Quintes, M. Franz, P. Thielert, A. J. Redman and S. Richert	Determination of exchange coupling constants in the electronic ground and excited states of molecular multi-spin systems	<i>Chem. Phys. Rev.</i> , 2024, 5 , 041312.
A. Mizuno, R. Matsuoka, T. Mibu and T. Kusamoto	Luminescent Radicals	<i>Chem. Rev.</i> , 2024, 124 , 1034–1121.
X. Zhang, X. Chen, Y. Sun and J. Zhao	Radical enhanced intersystem crossing mechanism, electron spin dynamics of high spin states and their applications in the design of heavy atom-free triplet photosensitizers	<i>Org. Biomol. Chem.</i> , 2024, 22 , 5257–5283.
A. Zhou, Z. Sun and L. Sun	Stable organic radical qubits and their applications in quantum information science	<i>Innovation</i> , 2024, 5 , 100662
Y. Zhu, Z. Zhu, S. Wang, Z. Kuang, Q. Peng and A. Abdurahman	Anti-Kasha Emission in Organic Radicals: Mechanistic Insights and Experimental Caveats	<i>ChemPhotoChem</i> , 2025, 9 , e202500118.
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G. N. Lipunova, T. G. Fedorchenko, A. V. Shchepochkin and O. N. Chupakhin	New aspects of verdazyl chemistry	<i>Russ. Chem. Bull.</i> , 2025, 74 , 328–353.
D. Straub, M. Gross, M. E. Arnold, J. Zolg and A. J. C. Kuehne	On the photoluminescence in triarylmethyl-centered mono-, di-, and multiradicals	<i>Beilstein J. Org. Chem.</i> , 2025, 21 , 964–998.
K. Dzieszkowski and M. Pawlicki	Open-Shell States in Dynamic Diradicaloids	<i>ChemPlusChem</i> , 2025, 90 , e202500033.
C. A. Ndamyabera and H. W. Langmi	Recent Developments in Organic Radical Inclusion in MOFs and Radical MOFs	<i>ChemistryOpen</i> , 2025, 14 , e202500069.
Y. Zhu, Z. Zhu, S. Wang, Q. Peng and A. Abdurahman	Stable Luminescent Diradicals: The Emergence and Potential Applications	<i>Angew. Chem. Int. Ed.</i> , 2025, 64 , e202423470.
W. Wu	Stable organic radicals – a material platform for developing molecular quantum technologies	<i>Phys. Chem. Chem. Phys.</i> , 2025, 27 , 1214–1221