The Golden Age of Thermally Activated Delayed Fluorescence Materials: Design and Exploitation

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1. Tables

Table **S1.** Summary of photophysical and device performance of blue TADF emitters reviewed in Section **3**.

Compound	Medium	λ_{PL} / nm	Φ_{PL} / %	τ_d / µs	ΔE_{ST} / eV	λ_{EL} / nm	CIE_{XY}	EQE_{max} / %	Roll-off 100 cd m^{-2} / %	Roll-off 1000 cd m^{-2} / %	Ref
Triazine											
***p*CzTPTZ**	10% in DPEPO	438	71	N.A.	0.36	N.A.	0.15.0.23	2.0	30	80	[1-3]
BuCz-TRZ	6% in DPEPO	439	83	68.1	0.29	459	0.15, 0.15	9.3	69	N.A.	[4]
DPFCz-TRZ	40% DPEPO	429[a]	88	0.64	0.21	445	0.15, 0.10	15.5	37	47	[5]
IndCzpTr-1	10% in mCBP	492[b]	75[b]	35	0.13[g]	472	0.17, 0.27	14.5	24	N.A.	[6]
IndCzpTr-2	20% in mCBP	510[b]	71[b]	34	0.11[g]	496	0.23, 0.50	30.0	49	N.A.	[6]
DBTCz-Trz	15 wt% in DPEPO	461[g]	90	13.1	0.23[g]	472	0.17, 0.28	21.7	~65	88	[7]
DBFCz-Trz	15 wt% in DPEPO	460[g]	89	12.8	0.23[g]	472	0.17, 0.28	21.6	~63	85	[7]
BDBFCz-Trz	15 wt% in DPEPO	465[g]	98	10.7	0.20[g]	488	0.18, 0.35	21.5	~36	80	[7]
Trz-BFCzCz	20% in DPEPO	455	75	37.4	0.13	N.A.	0.18, 0.32	23.3	N.A.	43.8	[8]
DCBTRZ	10% in CBP	435	39	0.1	0.39[e]	440	0.15, 0.059	6.7	N.A.	N.A.	[9]
PPCTRZ	10% in CBP	411	38	0.3	0.38[e]	442	0.15, 0.063	6.5	N.A.	N.A.	[9]
InCz23FlTz	10% in DPEPO	470	86	98	0.19	468	0.15, 0.18	17.2	63	82	[10]
InCz23DPhTz	10% in DPEPO	471	91	87	0.17	472	0.15, 0.22	17.9	55	83	[10]
InCz23DMeTz	10% in DPEPO	488	93	77	0.15	480	0.16, 0.30	22.8	43	75	[10]
InCz34DPhTz	10% in DPEPO	475	98	70	0.11	472	0.15, 0.24	25.9	45	80	[10]
TrzBFCz	10% in DPEPO 20% in DPEPO	385[b]	99	26.3	0.27	447 451	0.15, 0.09 0.15, 0.10	19.0 18.0	N.A. N.A.	77 55	[11]
TrzCNBFCz	10% in DPEPO 20% in DPEPO	407[b]	100	9.4	0.13	473 481	0.16, 0.24 0.17, 0.31	13.1 20.9	N.A. N.A.	72 37	[11]
dBFCzTrz	20% DPEPO	425[a]	90	30.4	0.13	476	0.16, 0.27	22.6	N.A.	46	[12]
dBFCzCNTrz	20% DPEPO	475[a]	80	4.9	0.09	497	0.22, 0.47	27.5	N.A.	12	[12]
Bzimim_FCNTz	20% in DPEPO	461[e]	99	7.9	0.17	N.A.	0.17, 0.27	22.6	11	N.A.	[13]
Cz-TRZ2	6 wt% in DPEPO	465[a]	98	3.5	0.07[a]	N.A.	0.16, 0.24	22.0	23	42	[14]
Cz-TRZ3	6 wt% in DPEPO	435[a]	92	13.0	0.17[a]	N.A.	0.15, 0.10	19.2	23	68	[14]
Cz-TRZ4	6 wt% in DPEPO	432[a]	85	10.3	0.15[a]	N.A.	0.15, 0.10	18.3	19	49	[14]
TCZ-TRZ(Me)	15% in DPEPO	457	40	38	0.27	456	0.16, 0.14	10.4	N.A.	N.A.	[15]
TCZ-TRZ(Me')	15% in DPEPO	451	32	51	0.16	448	0.17, 0.18	11.1	N.A.	N.A.	[15]
TRZ-CF	20% in DPEPO	474	86	7.3	0.22	476	0.17, 0.27	20	N.A.	43	[16]
TRZ-CzF	20% in	458	69	11	0.31	460	0.15, 0.16	13.3	N.A.	72	[16]

	DPEPO										
PhBuCz-TRZ	6% in DPEPO	440[e]	82	44.1	0.27	458	0.15, 0.16	12.1	49	N.A.	[4]
PyBuCz-TRZ	6% in DPEPO	434[e]	87	35.8	0.30	455	0.15, 0.13	15.3	57	N.A.	[4]
IDB-TRZ	Neat	481	99	1.7	0.02[f]	487	0.15, 0.36	22.8	1	17	[17]
IDB-TRZ-Me	Neat	466	98	2.4	0.02[f]	474	0.14, 0.23	21.3	14	62	[17]
IDB-TRZ-Me_2	20% in PPF	472[a]	98	28	0.093	496	0.21, 0.44	28.3	14	N.A.	[17]
IDB-TRZ-Me_4	20% in PPF	456[a]	37	6	~0	484	0.20, 0.30	16.4	12	N.A.	[17]
TAZ-1	20% in PPF	468	88	8.4	0.15	478	0.16, 0.25	17.7	10	40	[18]
TAZ-2	20% in PPF	476	100	6.6	0.10	479	0.16, 0.27	21.2	10	38	[18]
o12BFCzTrz	20% DPEPO	473[a]	83	4.1	0.015	478	0.16, 0.29	19.2	N.A.	11	[19]
o23BFCzTrz	20% DPEPO	476[a]	86	4.2	0.042	484	0.18, 0.39	21.1	N.A.	20	[19]
oBFCzTrz	20% DPEPO	477[a]	89	3.1	0.002	488	0.17, 0.34	22.9	N.A.	13	[19]
PPCzTrz	20% in DPEPO	444	93	25.0	0.16	N.A.	N.A.	10	N.A.	N.A.	[20]
DMAC-TRZ	8% in mCPCN	495	90	1.9	0.05	-	-	26.5	5	N.A.	[21, 22]
***a*-DMAc-TRZ**	20% in DPEPO	479	86	4.1	0.20	N.A.	0.19, 0.34	28.9	56	88	[21]
DTPPDDA	8wt% in mCP: TSPO1	439	38	0.02	0.04	N.A.	0.15, 0.09	4.7	50	N.A.	[23]
TTSA	10% in mCP:TSPO1	481	99	3.5	0.06	480	0.16, 0.28	27.9	19	N.A.	[24]
TXSA	10% in mCP:TSPO1	475	91	3.7	0.06	476	0.15, 0.25	20.7	22	N.A.	[24]
TTAZ	10% in DPEPO	465	68	4.7	0.16[e]	464	0.15, 0.16	23.7	39	N.A.	[24]
TXAZ	10% in DPEPO	460	50	4.6	0.18[e]	456	0.15, 0.13	16.0	47	N.A.	[24]
DTPDDA	10% in mCP:TSPO1	468	70	5.1	0.16	N.A.	N.A.	N.A.	N.A.	N.A.	[25]
SAzTrz	10 wt% in DPEPO	469	68	165	0.20	468	0.15, 0.18	20.6	64	N.A.	[25]
TspiroS-TRZ	30% in DPEPO	470[a]	81.6	3.03	0.05[a]	481	0.17, 0.33	31.1	6.6	29	[26]
TspiroF-TRZ	30% in DPEPO	479[a]	74.8	4.57	0.08[a]	493	0.19, 0.39	28.1	1.4	18	[26]
DspiroAc-TRZ	Non-Doped	482	83	3.2	0.04	484	0.18, 0.38	25.7	8	36	[27]
CzTrzPh	15% in CNmCBPCN	458	34	15.3	0.16	459	0.16, 0.19	12.5	25[f]	N.A.	[28]
CzTrzBp	15% in CNmCBPCN	457	35	30.3	0.31	448	0.16, 0.14	9.2	48[f]	N.A.	[28]
CzTrzDbf	15% in CNmCBPCN	466	49	26.3	0.26	457	0.16, 0.19	12.4	51[f]	N.A.	[28]
MA-TA	10% in CzSi	469	99	18.3	0.14	N.A.	0.15, 0.19	22.1	37	N.A.	[29]
FA-TA	10% in	454	76	44.4	0.16	N.A.	0.15, 0.13	11.2	N.A.	N.A.	[29]

	CzSi										
PA-TA	10% in CzSi	451	70	69.5	0.17	N.A.	0.15, 0.10	6.7	N.A.	N.A.	[29]
moTrSAc	10% DPEPO	482	70	3.4	0.01	472	0.17, 0.27	21.3	N.A.	N.A.	[30]
motmTrSAc	10% DPEPO	469	51	3.0	0.01	468	0.16, 0.22	19.5	N.A.	N.A.	[30]
oCzPO$_2$TPTZ	10% in DPEPO	472	25	15.7	0.01	N.A.	0.17, 0.27	6.7	15	66	[31]
mCzPO$_2$TPTZ	10% in DPEPO	476	53	24.5	0.03	N.A.	0.16, 0.20	11.6	38	74	[31]
pCzPO$_2$TPTZ	10% in DPEPO	482	74	19.4	0.01	N.A.	0.15, 0.27	20.9	22	51	[31]
CzDCbTrz	6 wt% in DPEPO	469[a]	85	7.2	0.12	471	0.16, 0.23	22.0	~23	57	[32]
DCzCbTrz	40% in DBFPO	451[a]	79	15.6	0.13[a]	N.A.	0.16, 0.23	22.1	~17	54	[33]
Tris-Cz-TRZ	7 wt% in mCP	457	71	5.0	0.03	468	0.15, 0.22	16.5	0	5	[34]
23CT	30% in DPEPO	N.A.	80	8.7	N.A.	N.A.	0.17, 0.33	21.8	0	5	[35]
24CT	30% in DPEPO	N.A.	92	21, 241	N.A.	N.A.	0.15, 0.26	22.4	9	32	[35]
34CT	30% in DPEPO	N.A.	N.A.	N.A.	N.A.	N/A	0.15, 0.17	13.3	29	58	[35]
245CzTrz	30% DPEPO	450	98	9.7	0.17	490	0.17, 0.39	22	N.A.	37	[36]
5Cz-Trz	15% mCBP	486	99	2.1	0.02	486	N.A.	29.3	N.A.	3	[37]
p2Cz2Trz	30% in DPEPO	430[h]	82[i]	16.6[i]	0.18[h]	534	0.39, 0.58	12.5	N.A.	26	[38]
m2Cz2Trz	30% in DPEPO	410[h]	91[i]	12.2[i]	0.09[h]	493	0.20, 0.47	18.5	N.A.	14	[38]
TrzoCz	20% DPEPO	450	96	20	0.2	484	0.15, 0.32	28	15	60	[39]
DPA-MeTRZ	12% in mCPCN	466	100	N.A.	0.30	474	0.14, 0.23	19.1	65[f]	N.A.	[40]
c-NN-TRZ	12% in mCPCN	476	100	N.A.	0.32	481	0.14, 0.32	26.3	70[f]	N.A.	[40]
c-NN-MeTRZ	12% in mCPCN	467	100	N.A.	0.24	467	0.14, 0.22	32.2	59[f]	N.A.	[40]
TTT-Ac	20% in mCP	426	63	27.2	0.35	470	0.16, 0.21	9.2	N.A.	N.A.	[41]
TTT-2Ac	20% in mCP	446	47	20.0	0.19	474	0.17, 0.26	8.1	N.A.	N.A.	[41]
TTT-DMAC	5% in CzSi	468	21	19.5	0.20	480	0.19, 0.29	6.2	N.A.	5.3	[42]
TTT-PXZ	5% in CzSi	522	39	36.0	0.07	530	0.32, 0.52	1.9	N.A.	N.A.	[42]
TTT-Ph-Cz	3% in DPEPO	422	42	N.A.	0.43	432	0.16, 0.07	3.2	N.A.	N.A.	[42]
TTT-Ph-Ac	3% in DPEPO	464	79	142.7	0.24	480	0.16, 0.27	9.7	N.A.	N.A.	[42]
TTT-Ph-BAc	3% in DPEPO	470	32	150.7	0.09	486	0.20, 0.34	3.8	N.A.	N.A.	[42]
3,4,5-3TCz-TTT	15% in CzSi	485	80	3100	0.21	N.A.	0.17, 0.28	5.8	N.A.	N.A.	[43]
3DMAC-TTT	15% in CzSi	475	79	4700	0.27	N.A.	0.16, 0.23	11.0	N.A.	N.A.	[43]
Pyrimidine, pyrazine											
Ac-1MHPM	20 wt% in DPEPO	481	75	50	0.23	N.A.	0.17, 0.28	24	21	53	[44]
Ac-2MHPM	20% in DPEPO	477	71	44	0.22	N.A.	0.17, 0.27	19.8	20	52	[44]
Ac-	20% in	454	47	45	0.24	N.A.	0.16, 0.15	17.8	42	N.A.	[44]

3MHPM	DPEPO										
3CbzPYR	10% DPEPO	464	81	868	0.32	473	0.16, 0.23	19.7	55%	77%	[45]
2SPAc-HPM	20 wt% in DPEPO	469[a]	97	52.2	0.15[a]	487	0.18, 0.34	25.6	26	53	[46]
2SPAc-MPM	20 wt% in DPEPO	460[a]	82	53.3	0.19[a]	479	0.17, 0.29	24.3	34	62	[46]
2SPAc-PPM	20 wt% in DPEPO	464[a]	97	56.9	0.16[a]	484	0.18, 0.32	31.5	42	66	[46]
MFAc-PPM	18 wt% in PPF	464	87	38	0.25	470	0.16, 0.23	20.4	24	~65	[47]
4,6-PhPMAF	22 DPEPO	448	17	301.15	0.27	458	0.15, 0.11	2.95	N.A.	N.A.	[48]
Ac-26DPPM	10% in DPEPO	491	81	87	0.17	N.A.	0.18, 0.33	19.3	38	67	[49]
CzAc-26DPPM	10% in DPEPO	488	81	55	0.12	N.A.	0.21, 0.38	23.7	37	61	[49]
2NPMAF	22 wt% in DPEPO	482	73	1.8	0.11	481	0.19, 0.34	23.6	23	~34	[50]
DPAc-4PyPM	10 wt% in DPEPO	486	86	22.7	0.23	484	0.19, 0.36	24.3	28	65	[51]
DPAc-6PyPM	10 wt% in DPEPO	468	83	16.3	0.20	472	0.15, 0.24	22.4	50	88	[51]
SFI34pPM	10% in DPEPO	424[a]	74	118	0.24	460	0.15, 0.09	8.2	N.A.	N.A.	[52]
SFI23pPM	20% in DPEPO	414[a]	72	189	0.36	460	0.15, 0.10	5.1	N.A.	N.A.	[52]
pBFCz-2,6DPPM	10 wt% in DPEPO	437	71	200	0.23[b]	N.A.	0.15, 0.05	6.2	~29	N.A.	[53]
pBTCz-2,6DPPM	10 wt% in DPEPO	433	75	383	0.24[b]	N.A.	0.15, 0.05	5.4	N.A.	N.A.	[53]
BFCZPZ1	7% PPT	430	68	910	0.37	436	0.15, 0.06	6.5	20	27	[54]
BFCZPZ2	7% PPT	462	91	420	0.31	464	0.15, 0.16	21.3	53	76	[54]
BTCZPZ1	7% PPT	477	91	90	0.24	472	0.16, 0.26	21.1	26	58	[54]
BTCZPZ2	7% PPT	462	98	440	0.31	468	0.15, 0.18	19.7	50	70	[54]
CZ9CZPZ	7% PPT	458	94	300	0.31	468	0.16, 0.20	20	48	70	[54]
DCz-ND	20% in DPEPO	475	46	6.0	0.12	469	0.15, 0.21	18.1	44	70	[55]
DCz-ND-Cz	20% in DPEPO	471	74	4.4	0.13	468	0.16, 0.21	20.8	36	54	[55]
DCz-ND-DCz	20% in DPEPO	468	72	7.0	0.13	464	0.16, 0.20	20.8	35	67	[55]
CN1	Neat	482	76	2.4	0.01	481	0.16, 0.27	8.4	N.A.	N.A.	[56]
CN4	Neat	490	27	1.8	0.05	476	0.17, 0.24	5.5	N.A.	N.A.	[56]
Boron											
Cz*o*B	20 wt% in DPEPO	466	84	56	0.12	N.A.	0.14, 0.15	22.6	19	77	[57]
CzAZB	10 wt% in mCP	452	99	N.A.	0.31	454	0.14, 0.10	5.5	~20	~35	[58]
tmCzAZB	10 wt% in mCP	451	56	162	0.26	464	0.14, 0.15	12.4	~56	~90	[58]
dmAcAZB	10 wt% in mCP	469	95	197	0.11	469	0.14, 0.19	20.8	~38	~73	[58]
MPAc-BS	Neat film	487	99	1.7	0.02	487	0.15, 0.36	22.8	1	N.A.	[59]
MPAc-BO	Neat film	466	98	2.4	0.02	474	0.14, 0.23	21.3	14	N.A.	[59]
MCz-BS	50 wt% in PPF	476	92	1.9	0.11	478	0.14, 0.26	21.6	1	6	[60]
MPASi-BS	50 wt% in PPF	479	100	2.7	0.08	478	0.14, 0.26	27.6	0.1	5	[60]
MFASi-BS	50 wt% in PPF	483	100	5.3	0.06	484	0.14, 0.32	23.9	1	8	[60]

MPAGe-BS	50 wt% in PPF	468	92	10.4	0.11	476	0.14, 0.22	15.7	1	16	[60]
PXB-DI	20 wt% in PPBI	470	79	3.3	0.09	470	0.16, 0.34	37.4	N.A.	15	[61]
PXB-mIC	20 wt% in PPBI	425	51	4	0.19	450	0.15, 0.08	12.5	N.A.	58	[61]
QBO	20 wt% in PPF	455	83	0.65	0.01	460	0.14, 0.12	20.5	20.2	17.7	[62]
MCz-BOBO	20 wt% in PPF	476	100	0.78	0.01	473	0.13, 0.20	20.1	1	12	[63]
MCz-BSBS	20 wt% in PPF	483	93	2.7	0.17	484	0.14, 0.33	25.9	9	25	[63]
SAC-SBS	20 wt% in PPF	491	81	22	0.12	489	0.17, 0.39	20.9	16	56	[64]
SAC-OBO	20 wt% PPF	470	28	140	0.30	471	0.16, 0.22	5.2	75	N.A.	[64]
NOBF2-Cz	10 wt% in DPEPO	475	99	132	0.20	467[c]	0.14, 0.16[c]	11.0	N.A.	N.A.	[65]
NOBF2-DTCz	10 wt% in DPEPO	488	74	126	0.20	471[c]	0.14, 0.21[c]	12.7	N.A.	N.A.	[65]
NOBF2-DPCz	10 wt% in DPEPO	496	70	110	0.22	483[c]	0.14, 0.28[c]	15.8	N.A.	N.A.	[65]
TDBA–Ac	20 wt% in PPBI	458	93	1	0.06	448	0.15, 0.06	21.5	N.A.	55	[66]
TDBA–DI	20 wt% in PPBI	456	99	6.2	0.11	460	0.14, 0.15	32.2	N.A.	17	[66]
DBA-DI	30 wt% in mCBP	467[a]	95.3	1.25	0.03[a]	470	0.15, 0.33	23.1	N.A.	1	[67]
***p*MDBA-DI**	30 wt% DBFPO	460[a]	97.8	1.60[a]	0.07[a]	483	0.15, 0.31	33.1	N.A.	32.3	[68]
***m*MDBA-DI**	30 wt% DBFPO	451[a]	97.3	1.90[a]	0.12[a]	474	0.14, 0.23	32.8	N.A.	28.4	[68]
FTAT-MBO	20 wt% in mCP	448	55	3.6	0.16	445	0.15, 0.08	5.1	N.A.	N.A.	[69]
FTAT-HBO	20 wt% in mCP	454	66	3.5	0.11	458	0.15, 0.12	7.7	N.A.	N.A.	[69]
FTAT-FBO	20 wt% in mCP	473	90	1.8	0.04	473	0.15, 0.25	17.3	N.A.	N.A.	[69]
TB-3Cz	Non-doped	433	99	4.4	0.06	424	0.17, 0.07	9.9	N.A.	N.A.	[70]
TB-P3Cz	Non-doped	460	93	4.7	0.11	428	0.15, 0.08	6.1	N.A.	N.A.	[70]
TB-P3Cz	20 wt% DBFPO	433[a]	88	9.32	0.23[a]	470	0.14, 0.19	29.1	N.A.	54	[70]
M3CzB	20 wt% DBFPO	445[a]	93	7.84	0.14[a]	478	0.14, 0.26	30.7	N.A.	30	[71]
TMCz-BO	30 wt% in PPF	467	98	0.75	0.02	471	0.14, 0.18	20.7	2	16	[72]
TMCz-3P	30 wt% in PPF	477	76	14.5	0.13	479	0.14, 0.26	20.4	10	37	[72]
TDBA-PAS	20 wt% in DPEPO	427[a]	92.3	2.49	0.06	435	0.155, 0.042	22.35	17.99	N.A.	[73]
TDBA-DPAC	20 wt% in DPEPO	444[a]	87.8	1.63	0.02	450	0.148, 0.085	24.61	11.03	2.42	[73]
OBO-I	20 wt% in PPF	451	81	1.6	0.07	457	0.14, 0.10	21.7	20.6	16.2	[74]
OBO-II	20 wt% in PPF	465	98	1.7	0.13	464	0.14, 0.13	31.7	29.0	20.8	[74]
TDBA-SBA	20 wt% in DBFPO	450	89	1.47	0.01[a]	467	0.13, 0.15	29.3	28.5	26.0	[75]
2TDBA-SBA	20 wt% in DBFPO	448	87	1.38	0.01[a]	475	0.13, 0.21	18.3	17.3	15.0	[75]
p-AC-DBNA	10 wt% BCPO	496	96	1.8	0.09	488	0.17, 0.36	20.5	8	20	[76]
TDBA-Cz	10 wt% in DPEPO	456	100	6.1[b]	0.14[a]	466	0.134, 0.129	31.1	N.A.	N.A.	[77]
DBA-Cz	10 wt% in	450	90	8.2[b]	0.03[a]	467	0.136,	30.3	N.A.	N.A.	[77]

	DPEPO						0.147				
3TBO	30 wt% in mCBP	476	78.4	1.42	78.4	484	0.120, 0.294	17.3	N.A.	10.3	[78]
5TBO	30 wt% in mCBP	466	96.7	1.90	96.7	484	0.125, 0.275	26.2	N.A.	16.7	[78]
PhCz-TOSBA	10 wt% in 2,6-DczPPy	454	39.3	114.37	0.23[a]	456	0.14, 0.15	16.69	N.A.	N.A.	[79]
TPA-TOSBA	10 wt% in 2,6-DczPPy	467	42.8	140.02	0.36[a]	456	0.14, 0.12	16.65	N.A.	N.A.	[79]
Nitrile											
δ-2CbPN	20 wt% in mCP	453[a]	93	180	0.13	486	0.19, 0.34	22.5	~24	66	[32]
DCzBN1	10% in DPEPO	415	28	18.0	0.31[a]	418	0.15, 0.05	2.5	N.A.	N.A.	[80]
DCzBN2	10% in DPEPO	432	66	11.2	0.22[a]	436	0.15, 0.07	7.7	N.A.	N.A.	[80]
DCzBN3	10% in DPEPO	424	76	13.5	0.26[a]	428	0.16, 0.06	10.3	N.A.	N.A.	[80]
DCzBN4	10% in DPEPO	462	86	5.5	0.14[a]	468	0.16, 0.23	18.0	42	77	[80]
DPAc-DCzBN	20 wt% DPEPO	476	71	3.03	0.13	472	0.17, 0.25	22.8	21	~55	[81]
DPAc-DCzBN	Non-doped	482	51	5.46	N.A.	476	0.16, 0.26	22	2.5	~50	[81]
DPAc-DtCzBN	30 wt% DPEPO	472	64	3.08	0.08	456	0.16, 0.15	23.1	20.7	N.A.	[81]
DPAc-DtCzBN	Non-doped	471	55	7.12	N.A.	460	0.16, 0.19	10.1	16.8	N.A.	[81]
DBFCzCN	20% DPEPO	451[d]	100	89	0.28	479	0.15, 0.29	25.2	N.A.	55	[82]
3Ph2CzCzBN	20 wt% in mCBP	464[a]	91	10[a]	0.19[a]	486	0.18, 0.39	17.9	2	4	[83]
Cy-2Cz	8 wt% in DPEPO	420[a]	57	9.4	0.18	445	0.16, 0.10	11.9	8	~21	[84]
2PhCz2CzBN	20% mCBP	470	86	9.6	0.17	464	0.15, 0.20	22.6	35	56	[85]
2PhCz2CzBN	Non-doped	N.A.	45	N.A.	N.A.	480	0.20, 0.33	3.9	N.A.	N.A.	[85]
2tCz2CzBN	30% mCBP	470	87	15.7	0.15	464	0.15, 0.19	23.8	28	48	[85]
2tCz2CzBN	Non-doped	N.A.	66	N.A.	N.A.	470	0.17, 0.25	21.6	29	50	[85]
2Cz2tCzBn	Non-doped	488	78	3.9	0.13	488	0.21, 0.42	25.8	N.A.	75	[86]
p4TCzPhBN	15% DPEPO	457	64	9.2	0.1	468	0.15, 0.19	22.8	N.A.	11	[87]
3Cz3BN	20 wt% in mCBP	412[a]	11[a]	N.A.	0.24[a]	N.A.	N.A.	N.A.	N.A.	N.A.	[88]
2Cz4BN	20 wt% in mCBP	416[a]	18[a]	N.A.	0.33[a]	N.A.	N.A.	N.A.	N.A.	N.A.	[88]
4Cz2BN	20 wt% in mCBP	439[a]	13[a]	27[a]	0.22[a]	N.A.	N.A.	N.A.	N.A.	N.A.	[88]
3tBuCz3BN	20 wt% in mCBP	425[a]	11[a]	N.A.	0.20[a]	N.A.	N.A.	N.A.	N.A.	N.A.	[88]
2tBuCz4BN	20 wt% in mCBP	435[a]	19[a]	N.A.	0.19[a]	N.A.	N.A.	N.A.	N.A.	N.A.	[88]
4tBuCz2BN	20 wt% in mCBP	456[a]	45[a]	29[a]	0.07[a]	N.A.	N.A.	N.A.	N.A.	N.A.	[88]
3PhCz3BN	20 wt% in mCBP	438[a]	13[a]	24[a]	0.21[a]	N.A.	N.A.	N.A.	N.A.	N.A.	[88]
2PhCz4BN	20 wt% in mCBP	455[a]	16[a]	N.A.	0.18[a]	N.A.	N.A.	N.A.	N.A.	N.A.	[88]

4PhCz2BN	20 wt% in mCBP	479	87	1.6	0.04	477	0.15, 0.23	18.2	16.8	14.5	[88]
T-CNDF-T-tCz	Non-doped	477	76	7.79	0.03	484	0.19, 0.35	21	N.A.	N.A.	[89]
S-CNDF-S-tCz	Non-doped	445	42	54.3	0.24	466	0.16, 0.18	2.6	N.A.	N.A.	[89]
Oxadiazole											
2CzdOXD4CF$_3$Ph	10% in PPT	474	55	4,500 26,000	0.32	474	0.17, 0.25	11.2	78	N.A.	[90]
2CzdOXDPh	10% in PPT	454	44	2,400 18,000	0.25	455	0.16, 0.15	6.8	71	79	[90]
2CzdOXDMe	10% in mCP	435	29	1,000 4,800	0.30	446	0.16, 0.12	4.7	45	62	[90]
2CzdOXD4MeOPh	10% in mCP	449	15	1,700 10,000	0.46	446	0.15, 0.11	6.6	70	88	[90]
2,4,6CzDPO	25% in DPEPO	472	32	309	0.12[a]		0.17, 0.30	6.1	~57	~89	[91]
2,3,4,6CzDPO	25% in DPEPO	484	54	166	0.07[a]	N.A.	0.18, 0.36	17.8	~36	~71	[91]
2,3,4,5,6CzDPO	25% in DPEPO	479	61	75	0.12[a]	N.A.	0.16, 0.29	24.4	~23	62	[91]
5*t*CzDPO	12.5% in DPEPO	474	20[a]	71	0.01[a]	N.A.	0.18, 0.36	29	N.A.	13	[92]
5CzMPO	12.5% in DPEPO	462	21[a]	105	0.12[a]	N.A.	0.21, 0.32	15	N.A.	7.2	[92]
5*t*CzMPO	12.5% in DPEPO	466	30[a]	69	0.03[a]	N.A.	0.18, 0.34	23	N.A.	16	[92]
BAcOX	10% in DPEPO	472	93	84.1	0.26	475	0.16, 0.24	22.3	N.A.	N.A.	[93]
Sulfone											
ACR-BPSBP	10% in DPEPO	460	82	5.0	0.14	468	0.16, 0.21	24.6	~47	N/A	[94]
DAc-DSO2	30 wt% in DPEPO	N.A.	N.A.	2.1	0.01	N.A.	0.18, 0.33	25.4	4	20	[95]
DDPhMesA-DDPS	10 wt% in PMMA	450	79	70	N.A.	456	0.16, 0.08	8.5	2	9	[96]
TXADO-Spiro-DMACF	nondopen	445	42	106	0.28	444	0.16, 0.09	5.3	N.A.	N.A.	[97]
SBA-2DPS	30% in DPEPO	459	60	4.3	0.09	467	0.15, 0.20	25.5	10	39	[98]
DMA-ThX	mCBP	448[a]	N.A.	0.08[b]	0.07[b]	458	0.14, 0.10	2.9	0	N.A.	[99]
DMAC-mTXO2	35 wt% DPEPO	440[a]	88	3	0.05	455	0.15, 0.18	22.6	0.4	11.9	[100]
CZ-MPS	10% in TCTA+10 % in CzSi	392	46	4.85	0.49	389	0.18, 0.06	9.3	N.A.	N.A.	[101]
DMAC2PTO	15% DPEPO	452	62	4.2	0.03	448	0.15, 0.11	15.2	N.A.	N.A.	[102]
3,4'ACSO2	10% DPEPO	464[a]	77	5.4	0.09	480	0.17, 0.29	20.5	10	35	[103]
3SO2	5% in 26DCzPPY	414	17	8.6	0.18	413	0.15, 0.04	2.6	N.A.	N.A.	[104]

ICz-DPS	10 wt% DPEPO	438	72	616.1	0.22	435	0.15, 0.08	11.6	N.A.	6	[105]
DPS-BF-Ac	25 wt% mCP	477	74	14.5	0.03	482	0.16, 0.28	24.7	~60	N.A.	[106]
SeDF-B	10 wt% in mCBP	490	3	18.5	0.08	490	0.17, 0.14	25.6	N.A.	10	[107]
D-A-Pi	10 wt% in DPEPO	448	62	6.6	0.10	447	0.15, 0.11	17.2	48	N.A.	[108]
D-A-MeO	10 wt% in DPEPO	450	82	6.2	0.08	451	0.16, 0.14	21.3	25	57	[108]
D-A-CH_3	10 wt% in DPEPO	457	81	5.2	0.06	456	0.16, 0.15	21.2	24	53	[108]
D-A-H	10 wt% in DPEPO	460	82	4.8	0.04	461	0.16, 0.16	21.5	26	60	[108]
D-A-CF_3	10 wt% in DPEPO	478	95	3.6	0.01	478	0.17, 0.27	23.4	9	38	[108]
D-A-CN	10 wt% in DPEPO	488	96	2.1	0.01	489	0.18, 0.37	23.9	14	40	[108]
pCz-BTO	10 wt% in DPEPO	438	59	0.2	0.18	440	0.15, 0.09	9.5	N.A.	N.A.	[109]
Ketone											
MXAc-BF	50% PPF	478	88	4.1	0.08[j]	478	0.17, 0.29	16.2	3	26	[110]
MXAc-CM	50% PPF	484	77	2.8	0.08[j]	478	0.16, 0.29	15.0	3	26	[110]
XAc-CM	50% PPF	462	74	3.9	0.11[j]	462	0.15, 0.19	12.1	4	41	[110]
CzX	6 wt% in PPF	453[a]	54[a]	N.A.	N.A.	482	0.18, 0.32	19.9	~25	~60	[111]
CCX-II	6 wt% in PPF	460	97	9.7	0.03	471	0.15, 0.22	25.9	13	34	[112]
3DPyM-pDTC	7wt% in mCBP	464	98	10	0.02	464	0.14, 0.18	31.9	18	~49	[113]
2BPy-mDTC	7 wt% in mCBP	480[a]	92	8.3	0.05[a]	476	0.15, 0.28	24.6	~13	~52	[114]
3BPy-pDTC	7 wt% in mCBP	453[a]	93	25.9	0.19	458	0.14, 0.13	25.3	29	80	[114]
5tCzMeB	20% DPEPO	483	99	1.8[a]	0.08	481	0.19, 0.32	24.6	33	N.A.	[115]
QXT	20 wt% PPF	489	96	1.0	0.02	481	0.16, 0.30	24.9	2	13	[116]
33PCX	20 wt% PPF	472	92	5.2	0.16[a]	469	0.16, 0.25	27.5	1	33	[117]
CP-BP-SFAC	25 wt% in DPEPO	481	99	5.5	0.06	484	0.17, 0.30	36.6	~12	~20	[118]
mCP-BP-SFAC	20 wt% in DPEPO	478	99	5.5	0.06	478	0.16, 0.28	38.0	~12	~20	[118]
TCP-BP-SFAC	25 wt% in DPEPO	482	99	5.6	0.06	480	0.16, 0.28	38.6	~12	~20	[118]
Other acceptors											
***m*2tBCzPO**	30% in DPETPO	472	75	16.7	0.02[j]	460	0.16, 0.17	21.0	7	26	[119]
4tBCzDPDPO2A	30% in DBFDPO	479	81	19.3	0.03	472	0.18, 0.30	23.7	6	22	[120]
5CzDPhCF3	10 wt% in DPEPO	435[b]	27[a]	0.14	0.23	431	0.16, 0.07	2	75	N.A.	[121]
4CzIPN-CF3	1% in SimCP:oCF3-T2T	492	77	3.6	0.08	487	0.20, 0.41	23.1	N.A.	10	[122]
TN4T-PCZ	6 wt% in 2,6-DCzppy	411[a]	87	N.A.	0.10	420	0.16, 0.03	20.4	N.A.	N.A.	[123]
ICzDAc	10wt% in DPEPO	446	96	8.5	0.17	477	0.15, 0.16	19.7	N.A.	50	[124]
PhICzDP	10%	468	96	249	0.12	482	0.13, 0.32	30.4	43	N.A.	[125]

A	DPEPO										
PA(OOQ)	5 wt% in mCBP	489	74	1480	0.35	488	0.19, 0.37	19.5	73	84	[126]

[a] Toluene, [b] Neat film, [c] 10% in mCBP, [d] THF, [e] 10% in mCP:TSPO1, [f] 50% in PPF, [g] MeTHF, [h] 1% in PMMA, [i] 10% in DPEPO, [j] 25% in PPF, N.A. = Not Available.

Table **S2**. Summary of photophysical and device performance of green TADF emitters reviewed in Section **4**.

Compound	**Medium**	**λ_{PL} / nm**	**Φ_{PL} / %**	**τ_D / µs**	**ΔE_{ST} / eV**	**λ_{EL} / nm**	**CIE_{XY}**	**EQE$_{MAX}$ / %**	**Roll-off 100 cd m^{-2} / %**	**Roll-off 1000 cd m^{-2} / %**	**Ref**
Cyano containing acceptors											
mPTBC	2 wt% mCP	518 [b]	58	9.6	0.006	516	0.29, 0.56	18.1	0.6	13	[127]
oPTBC	2 wt% mCP	561 [b]	58	4.6	0.007	540	0.35, 0.56	17.8	5	18	[127]
oAcTBC	10 wt% mCP	509 [b]	84	17.4	0.03	512	0.23, 0.53	20.9	≈6	17	[128]
oSpTBC	16 wt% mCP	497 [b]	93	16.9	0.02	508	0.21, 0.49	26.8	≈17	29	[128]
mAcTBC	27 wt% mCP	480 [b]	77	15.5	0.02	496	0.19, 0.44	19.2	≈17	37	[128]
mSpTBC	24 wt% mCP	475 [b]	65	13.3	0.01	492	0.17, 0.37	18.9	≈8	26	[128]
4tBuCzPN	25 wt% DPEPO	476	74	4.0	0.05	500	N/A	20.8	N/A	N/A	[129]
3Cz2DPhCzBN	20 wt% mCBP	495	80	5.7	0.15 [b]	≈500	0.21, 0.44	20.9	≈0	0.5	[130]
PyPhBN	15 wt% PPT	486 [b]	92 [b]	10.5 [b]	0.13 [b]	501	0.21, 0.46	20.6	4	17	[131]
4mCzBN-BP	10 wt% mCBP	491	95	N/A	N/A	496	0.20, 0.45	23.1	N/A	N/A	[132]
5PCzCN	10 wt% mCP	489 [b]	96.5	2.68	0.03	504	0.21, 0.49	32.1	N/A	9.3	[133]
5CzBN-ESF	Neat film	480	80	1.82	0.06	508	0.27, 0.55	30.6	2	33	[134]
5CzBN-BSF	Neat film	486 [b]	78	1.97	0.12	508	0.26, 0.54	26.5	≈1	39	[134]
5CzBN-HSF	Neat film	488 [b]	70	2.3	0.11	508	0.25, 0.54	20.9	≈1	23	[134]
Boron containing acceptors											
ACBM	8 wt% 2,6-DCzpppy	527	76	3.0	0.11	≈531	0.33, 0.56	11.2	9	≈63	[135]
SACBM	4 wt% 2,6-DCzppy	518	99	2.6	0.11	≈514	0.22, 0.59	19.1	2	25	[135]
B-2DMAC	4 wt% 2,6-DCzppy	505	47 [b]	3.5	0.03	507	0.25, 0.53	19.3	6	21	[136]
B-2PTZ	4 wt% 2,6-DCzppy	549	18 [b]	2.0	0.06	556	0.43, 0.54	7.6	12	43	[136]
B-2PXZ	4 wt% 2,6-DCzppy	542	26 [b]	1.9	0.04	544	0.40, 0.56	10.1	2	12	[136]
PXZBM	4 wt% 2,6-DCzppy	N/A	36 [b]	3.6 [b]	0.13 [b]	567	0.45, 0.51	10.9	10	63	[137]

PXZPBM	4 wt% 2,6-DCzppy	538 [b]	80 [b]	2.2 [b]	0.08 [b]	505	0.25, 0.54	22.6	1	6	[137]
PX-SF-B	5 wt% CBP	533	84	3.83	0.013 [b]	535	0.37, 0.55	24.8	0	5.6	[138]
CzCF3oB	20 wt% TCTA:B3PYMPM	498	86	23.5	0.081	517	0.24, 0.57	22.9	2	23	[139]
BuCzCF3oB	20 wt% TCTA:B3PYMPM	518	87	15.3	0.07	521	0.330, 0.598	29.9	0	16	[139]
BuCzTF7oB	20 wt% TCTA:B3PYMPM	534	76	19.3	0.075	550	0.33, 0.60	21.9	0.4	16	[139]
MPAc-BS	50 wt% PPF	497	100	1.3	0.023	503	0.20, 0.51	25.3	1.2	6.3	[140]
CzDBA	10 wt% CBP	524	100	3.2	0.03	528	0.31, 0.61	37.8	≈0	0.3	[141]
***t*BuCzDBA**	10 wt% CBP	553	86	2.1	0.02	542	0.37, 0.60	32.4	≈8	3	[141]
oB-2Cz	10 wt% DPEPO	482	92.9	2.4	0.06	486	0.18, 0.37	28.1	N/A	51	[142]
oB-2tCz	10 wt% DPEPO	495	96.3	1.2	0.03	498	0.22, 0.49	27.5	N/A	44	[142]
TMCzBCO	5 wt% mCBP	526	94	0.99	0.007	532	0.33, 0.59	24.7	N/A	7.3	[143]
DMACBCO	5 wt% mCBP	520	93	1.05	0.011	556	0.43, 0.54	28.4	N/A	5.6	[143]
CzDBA	Neat film	540	90.6	1.0	0.03 [J]	557	0.44, 0.55	13.5	N/A	7.4	[144]
***t*BuCzDBA**	Neat film	561	84	1.2	0.02 [J]	558	0.44, 0.55	26.9	N/A	1.1	[144]
iCzDBA	Neat film	538	88	1.4	0.03 [J]	540	0.38, 0.59	18.7	N/A	0.5	[144]
fppyBTPA	8 wt% mCPCN	494	72	2.0	0.00	N/A	N/A	20.2	23	≈59	[145]
dfppyBTPA	25 wt% mCPCN	508	100	2.4	0.00	N/A	N/A	26.6	5	≈33	[145]
Sulfone containing acceptors											
DDA-DP	15 wt% mCP	549 [e]	45	0.45	0.04	550	0.36, 0.56	8.1	≈0	1	[146]
CzTTR	6.5 wt% mCP	487	56	28.1	0.10	492	0.21, 0.35	14.4	≈43	≈83	[147]
DCZ-TTR	6.5 wt% mCP	502	47	25.8	0.03	512	0.25, 0.50	20.2	≈16	≈40	[147]
DMAC-TTR	10 wt% mCP	555	43	5.2	0.01	≈545	0.33, 0.50	13.9	≈12	≈39	[148]
DMAC-PTR	10 wt% mCP	572	59	3.4	0.01	≈553	0.40, 0.56	18.2	≈14	≈44	[148]
SADF-TTR	10 wt% mCP	530	51	5.2	0.04	≈545	0.35, 0.57	20.2	≈17	≈31	[148]
2,3-TXO-PhCz	5 wt% CBP	540	62	131	0.24	≈548	0.42, 0.45	11.9	≈45	≈74	[149]
3,6-TXO-PhCz	5 wt% CBP	544	85	74	0.22	≈558	0.43, 0.53	18.1	≈41	≈76	[149]
2,6-TXO-PhCz	5 wt% CBP	526	84	77	0.20	≈548	0.40, 0.55	23.2	≈59	≈83	[149]
2,7-TXO-PhCz	5 wt% CBP	530	89	63	0.01	≈548	0.39, 0.55	24.4	≈51	≈76	[149]
TAT-3DBTO$_2$	10 wt% BCPO	≈512	100	11.7	0.03	≈508	0.26, 0.46	30.9	29	47	[150]
DMAC-Cz-TTR	10 wt% CBP	550	69.5	14.7	0.07	568	0.40, 0.54	21.2	13.7	31.6	[151]
PS-BZ-DMAC	5 wt% CBP	574	76.0	2.83	0.005	537	0.37, 0.55	20.6	31.2	N/A	[152]

CzPXZ	Neat film	533	79	3.6	0.03	520	N/A	21.8	N/A	N/A	[153]
t-CzPXZ	Neat film	528	77	1.4	0.04	514	N/A	17.4	N/A	N/A	[153]
Triazine acceptor											
TRZ-*p*-ACRSA	20 wt% DPEPO	≈500	97	4.7	N/A	≈494	0.19, 0.42	28.0	1	21	[154]
TRZ-*m*-ACRSA	20 wt% DPEPO	≈500	70	5.7	N/A	≈494	0.22, 0.45	17.7	3	24	[154]
***p*tBCzTPTZ**	80 wt% DPEPO	446	25	N/A	0.24	492	0.21, 0.35	4.4	23	66	[155]
***p*tBCzPO$_2$TPTZ**	80 wt% DPEPO	494	96	N/A	0.01	488	0.18, 0.42	28.9	10	43	[155]
PAPTC	20 wt% SimCP2	509	78	0.6	0.07	520	N/A	17.4	N/A	17	[156]
BPAPTC	20 wt% SimCP2	519	90	0.6	0.06	520	N/A	24.3	N/A	7	[156]
BP-phIDID	8 wt% CBP	520 [b]	57	22.8 [i]	0.20 [b]	497	0.25, 0.43	13.9	56	≈81	[157]
Tria-phIDID	8 wt% CBP	526 [b]	70	18.4 [i]	0.12 [b]	504	0.28, 0.49	20.8	49	≈78	[157]
TRZ-TPDICz	20 wt% DBFPO	N/A	96	8.57	0.14	509	0.25, 0.53	30.3	N/A	39	[158]
HPy	10 wt% DPEPO	500	94 (THF)	5.08	0.22	N/A	0.22, 0.44	23.6	N/A	63	[159]
CH3Py	10 wt% DPEPO	500	88.7 (THF)	3.42	0.1	N/A	0.24, 0.44	24.6	N/A	28	[159]
DTRZ-DI	25 wt% TCTA:Bepp$_2$	521	83	1.47	0.03	526	0.32, 0.58	26.2	N/A	≈7	[160]
TRZ-DI	25 wt% TCTA:Bepp$_2$	521	87	1.32	0.02	526	0.31, 0.57	31.4	N/A	≈4	[160]
dBFCzCNTrz	20 wt% DPEPO	490	80.7	4.9	0.09	497	0.22, 0.47	27.5	N/A	12	[12]
dBFCzTrz	20 wt% DPEPO	455	89.4	30.4	0.13	476	0.15, 0.18	22.6	N/A	46	[12]
p2Cz2Trz	10 wt% DPEPO	502 [i]	86	16.6	0.18 [i]	534	N/A	12.5	≈2	26	[38]
m2Cz2Trz	10 wt% DPEPO	465 [i]	96	12.2	0.09 [i]	493	N/A	18.5	≈3	13	[38]
BCzTRzDBF	5 wt% mCBPTrz	≈485	82	5.4	0.06	503	0.24, 0.52	20.1	≈0	≈15	[161]
TCzTrzDBF	5 wt% mCBPTrz	≈499	86	4.4	0.01	511	0.27, 0.57	23.5	≈0	≈13	[161]
IDCzTrzDBF	5 wt% mCBPTrz	≈475	85	2.8	0.05	500	0.22, 0.48	12.2	≈0	≈4	[161]
D2T-TRZ	10 wt% DPEPO	489	97	2.17	0.10	N/A	0.20, 0.45	27.1	11.1	29.5	[162]
D2Y-TRZ	10 wt% DPEPO	491	71	64	0.41	N/A	0.23, 0.48	16.4	42.7	76.8	[162]
BmTrzCz	Neat film	N/A	85	5.5	0.07	481	0.15, 0.30	20.3	N/A	11.3	[163]
BmTrzCNCz	Neat film	N/A	84	3.9	0.05	494	0.20, 0.46	21.9	N/A	11.9	[163]
BTrzICz	20 wt% CzTrz	490	97	3.7	0.00	N/A	0.29, 0.56	20.7	19	N/A	[164]
BTrzBCz	20 wt% CzTrz	500	92	7.2	0.04	N/A	0.30, 0.57	20.5	N/A	N/A	[164]
PXZ-Ph-PyTRZ	10 wt% CBP	538	76	N/A	0.09	540	0.38, 0.56	22.2	N/A	18.9	[165]
BTrztCz	10 wt%	N/	70.0	33.4	0.16	496	N/A	21.4	N/A	N/A	[166]

	DPEPO	A									
TDMAC-PM	10 wt% DPEPO	505	77	5.0	0.048	505	0.32, 0.53	24.2	50.8	78.5	[167]
TDMAC-TRZ	10 wt% DPEPO	525	82	1.7	0.045	525	0.32, 0.54	24.2	18.6	45.5	[167]
DTPTCzDP	7 wt% DPEPO	508	68	2.78	0.14[f]	510	0.30, 0.50	20.13	7.5	28.5	[168]
DTPTCzDP-CN	7 wt% CBP	545	62	1.47	0.03[f]	548	0.40, 0.54	17.81	4.1	20.7	[168]
DTPTCzDP-Py	7 wt% DPEPO	532	70	1.76	0.08[f]	538	0.37, 0.54	16.85	11.9	35.1	[168]
PFDMAC-TRZ	30 wt% DPEPO	501[b]	93	1.6	0.16	521	0.32, 0.55	35.1	N/A	29.1	[169]
DPFDMAC-TRZ	30 wt% DPEPO	508[b]	97	1.53	0.16	524	0.32, 0.55	37.0	N/A	9.5	[169]
Trz-Py-NCS	Neat film	505	100	1.2	0.059	520	N/A	30.8	N/A	5.5	[170]
Trz-Py-SAC	Neat film	510	100	1.3	0.058	524	N/A	30.3	N/A	7.3	[170]
Pyrimidine-based acceptor											
PXZPM	mCPCN 6wt%	521	100	2.56	0.04	528	0.33, 0.58	29.5	N/A	31	[171]
PXZPyPM	mCPCN 6wt%	524	100	2.77	0.07	528	0.33, 0.58	33.9	N/A	31	[171]
PXZTAZPM	mCPCN 6wt%	528	93	2.79	0.05	528	0.33, 0.58	30.1	N/A	38	[171]
2PXZ-PRZ	10 wt% CBP	519	65	54	0.21	≈517	0.31, 0.55	21.4	19	59	[172]
ClPPM	1.5 wt% CBP	547	93	1.4	0.06	546	0.4, 0.55	25.3	N/A	12	[173]
BrPPM	1.5 wt% CBP	546	91	1.3	0.07	544	0.39, 0.56	23.6	N/A	16	[173]
PXZ-PYR	1 wt% PMMA	543[b]	42[b]	1.6[b]	0.01	536	0.35, 0.56	27.9	35	56	[174]
PXZ-muPYR	1 wt% PMMA	530[b]	52[b]	4.2	0.07	529	0.32, 0.55	29.1	14	30	[174]
PXZ-mdPYR	1 wt% PMMA	528[b]	38[b]	1.7	0.15	514	0.27, 0.49	27.5	24	42	[174]
PXZ-2dPYR	1 wt% PMMA	519[b]	53[b]	4.3	0.13	502	0.23, 0.42	26.3	36	66	[174]
12BTAc-PM	30 wt% DPEPO	509	87	3.8	0.17	503	0.23, 0.50	25.6	N/A	14	[175]
34BFAc-PM	30 wt% DPEPO	519	95	3.5	0.08	503	0.23, 0.51	27.7	N/A	11	[175]
34BTAc-PM	30 wt% DPEPO	521	92	3.4	0.08	509	0.25, 0.55	25.8	N/A	2	[175]
22bpmAc	20 wt% DPEPO	471[k]	75	37.5	0.28[k]	517	0.30, 0.54	15.7	≈47	≈83	[176]
25bpmAc	20 wt% DPEPO	472[k]	98	17.1	0.24[k]	524	0.31, 0.58	20.5	≈24	≈63	[176]
55bpmAc	10 wt% DPEPO	466[k]	99	21.8	0.29[k]	512	0.25, 0.53	24.9	≈49	≈80	[176]
DMAC-PymCN	8 wt% mCPCN	522	84	14.6	0.20	N/A	0.28, 0.51	19.8	35.4	71.2	[177]
DMAC-PyoCN	8 wt% mCPCN	546	91	6.8	0.13	N/A	0.41, 0.55	25.9	19.3	51.7	[177]
DMAC-PmmCN	8 wt% mCPCN	542	83	9.6	0.14	N/A	0.36, 0.55	22.3	15.2	55.6	[177]
DMAC-PmoCN	8 wt% mCPCN	588	66	5.1	0.11	N/A	0.43, 0.54	18.8	15.4	53.2	[177]
SpiroAC-PyoCN	8 wt% mCPCN	548	100	10.6	0.16	N/A	0.31, 0.58	33.7	18.1	53.4	[177]

SBAC-PyoCN	6 wt% mCPCN	553	100	16.6	0.22	N/A	0.31, 0.58	36.1	21.3	63.7	[177]
Other N-heterocycles acceptors											
NyDPO	5 wt% CBP	530	79	11.9	0.09	540	0.36, 0.58	29.9	23	53	[178]
NyDPt	5 wt% CBP	533	45	10	0.016	544	0.38, 0.56	25.8	41	76	[178]
NyDPAc	10 wt% DPEPO	510	57	451	0.29	516	0.28, 0.53	20.9	N/A	N/A	[179]
26AcINN	10 wt% DPEPO	495	79	117	0.28	501	0.22, 0.45	21.6	36	66	[180]
26PXZINN	10 wt% CBP	522	79	26.9	0.06	527	0.34, 0.58	22.7	3	26	[180]
Ac-2TP	10 wt% DPEPO	457	53	319	0.38	≈449	0.16, 0.18	9.2	63	88	[181]
AcDPA-2TP	10 wt% CBP	526	62	15	0.03	≈525	0.35, 0.57	23.7	10	8	[181]
PPZTPI	5 wt% CBP	527	73	127	0.11	528	0.36, 0.58	20.5	≈33	≈74	[182]
PPZPPI	5 wt% CBP	533	99	118	0.12	528	0.36, 0.57	21.1	≈21	≈70	[182]
FDQCNAc	1 wt% polystyrene	549	87	24.0	0.087 [b]	554	0.42, 0.55	27.6	N/A	N/A	[183]
FBPCNAc	1 wt% polystyrene	607	79	11.0	0.048 [b]	597	0.55, 0.44	23.8	N/A	N/A	[183]
5TzPMPXZ	0.7 wt% CBP	527	64	2.9	0.10	542	0.37, 0.54	9.3	13	22	[184]
7TzPMPXZ	0.7 wt% CBP	532	49	2.8	0.07	552	0.40, 0.53	9.3	33	2	[184]
5,7TzPmPXZ	0.7 wt% CBP	543	66	2.6	0.06	560	0.43, 0.53	14.3	6	13	[184]
Ph-PO	20 wt% DPEPO	525	78	5.36	0.14	524	0.31, 0.55	20.8	10	N/A	[185]
4BPy-*m*DTC	7 wt% mCBP	495 [b]	97	18.0	0.01 [b]	490	0.17, 0.37	28.1	≈28	≈58	[114]
2BPy-*m*DTC	7 wt% mCBP	494 [b]	96	6.9	0.02 [b]	490	0.16, 0.37	28.0	≈21	≈53	[114]
TCZPBOX	40 wt% PYD2	527	89	4.0	0.03	≈523	0.40, 0.56	27.9	5	13	[186]
DQBC	20 wt% mCPBC	551	95	5.5	0.06	534	0.38, 0.55	39.1	7.7	25.6	[187]
***p*CF35tCzOXD**	10 wt% o-CzOXD	535	66.7	2.16	0.120	494	0.19, 0.41	20.3	N/A	N/A	[188]
***m*CF35tCzOXD**	10 wt% o-CzOXD	532	66.2	1.90	0.005	494	0.19, 0.42	22.1	N/A	N/A	[188]
dCF35tCzOXD	10 wt% o-CzOXD	N/A	87.8	2.04	0.005	496	0.20, 0.45	23.3	N/A	N/A	[188]
5*t*CzDPO	12.5 wt% DPEPO	474	79	71	0.01 [b]	N/A	0.18, 0.36	29	N/A	55.2	[92]
CN-BP-TPA	10 wt% CBP	578	98	760	0.19	580	0.51, 0.47	26.0	N/A	86.9	[189]
TPZ	10 wt% CBP	539	54	284	0.29 [b]	534	0.32, 0.61	8.3	33.7	59.0	[190]
DPZ	10 wt% CBP	564	67	240	0.34 [b]	550	0.40, 0.57	11.6	53.4	66.4	[190]
APZ	10 wt% CBP	577	86	298	0.20 [b]	562	0.44, 0.55	27.5	81.8	85.8	[190]
4HQ-PXZ	6 wt% CBP	504	67	48.3	0.19	511	0.25, 0.54	20.2	22	54	[191]
4PQ-PXZ	6 wt% CBP	510	68	40.1	0.22	518	0.28, 0.57	20.5	37	71	[191]

2HQ-PXZ	6 wt% CBP	523	81	35.9	0.10	538	0.36, 0.57	16.0	14	38	[191]
2PQ-PXZ	6 wt% CBP	523	74	28.3	0.09	538	0.36, 0.56	17.1	27	59	[191]
TBQ-DPXZ	20 wt% BCPO	537	91	3.6	0.07	533	0.35, 0.55	25.1	22.7	53.0	[192]
PXZ-PCN	10 wt% CBP	565	57	1.6	0.01	568	0.48, 0.51	15.1	≈0	21	[193]
DPmP-PXZ	Neat film	524	90	1.11	0.10	556	0.43, 0.55	23.6	N/A	8.5	[194]
PyDCN-PXZ	15 wt% CBP	532 [b]	89.6	6.4	0.06	519	0.30, 0.53	26.9	N/A	25.3	[195]
Ph-DMAC	10 wt% CBP	532	89	2.5	0.06	539	0.37, 0.56	29.1	N/A	33	[196]
Na-DMAC	10 wt% CBP	531	56	0.68	0.15	554	0.42, 0.54	21.2	N/A	61	[196]
3Py-DMAC	10 wt% CBP	538	60	1.5	0.04	567	0.47, 0.52	21.5	N/A	22	[196]
Me-DMAC	10 wt% mCP	542	96	2.7	0.12	517	0.28, 0.51	25.8	N/A	29	[197]
TPAPPC	10 wt% mCPCN	531	100	133.9	0.21	520	0.28, 0.56	37.5	N/A	N/A	[198]
TPAmPPC	10 wt% mCPCN	533	100	3.4	0.009	537	0.35, 0.57	39.8	N/A	N/A	[198]
tTPAmPPC	10 wt% mCPCN	549	97	3.4	0.010	556	0.42, 0.55	29.8	N/A	N/A	[198]
3CPDA-MPC	Neat film	522	89	1.65	0.11	525	0.34, 0.54	26.5	23.0	25.3	[199]
9CPDA-MPC	Neat film	509	92	2.05	0.13	510	0.28, 0.48	29.6	14.5	34.1	[199]
BTPDIDCz	5 wt% CzTrz	N/A	83	4.1	0.01 [f]	530	0.38, 0.57	24.5	N/A	N/A	[200]
BTPBFCz-D1	DPEPO	480	84	16.3	0.10 (THF)	491	0.18, 0.39	20.7	N/A	43	[201]
BTPBFCz-D2	DPEPO	480	85	22	0.23(THF)	491	0.18, 0.37	20.0	N/A	63	[201]
BTPBFCz-D3	DPEPO	480	92	15.6	0.12(THF)	493	0.19, 0.41	22.7	N/A	35	[201]
Carbonyl acceptors											
AI-Cz	5 wt% mCBP	510	84	81	0.09	510	0.32, 0.55	23.2	34	70	[202]
AI-TBCz	5 wt% mCBP	545	72	64	0.08	540	0.37, 0.56	21.1	45	74	[202]
5PXZ-PIDO	1.5 wt% CBP	535	72	2.4	0.11	≈526	0.39, 0.42	14.4	≈5	25	[203]
5,6PXZ-PIDO	1.5 wt% CBP	544	76	2.0	0.06	≈534	0.42, 0.53	16.9	≈4	16	[203]
BPO-BDMAc	25 wt% mCPCN	516	89.1	3	0.03	522	0.29, 0.54	22.5	N/A	N/A	[204]
SBF-BP-DMAC	Neat film	518	72.1	4.9	0.06	528	0.32, 0.58	24.5	N/A	16.8	[205]
BZC-PXZ	5 wt% mCP	561 [b]	93	4.47	0.02 [b]	N/A	N/A	22	N/A	7.3	[206]
OPDPO	10 wt% CBP	589 [e]	N/A	N/A	0.02 [e]	552	N/A	26.7	10.1	32.6	[207]
TBP-PXZ	5 wt% CBP	592	68	11.9	0.02	564	0.45, 0.53	17.7	≈0	10	[208]
PBCz-BP-DMAC	10 wt% PPF	488	92.3	9.2	0.02	492	0.21, 0.42	27.5	N/A	8	[209]
TCO-DMAC	20 wt% BCPO	499	92	4.94	0.04	499	0.23, 0.45	21.2	3.8	17.0	[210]
SeDF-G	10 wt% mCBP	N/A	7.6	3.9	0.15	N/A	0.31, 0.53	30.8	N/A	N/A	[107]

SeDF-YG	10 wt% mCBP	N/A	8.5	4.6	0.15	N/A	0.33, 0.48	18.8	N/A	N/A	[107]
PHzMCO	8 wt% mCP	510	47	17.9	0.018	508	0.26, 0.50	17.8	≈1	14	[211]
PHzBCO	8 wt% mCP	524	52	9.3	0.006	520	0.32, 0.50	19.6	≈6	13	[211]
2,3-POA	3.5 wt% mCBP	547	82.5	6.2	0.01	528	0.30, 0.62	21.7	N/A	N/A	[212]
3,6-DPXZ-AD	7 wt% CBP	563 [b]	94.9	1.6	0.02	552	0.43, 0.55	30.6	5.6	26.8	[213]
PDAD-DMAC	20 wt% PPF	524	94	4.8	0.029	492	0.19, 0.46	24.1	N/A	N/A	[214]
3-DMAC-6-CF_3-AD	7 wt% DPEPO	514 [b]	85	3.5	0.07 [f]	512	0.27, 0.55	21.6	17.1	N/A	[215]
3-PXZ-AD	7 wt% CBP	555 [b]	86	2.2	-0.06 [f]	519	0.32, 0.57	21.1	4.7	N/A	[215]
3-PXZ-6-Me-AD	7 wt% CBP	533 [b]	91	2.3	0 [f]	505	0.27, 0.53	23.3	5.2	N/A	[215]
3,6-DMAC-AD	7 wt% DPEPO	504 [b]	81.1	3.4	0 [f]	495	0.20, 0.42	23.5	7.2	19.6	[216]
3,6-DMAC-AD-CF_3	7 wt% DPEPO	508 [b]	74.4	2.2	0 [f]	505	0.24, 0.55	21.6	0.4	5.1	[216]
MCz-TXT	10 wt% mCBP	490	92	0.75	0.30	497	0.21, 0.46	25.8	0	4.7	[217]
SAT-DAC	30 wt% DPEPO	510 [e]	76.8	N/A	0 [e]	520	N/A	22.6	N/A	19.9	[218]
SATX-DAC	30 wt% DPEPO	517 [e]	68.1	N/A	0.05 [e]	524	N/A	20.9	N/A	18.6	[218]
PXZANQ	10 wt% DPEPO	522	71	10.2	0.03	528	0.33, 0.54	22.1	24.9	37.1	[219]
DPAC-BPI-CN	Neat film	525	90.1	3	0.07 [b]	531	0.34, 0.56	26.2	N/A	43.1	[220]
DPAC-BPI	Neat film	472	11.2	27	0.15 [b]	494	0.19, 0.39	10.5	N/A	94.3	[220]
Other acceptors											
7CzFDCF$_3$DPh	Neat film	555	55	2.02	0.05	N/A	0.36, 0.56	20.8	11	19	[221]
DBCP	5 wt% mCP	557 [b]	89	30	0.1	544	0.38, 0.57	20.2	N/A	N/A	[222]
FAP	5 wt% mCP	580 [b]	54	489.4	0.32	568	0.48, 0.51	12.8	N/A	N/A	[222]

[a] 10% in mCP:TSPO1; [b] Toluene; [c] 50% doped in PPF; [d] 25% PPF; [e] Neat films; [f] MeTHF; [g] DCM; [h] BLYP/TD-DFT; [I] PMMA. [J] 10% in mCP [K] 1% in polystyrene film.

Table **S3**. Summary of photophysical and device performance of red TADF emitters reviewed in Section **5**.

Compound	**Medium**	**λ_{PL} / nm**	**Φ_{PL} / %**	**τ_d / µs**	**ΔE_{ST} / eV**	**λ_{EL} / nm**	**CIE_{XY}**	**EQE$_{max}$ / %**	**Roll-off 100 cd m^{-2} / %**	**Roll-off 1000 cd m^{-2} / %**	**Ref.**
Pyridine-3,5-dicarbonitrile Acceptors											

bis-PXZ-PCN	10 wt% CBP	565	36	1.40	0.04	600	0.55, 0.44	9.8	N/A	15	[193]
tri-PXZ-PCN	10 wt% CBP	601	34	1.48	0.05	608	0.56, 0.44	9.7	N/A	18	[193]
PXZ-PCN	10 wt% CBP	606	57	1.58	0,01	568	0.48, 0.51	15.1	N/A	N/A	[193]
NP	10 wt% CBP	560	50	0.65	0.14	591	0.53, 0.46	17.1	N/A	41	[223]
TP	10 wt% CBP	555	40	0.80	0.15	591	0.52, 0.47	12.4	N/A	32	[223]
Quinoxaline Acceptors											
TPA-QCN	15 wt% TPBi	649	~70	285	0.23	644	0.62, 0.38	14.5	N/A	N/A	[224]
6,7-DCQx-Ac	1 wt% polystyrene	~550	91	8.99	0.13	578	0.49, 0.50	21.1	~5	~19	[225]
5,8-DCQx-Ac	1 wt% polystyrene	~600	72	3.12	0.11	602	0.55, 0.44	16.4	~9	~21	[225]
5,8-DCQx-DICz	1 wt% polystyrene	651	40	1.6	0.028	578	0.55, 0.44	12.5	N/A	N/A	[226]
6,7-DCQx-DICz	1 wt% polystyrene	603	73	2.5	0.064	603	0.49, 0.50	23.9	N/A	N/A	[226]
TFM-QP	5 wt% CBP	N/A	61	5	0.04	584	0.50, 0.48	10.7	N/A	N/A	[227]
CN-QP	5 wt% CBP	N/A	62	1.6	0.03	584	0.50, 0.48	9.7	N/A	N/A	[227]
PXZ-PQM	5 wt% DCzDPy	588	70	5.37	0.03	592	0.53, 0.46	20.4	14	45	[228]
DPXZ-PQM	5 wt% DCzDPy	586	88	3.77	0.02	590	0.51, 0.48	26	23	47	[228]
Acenaphtho[1,2-b]pyrazine Acceptors											
APDC-DTPA	10 wt% TPBi	687	63	N/A	0.14	693	N/A	10.2	92	N/A	[229]
TPAAP	1wt%TPBi	648	98	5530	0.149	700	N/A	14.1	70	84	[230]
TPAAQ	1 wt% TPBi	585	95	35700	0.296	630	N/A	15.8	81	89	[230]
CAT-1	10 wt% CBP	763	8.83	80	0.4	719	N/A	N/A	N/A	N/A	[231]
ANQDC-DMAC	1.5 wt% CBP:TPBi	596	95	4.2	0.06	615	0.58, 0.41	27.5	30	58	[232]
ANQDC-MeFAC	1.5 wt% CBP:TPBic	604	77	2.8	0.05	614	0.60, 0.40	26.3	16	36	[232]
AQTC-DTPA	10 wt% mCBP	718	19.10	7.95	0.18	694	N/A	9.28	N/A	N/A	[233]
ANQDC-MSTA	1.5 wt% CBP:TPBi	623	65	3.4	0.07	622	0.61, 0.38	21.8	16.8	43	[234]
ANQDC-PSTA	1.5 wt% CBP:TPBi	618	72	3.7	0.08	622	0.61, 0.38	24.7	19.7	42	[234]
Pyrazino- or Quinoxalino- Expanded Phenanthrene Acceptors											
DMAC-DCPP	3 wt% mCPPy2PO	618	33	2.4	0.08	0	0.60, 0.40 (100)	10.1	N/A	N/A	[235]
DPA-Ph-DCPP	3 wt% mCPPy2PO	628	55	82.1	0.1	0	0.64, 0.36 (100)	15.1	N/A	N/A	[235]
DMAC-Ph-DCPP	3 wt% mCPPy2PO	594	65	3.2	0.05	0	0.53, 0.46 (100)	16.9	N/A	N/A	[235]
PXZ-DCPP	5 wt% CBP	564	11.9	3.3	0.09	608	0.56, 0.43	17.4	N/A	26	[236]

PTZ-DCPP	5 wt% CBP	580	17.4	3.7	0.18	640	0.62, 0.36	12.3	N/A	50	[236]
DDPhCz-DCPP	10 wt% CBP	593	66	15.6	0.08	584	0.51, 0.48	20.8	N/A	N/A	[237]
DDTPACz-DCPP	10 wt% CBP	663	53	9.7	0.16	646	0.61, 0.38	13.6	N/A	N/A	[237]
Da-CNBQx	6 wt% CBP	633	85	60 us	0.18	617	0.59, 0.41	20	63	N/A	[238]
Ac-CNBQx	6 wt% CBP	561	75	9.3	0.1	585	0.51, 0.48	14	1	N/A	[238]
Da-CNBPz	6 wt% CBP	688	72	49	0.11	670	0.66, 0.34	15	75	N/A	[238]
Ac-CNBPz	6 wt% CBP	615	67	6.9	0.03	630	0.61, 0.39	16.2	10	N/A	[238]
FBPCNAc	1 wt% polystyrene	607	79	9.02	0.047	597	0.55, 0.44	23.8	~16	~58	[183]
TPA–PZCN	15 wt% CBP	610	98	133	0.13	628	0.65, 0.35	27.4	63	83	[239]
1DMAC−BP	20 wt% mCBP	549	42	12.6	0.22[b]	560	0.43, 0.54	10.1	60	85	[240]
2DMAC−BP	20 wt% mCBP	565	84	7.5	0.21	576	0.49, 0.49	11.8	21	64	[240]
3DMAC−BP	20 wt% mCBP	590	89	2.9	0.05	606	0.58, 0.41	22	20	56	[240]
1PXZ-BP	7 wt% CBP	578	73	4.8	N/A	590	0.52, 0.46	26.3	35	64	[241]
2PXZ-BP	7 wt% CBP	596	63	4.3	N/A	606	0.57, 0.42	19.2	24	53	[241]
tDBBPZ-DPXZ	10 wt % CBP	625	83	9.78	0.03	608	0.58, 0.42	17	22	N/A	[242]
DBPZ-DPXZ	10 wt % CBP	620	84	6.47	0.03	608	0.57, 0.43	17.8	4	N/A	[242]
pDBBPZ-DPXZ	8 wt% CBP	622[b]	49	53.3	0.23	608	0.59, 0.40	8	61	N/A	[243]
pDTBPZ-DPXZ	8 wt% CBP	621[b]	66	5.6	0.1	604	0.58, 0.41	16	34	N/A	[243]
oDTBPZ-DPXZ	8 wt% CBP	622[b]	87	3.3	0.04	604	0.59, 0.41	20.1	30	N/A	[243]
DPXZ-DPPM	5 wt% DCzDPy	630	61	3.53	0.05	630	0.61, 0.38	11.5	9	41	[228]
BPPZ-PXZ	14 wt% CBP	607	100	3.6	0.03	604	0.57, 0.43	25.2	N/A	28	[244]
mDPBPZ-PXZ	14 wt% CBP	638	95	7.4	0.04	624	0.62, 0.38	21.7	N/A	33	[244]
DPXZ-BPPZ	18 wt% CBP	610	97.1 ± 1.1	10.3	0.03	612	0.6, 0.4	20.1	5	17	[245]
IDAC-BPPZ	11 wt% CBP	583	84	14	0.07	580	0.5, 0.49	18.3	42	70	[246]
ACID-BPPZ	11 wt% CBP	596	75	12	0.02	588	0.52, 0.47	14.7	16	39	[246]
DMAC-11-DPPZ	10 wt% CBP	576	57	1.53	0.11	588	0.53, 0.46	23.8	~37	~66	[247]
PXZ-11-DPPZ	10 wt% CBP	617	41	0.72	0.06	627	0.63, 0.37	8.7	~20	~66	[247]
TAT−DBPZ	20 wt% CBP	576	76	2.3	0.16	604	0.56, 0.44	15.4	20	47	[248]
TAT−FDBPZ	20 wt% CBP	593	62	1.51	0.1	611	0.58, 0.41	9.2	1	20	[248]
TPA-PZTCN	1 wt % mCBP	672	45.6	19.2	0.10	651	N/A	19.3	N/A	N/A	[249]
Ac-BPCN	1 wt% polystyrene	618	66	11.1	0.13	597	0.54, 0.45	20.7	~42	~61	[250]

DACz-BPCN	1 wt% polystyrene	654	47	7.2	0.03	631	0.60, 0.39	11	~27	~55	[250]
3,6,11-triAC-BPQ	15 wt% CBP	589	75	2.5	N/A	581	0.51, 0.48	22	45	82	[251]
3,6,12-triAC-BPQ	15 wt% CBP	607	53	2.25	N/A-	616	0.58, 0.39	16.5	33	82	[251]
***o*TPA-DPPZ**	30 wt% DBFDPO	605	75	17	0.07	600	N/A	18.5	17	48	[252]
***p*TPA-DPPZ**	neat	644	87	5	0.1	652	0.67, 0.33	12.3	3	15	[252]
ACFO	3 wt% CBP	N/A	31	3.8	0.13	593	0.51, 0.45	10.8	43	76	[253]
DBPz-2spAc	1 wt% mCBP	632	65.6	2.74	-0.04	630	0.62, 0.36	13.3	1	N/A	[254]
oPDM	8 wt% mCBP	582	100	72.7	0.11	596	0.56, 0.44	28.2	N/A	N/A	[255]
pPDM	8 wt% mCBP	573	88	73.7	0.15	582	0.52, 0.47	11.8	N/A	N/A	[255]
oDMAC–DPPZ	1 wt% polystyrene	652[b]	63	1.76	0.037	614	0.59, 0.40	13.4	N/A	N/A	[256]
pDMAC–DPPZ	1 wt% polystyrene	669[b]	15	5.03	0.079	638	0.64, 0.35	4	N/A	N/A	[256]
3DMAC-BP-Br	15 wt% mCBP	612[b]	83	3.8	0.04	596	0.55, 0.45	18.97	N/A	N/A	[257]
3DMAC-BP-CN	5 wt% mCBP	617[b]	92	4.6	0.02	586	0.51, 0.47	22.4	N/A	N/A	[257]
TPA-PZTCN	1 wt % mCBP	672	45.6	19.2	0.10	651	N/A	19.3	N/A	N/A	[249]
pDBBPZ-DPXZ	8 wt% CBP	622	49	53.3	0.23	608	0.59, 0.40	18	3.1	N/A	[243]
pDTBPZ-DPXZ	8 wt% CBP	621	66	5.6	0.10	604	0.58, 0.41	16	10.5	N/A	[243]
oDTBPZ-DPXZ	8 wt% CBP	622	87	3.3	0.04	604	0.59, 0.41	20.1	14.1	N/A	[243]
Phenanthro[4,5-abc]phenazine-11,12-dicarbonitrile or Phenanthro[4,5-fgh]quinoxaline Acceptors											
TPA-PPDCN	10 wt% CBP	663	87	2.36	0.23 (tol)	664	0.68, 0.32	20.2	77	N/A	[64]
T-DA-1	10 wt% CBP	601	78	1.59	0.16	596	0.54, 0.46	22.62	38	N/A	[258]
T-DA-2	10 wt% CBP	640	89	0.88	0.05	640	0.62, 0.37	26.3	9	N/A	[258]
C-DA-1	10 wt% CBP	649	12	1.15	0.02	648	0.66, 0.34	3.52	N/A	N/A	[258]
C-DA-2	10 wt% CBP	689	14	0.94	0.02	684	0.67, 0.31	3.13	N/A	N/A	[258]
1,8-naphthalimide acceptors											
NAI-DMAC	1.5 wt% mCPCN	582[b]	59.9	14.7	0.09	597	0.56, 0.44	23.4	42	80	[259]
NAI-DPAC	6 wt% mCPCN	570[b]	78.9	48.7	0.07	584	0.52, 0.47	29.2	55	92	[259]
BTDMAc-NAI	1.5 wt% mCPCN	~590	39	69.3	0.07	641	0.62, 0.38	9.2	~32	N/A	[260]
BFDMAc-NAI	1.5 wt% mCPCN	~570	73	55.8	0.16	590	0.54, 0.45	20.3	~48	~80	[260]
NAI_R1	1.5 wt% mCP	~585	63	3.95	0.09	616	0.58, 0.41	9	N/A	52	[261]
NAI_R2	1.5 wt% mCP	~585	65	3.98	0.092	610	0.57, 0.42	11.5	N/A	66	[261]
NAI_R3	1.5 wt%	~59	66	3.14	0.058	622	0.60, 0.40	22.5	N/A	85	[261]

	mCP	0									
PXZ-NAI	10 wt% o-mCPBI	605	43.6	1.2	0.06	624	0.61, 0.39	13	N/A	28	[262]
PTZ-NAI	10 wt% o-mCPBI	617	30.5	1.6	0.08	632	0.60, 0.37	11.4	N/A	47	[262]
PhNAI-MFAC	1.5 wt% mCPCN	603	61	2.9	0.06	610	0.59, 0.41	22.5	33	66	[263]
PhNAI-PMSBA	1.5 wt% mCPCN	606	55	2.7	0.05	615	0.60, 0.40	22.3	36	74	[263]
BFDMAc-PhNAI	1.5 wt% mCPCN	~575	77	52.5	0.16	590	0.54, 0.46	19.8	46	N/A	[260]
BTDPAc-PhNAI	3 wt% mCPCN	~590	63	54.7	0.08	601	0.57, 0.43	18.7	44	N/A	[264]
BTDMAc-PhNAI	1.5 wt% mCPCN	~590	42	40.4	0.07	642	0.61, 0.39	10.1	37	N/A	[260]
Other Miscellaneous Examples											
2TPA-BF2	6 wt% CBP	721	70	28	0.06[a]	721	N/A	9.7	NA	N/A	[265]
4TPA-2BF2	6 wt% CBP	760	45.2	N/A	0.32[a]	758	N/A	5.1	NA	N/A	[266]
DPhCzB	5 wt% mCP	538[b]	87	19.5	0.15[b]	587	N/A	6.7	~3.7	~9.0	[267]
DTPAB	5 wt% mCP	560[b]	97	55.7	0.17[b]	605	N/A	8.2	~3.7	~9.0	[267]
DMAC2oDBA	20 wt% CBP	602	44	6.6	0.054	615	0.59, 0.40	10.1	~14	~51	[268]
dPhADBA	12 wt% CBP	614	53	1.16	0.04	613	0.60, 0.39	11.1	1.7	24.8	[269]
dmAcDBA	12 wt% CBP	587	71	3.97	0.06	583	0.51, 0.48	24.9	4.5	26.4	[269]
SpAcDBA	12 wt% CBP	570	85	3.35	0.08	567	0.46, 0.52	30.0	2.0	15.9	[269]
PzTDBA	5 wt% TCTA/Bepp2 (1:1)	599	99.8	2.63	0.06	576	0.53, 0.46	30.3	N/A	3.6	[270]
PzDBA	5 wt% TCTA/Bepp2 (1:1)	610	85.4	2.0	0.05	595	0.60, 0.40	21.8	N/A	3.2	[270]
TPACNBz	30 wt% CBP	710	52	1.52	0.0[6c]	712	0.68, 0.29	6.57	N/A	58	[271]
PT-TPA	15 wt% doped CBP	597[b]	99.7	58.0	0.26[b]	632	0.64, 0.35	29.7	N/A	N/A	[272]
PT-Az	10 wt% CBP	586[b]	68.9	27.7	0.28[b]	612	0.61, 0.38	14.1	N/A	N/A	[272]
TPA-DBT12	5 wt% 35DCzPPY	597	44.7	21.7	0.06[b]	608	0.56, 0.43	14.5	N/A	N/A	[273]
TPA-DBT3	5 wt% 35DCzPPY	616	55.5	241.1	0.17[b]	612	0.56, 0.44	15.0	N/A	N/A	[273]
DTPA-DBT	5 wt% 35DCzPPY	632	42.1	70.3	0.17[b]	628	0.58,0.41	11.8	N/A	N/A	[273]
2SO-AD	10 wt% 35DCzPPY	581	25.0	553.0	0.27[d]	599	N/A	3.2	N/A	N/A	[274]
2SO-TBU	10 wt% 35DCzPPY	615	58.3	272.1	0.14[d]	608	N/A	16.3	N/A	N/A	[274]
2SO-F-TBU	10wt% 35DCzPPY	591	53.0	577.5	0.20[d]	612	N/A	14.5	N/A	N/A	[274]
a1	1 wt% CBP	593	50	4600	0.29	NA	NA	NA	NA	NA	[275]

a2	1 wt% CBP	603	42	1560	0.27	NA	NA	NA	NA	NA	[275]
a3	1 wt% CBP	575	52	62	0.17	NA	NA	NA	NA	NA	[275]
a4	1 wt% CBP	600	8	1.6	0.08	NA	NA	NA	NA	NA	[275]
b1	1 wt% CBP	594	80	416	0.24	624[e]	0.61, 0.39	12.5	35	82	[275]
b2	1 wt% CBP	601	76	185	0.22	637[e]	0.63, 0.37	9.0	37	81	[275]
b3	1 wt% CBP	550	65	16/156	NA	574[e]	NA	9.0	NA	NA	[275]
b4	1 wt% CBP	564	50	6.5	0.07	584[e]	NA	6.9	NA	94	[275]
AQ-PhDMAC	5 wt% CBP	N/A	89	63.6	0.22	580	0.49, 0.49	18.1	N/A	N/A	[276]
26DPXZBPy	10 wt% mCBP	568	76	1	0.04	590	0.49, 0.49	13.7	~5	~20	[277]

[a] DFT calculations, [b] Toluene solution, [c] 10 wt% doped films in PMMA, [d] 2-MeTHF.

Table **S4**. Summary of photophysical and device performance of CP-TADF emitters reviewed in Section **7**.

Compound	**Medium**	**λ_{PL} / nm**	**Φ_{PL} / %**	**τ_D / µs**	**ΔE_{ST} / eV**	**g_{PL}**	**λ_{EL} / nm**	**CIE$_{XY}$**	**EQE$_{max}$ / %**	**roll-off 100 cd m^{-2} / %**	**roll-off 1000 cd m^{-2} / %**	**g_{EL}**	**Ref**
CP-TADF emitters containing stereogenic centers													
DPHN	Toluene	522	4	N/A	0.26	1.1×10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[278]
(*R*)-TTR-PMAc	Toluene	577	N/A	0.43	0.36[b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	[279]
(*S*)-TTR-PMAc	Toluene	577	N/A	0.47	0.39[b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	[279]
(*R*)-TRZ-MeIAc	12 wt% mCPCN	473	89	82.3	0.19	5.9×10^{-4}	494	0.18, 0.38	20.3	N/A	N/A	6.4×10^{-4}	[280]
(*S*)-NID-MeIc	6 wt% mCPCN	565	86	235.3	0.22	2.0×10^{-3}	589	0.53, 0.47	23.7	N/A	N/A	-2.4×10^{-3}	[280]
(*R*)-BN-MeIAc	1 wt% DMIC-TRZ	497[c]	96	28.1	0.11[c]	2.5×10^{-4}	504	0.12, 0.63	37.2	3	30	2.7×10^{-4}	[281]
(*S*)-SFOT	30 wt% mCBP	512[c]	89	6.78	0.053[c]	2.2×10^{-3}	508	N/A	23.1	N/A	8	1.0×10^{-3}	[282]
(*S*)-SFST	30 wt% mCBP	512[c]	53	7.98	0.052[c]	3.4×10^{-3}	508	N/A	12.5	N/A	4	1.30×10^{-3}	[282]
(*S*)-OSFSO	25 wt% DPEPO	470[c]	81.20	4.7	0.022	1.4×10^{-3}	472	0.16, 0.24	20.0	N/A	4	3.1×10^{-3}	[283]
(*R*)-FAC-SIC	Toluene	507	99	5.8	0.075	-2.0×10^{-4}	517	0.30, 0.52	28.5	16	51	N/A	[284]
(*S*)-NPE-AcDPS	12 wt% DPEPO	451	86	3.4	0.05	$\sim 10^{-4}$	458	N/A	18.5	13	N/A	N/A	[285]
(*R*/*S*)-SCN	Toluene	522	89	2.1	0.01	$1.4/-1.3 \times 10^{-3}$	519	0.34, 0.53	23.0	N/A	36	$-1.4/1.8\times 10^{-3}$	[286]

(*R*/*S*)-SPHCN	Toluene	505	67	14.6	0.16	3.5/−3.6 × 10^{-3}	512	0.30, 0.52	15.4	N/A	36	−3.6/3.6× 10^{-3}	[286]
(*R*/*S*)-SCFPY	Toluene	526	89	1.6	0.04	3.5/−3.5 × 10^{-3}	517	0.31, 0.51	23.3	N/A	30	−3.7/3.6× 10^{-3}	[286]
CP-TADF emitters with axial chirality													
(*R*)-1	15% in TCTA	568	18.5	1.03	0.059	-7.2 × 10^{-4}	580	0.49, 0.48	0.85	N/A	N/A	-0.9 × 10^{-3}	[287]
***p*-BAMCN**	8wt% in TCTA/8 wt% in 26DCzPPy	537	86	170	0.18	0.5 × 10^{-3}	530	0.33, 0.62	27.6	N/A	N/A	N/A	[288]
***o*-BAMCN**	8wt% in TCTA/8 wt% in 26DCzPPy	503	77	75	0.15	4.3 × 10^{-3}	506	0.22, 0.57	20.5	N/A	N/A	4.6 × 10^{-3}	[288]
(*R*)-DOBN	5 wt% in 26DCzPPy	453 [c]	91	51.8	0.14	1.0 × 10^{-3}	459	0.14, 0.10	23.9	48	68	-0.9 × 10^{-3}	[289]
(*R*)-DOBNT	5 wt% in 26DCzPPy	459 [c]	96	122.2	0.12	0.9 × 10^{-3}	464	0.13, 0.12	25.6	46	68	-1.0 × 10^{-3}	[289]
(-)-(*S*)-Cz-*Ax*-CN	20 wt% DPEPO	460	68.2	12.6	0.029	4.8 × 10^{-3}	468	N/A	12.5	11	30	1.2× 10^{-2}	[290]
(+)-4tBuCzPN	25 wt% DPEPO	476	74	4.0	0.05	5.4 × 10^{-3} [c]	500	N/A	20.8	N/A	N/A	N/A	[129]
(*R*)-BPPOACZ	20 wt% 26DCzPPy	543 [c]	86.1 [c]	1.1 [c]	0.04 [c]	1.85 × 10^{-2}	537	0.36, 0.57	15.1	N/A	2	4 × 10^{-3}	[291]
(*R*)-M-BPCZ4	25% in DPEPO	485	64	6.7	0.09	-5.2 × 10^{-3}	483	N/A	16.7	N/A	6	-3.8× 10^{-3}	[292]
(*R*)-P-BPCZ4	25% in DPEPO	485	76	7.0	0.05	-4.7 × 10^{-3}	480	N/A	18.3	N/A	6	-5.5× 10^{-3}	[292]
(+)-Ax-o-CHO	in DPEPO	460	3	1.04	0.19	1 × 10^{-3} [c]	N/A	N/A	N/A	N/A	N/A	N/A	[293]
(+)-Hel-*o*-CHO	in DPEPO	436	2	0.80	0.39	2 × 10^{-3} [d]	N/A	N/A	N/A	N/A	N/A	N/A	[293]
B^1TPNF_2	toluene	529	11	0.79	0	0.7 × 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[294]
B^2TPNF_2	toluene	530	29	0.953	0	2 × 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[294]
$B^2CNPyrF_2$	toluene	492	23	0.569	0.22	0.8 × 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[294]
CP-TADF emitters with planar chirality													
***g*-$BNMe_2$-Cp**	Toluene	531	46	0.38	0.17 [b]	4.2 x 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[295]
***rac*-CzpPhTrz**	10 wt% DPEPO	470 [c]	69	7	0.16	N/A	480	0.17, 0.25	17	29	N/A	N/A	[296]
(*S*)-PXZp-Ph-TRZ	10 wt% CBP	527	60	12.1	0.03	+3.3× 10^{-3}	539	0.42, 0.54	7.8	N/A	N/A	+4.3× 10^{-3}	[297]
(*R*)-PXZ-PT	10 wt% CBP	565 [c]	78	75	0.19 [b]	+1.9× 10^{-3}	557	0.44, 0.55	20.1	N/A	N/A	+1.5× 10^{-3}	[298]
(*R*)-Czp-tBuCzB	5 wt% 2,6DCzPPy	478 [c]	98	41.8	0.09 [c]	1.6× 10^{-3}	479	0.11, 0.21	32.1	9	4	+1.54 × 10^{-3}	[299]
(*R*)-Czp-POAB	8 wt% 2,6DCzPPy	497 [c]	96	62.4	0.13 [c]	1.4× 10^{-3}	513	0.23, 0.65	28.7	2	29	+1.30 × 10^{-3}	[299]
(*P*)-QAO-PhCz	5 wt% mCBP	460 [c]	46.6	40.36	0.11	1.1× 10^{-3}	467	0.13, 0.18	14	N/A	N/A	+1.50 × 10^{-3}	[300]
(*M*)-QPO-PhCz	Toluene	446	51	536	0.23	1.6× 10^{-3}	488	0.17, 0.34	10.6	N/A	N/A	+1.60 × 10^{-3}	[301]
(*P*)-Hel-DiDiKTa	1 wt% mCP	478	4.1	5.4	0.15	4.0× 10^{-4}	N/A	N/A	N/A	N/A	N/A	N/A	[302]

(*P*)-BTPT	1 wt% PMMA	400	9	109	0.01	-2.8× 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[303]
BN4	toluene	500	88	8.3	0.14	(1~2) × 10^{-3}	510	0.186, 0.632	20.6	0.4	48	+3.70 × 10^{-3}	[304]
BN5	toluene	497	87	23.1	0.14	(1~2)× 10^{-3}	506	0.167, 0.603	26.5	34	58	-1.6× 10^{-3}	[304]
(*M*)-helicene-BN	1 wt% DMIC-TRZ	525	98	71.8	0.15	-2.1× 10^{-3} [c]	524	0.26, 0.66	30.7	8	42	2.2× 10^{-3}	[305]
R-BN	toluene	662	100	0.18	16.6	2.1× 10^{-3} [h]	664	0.719, 0.280	28.1	N/A	N/A	N/A	[306,307]
R-TBN	toluene	692	100	0.16	46.4	2.1× 10^{-3} [h]	686	0.721, 0.278	27.6	N/A	N/A	N/A	[306,307]
CP-TADF emitters featuring chiral perturbation													
(*R*)/(*S*)-1	toluene	517	53	2.9	N/A	1.3 × 10^{-3}	~535 [a]	N/A	9.1 [a]	N/A	N/A	N/A	[308]
(*S*)-BN-CF	10 wt% mCP	493	32	24	N/A	1.2 × 10^{-3} [c]	496	0.25, 0.47	9.3	N/A	53	0.026	[309]
(*S*)-BN-CCB	10 wt% mCP	534	38	21	N/A	1.1 × 10^{-3}	527	0.34, 0.57	6.3	N/A	42	0.025	[309]
(*S*)-BN-DCB	10 wt% mCP	540	45	17	N/A	1.0 × 10^{-3}	547	0.42, 0.65	3.5	N/A	22	0.027	[309]
(*S*)-BN-AF	10 wt% mCP	571	13	32	N/A	1.3 × 10^{-3}	571	0.48, 0.51	1.7	N/A	8	0.016	[309]
(*S*)-CPDCz	10 wt% mCP	511	20	18	0.08	-3.3 × 10^{-4}	496	N/A	10.1	N/A	N/A	-3.7 × 10^{-3}	[310]
(*S*)-CPDCB	10 wt% mCP	533	55.2	10	0.04	-4.0 × 10^{-4}	516	N/A	10.6	N/A	N/A	-3.9 × 10^{-3}	[310]
B1	toluene	469	7 [e]	10	0.31 [b]	2.1 × 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[311]
B2	toluene	490	16 [e]	45	0.18 [b]	1.6 × 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[311]
B3	toluene	506	18 [e]	39	0.16 [b]	0.2 × 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[311]
B4	toluene	516	30 [e]	16	0.1 [b]	<0.1 × 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[311]
C'1	toluene	481	29 [e]	6	0.28 [b]	1.1 × 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[311]
C'2	toluene	504	46 [e]	19	0.13 [b]	1.0 × 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[311]
C'3	toluene	510	42 [e]	17	0.11 [b]	1.1 × 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[311]
C1	toluene	493	25 [e]	18	0.22 [b]	<0.1 × 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[311]
C2	toluene	511	31 [e]	40	0.11 [b]	<0.1 × 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[311]
C3	toluene	519	47 [e]	22	0.1 [b]	0.7 × 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[311]
(*R*)-DOBP	Neat film	670	11	0.9	0.14	2.5× 10^{-4} [f]	716	N/A	1.9	N/A	N/A	N/A	[312]
(*R*)-HDOBP	Neat film	662	9	0.7	0.08	1.5× 10^{-4} [f]	700	N/A	0.7	N/A	N/A	N/A	[312]

(*R*)-BDTPA	10 wt% mCP	600	15.8	53.5 [c]	0.14 [c]	-4.7 × 10^{-3} [c]	598	0.57, 0.43	2.0	N/A	N/A	-1.6 × 10^{-3}	[313]
OBNCz	10 wt% 26DCzPPy	504	92	11.4	0.04 [c]	N/A	526	0.33, 0.59	32.6	N/A	3	-2.3 × 10^{-3}	[314]
(*R*)-OBN-DPA	10 wt% 26DCzPPy	538 [c]	84.67	13.5	0.09	1.88 × 10^{-3}	544	0.39, 0.57	12.3	6.5	6.5	2.3 × 10^{-3}	[315]
(*R*)-OBS-Cz	15 wt% mCP	504 [c]	73	3.2	0.04	+7.0× 10^{-3}	502	0.21, 0.49	15.0	N/A	3.3	+0.80 × 10^{-3}	[316]
(*R*)-OBS-TCz	15 wt% mCP	520 [c]	87	2.7	0.05	+6.4× 10^{-3}	514	0.26, 0.56	20.3	N/A	1	+0.50 × 10^{-3}	[316]
(*R*)-OBN-2CN-BN	3 wt% PhCzBCz	498	99 [c]	95.3	0.12	+9.0× 10^{-4}	496	0.11, 0.52	29.4	32	72	+1.43 × 10^{-3}	[317]
(*R*)-OBN-4CN-BN	3 wt% PhCzBCz	510	96 [c]	97.4	0.13	+8.0× 10^{-4}	508	0.14, 0.64	24.5	67	91	+4.6× 10^{-4}	[317]
(*R*)-P	10 wt% mCP	549	72	1.6	0.045 [b]	-5.8× 10^{-4}	546	0.408, 0.566	14.9	N/A	15	-1.5× 10^{-3}	[318]
(*S*)-P	10 wt% mCP	547	76	2.3	0.061 [b]	+6.4× 10^{-4}	544	0.404, 0.569	15.8	N/A	22	+1.6× 10^{-3}	[318]
(*R*)-ODQPXZ	15 wt% CBP	589 [c]	92	3.6	0.16 [c]	-4.6× 10^{-4}	548	0.38, 0.56	28.3	2	54	6.0× 10^{-4}	[319]
(*R*)-ODPPXZ	7 wt% CBP	630 [c]	89	3.7	0.07 [c]	-1.4× 10^{-3}	600	0.53, 0.45	20.3	15	55	2.4× 10^{-3}	[319]
(+)-(*R*,*R*)-MC	In neat film	505	78	1.76	0.069	+2.2× 10^{-3}	522	0.28, 0.54	17.1	N/A	4	+1.5× 10^{-3}	[320]
(*R*)-OBN-AICz	13 wt% mCBP	509	81	4	0.08 [g]	+2.6× 10^{-3}	514	0.27, 0.52	19.0	N/A	N/A	+4.7× 10^{-4}	[321]
(+)-(*S*,*S*)-CAI-Cz	15 wt% mCBP	528	98	130	0.06	-1.1 × 10^{-3}	520	N/A	19.7	29	72	-1.7 × 10^{-3}	[322]
(-)-(*R*,*R*)-CAI-Cz	15 wt% mCBP	N/A	N/A	N/A	N/A	1.1× 10^{-3}	520	N/A	19.8	28	68	2.3 × 10^{-3}	[322]
(-)-(*R*,*R*)-CAI-DMAC	6 wt% CBP	583 [c]	39.9	37.4	0.07	9.2 × 10^{-4}	592	N/A	12.4	22	67	N/A	[323]
(*R*)-CzTA	THF	528	4.7	0.48	N/A	+0.84× 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[324]
(*S*)-CzTA	THF	528	5.0	0.40	N/A	-1.03× 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[324]
(*S*,*S*)-(+)-TpAc-TRZ	In neat film	541	85	1.1	0.03	+1.9× 10^{-3}	534	0.35, 0.59	25.5	34	94	+1.5× 10^{-3}	[325]
(*R*,*R*)-pTpAcDPS	15 wt% mCP	487	63	1.07	0.03	-1.4× 10^{-3}	496	N/A	12.0	N/A	N/A	-1.1× 10^{-3}	[326]
(*R*,*R*)-pTpAcBP	10 wt% mCP	532	92	1.75	0.01	-1.0× 10^{-3}	534	N/A	22.1	N/A	N/A	-1.0× 10^{-3}	[326]
chiral TADF exciplexes and LC emitters													
1:A	1:A (1:2)	N/	19	0.7	0.16	7× 10^{-3}	N/A	N/A	N/A	N/A	N/A	N/A	[327]

		A											
(*R*)-TRZ:TAPC	1:1	520	39.5	5.81	0.012	2.24×10^{-3}	520	0.28, 0.57	12.7	N/A	24	7.25×10^{-3}	[328]
FAC-PDMLM	5wt% in 5CB LC	490 [c]	18 [c]	2.3 [c]	0.02 [c]	7.26×10^{-2}	N/A	N/A	N/A	N/A	N/A	N/A	[329]
PXZ-PDMLM	3wt% in 5CB LC	546 [c]	13 [c]	0.61 [c]	0.02 [c]	-5.45×10^{-2}	N/A	N/A	N/A	N/A	N/A	N/A	[329]

[a] in 20 wt% doped mCP film, [b] in MeTHF, [c] in Toluene, [d] in $CHCl_3$, [e] in PMMA, [f] in 1,4-dioxane, [g] in neat film, [h] in DCM.

Table **S5.** Photophysical properties of typical TADF exciplex systems and their OLEDs, reviewed in Section **8.2**.

Compound	**Medium**	**λ_{PL} / nm**	**Φ_{PL} / %**	**τ_d / μs**	**ΔE_{ST} / eV**	**λ_{EL} / nm**	**CIE_{XY}**	**EQE_{max} / %**	**Ref**
***m*-MTDATA:*t*-Bu-PBD**	1:1 Bulk	540	20	N/A	0.05	N/A	N/A	2.4	[330]
***m*-MTDATA:3TPYMB**	1:1 Bulk	540	26	N/A	N/A	~545	N/A	5.4	[330]
***m*-MTDATA:PPT**	30 mol%:1 Bulk	510	N/A	N/A	N/A	N/A	N/A	~6	[331]
***m*-MTDATA:PPT**	50 mol%:1 Bulk	510	28.5	N/A	N/A	N/A	N/A	10	[331]
***m*-MTDATA:PPT**	70 mol%:1 Bulk	510	N/A	N/A	N/A	N/A	N/A	~8	[331]
TCTA:3P-T2T	Interface	544	N/A	N/A	N/A	544	0.40, 0.55	7.7	[332]
TCTA:3P-T2T	1:1 Bulk	544	N/A	2.4	N/A	544	0.40, 0.45	7.8	[332]
mCP:HAP-3MF	8:92 Bulk	538	66.1	1.7,5.7	N/A	538	N/A	11.3	[333]
mCP:HAP-3MF	25:75 Bulk	550	55.7	N/A	N/A	550	N/A	N/A	[333]
mCP:HAP-3MF	50:50 Bulk	550	44	N/A	N/A	555	N/A	N/A	[333]
TSBPA:PO-T2T	1:1 Bulk	~540	100	2.2	≈0	528	0.33, 0.57	20	[334]
NPB:PO-T2T	1:1 Bulk	~600	4	0.53	≈0	585	0.53, 0.47	1.7	[334]
TPD:PO-T2T	1:1 Bulk	~600	8	0.37	≈0	585	0.52, 0.46	2.4	[334]
TCBPA:PO-T2T	1:1 Bulk	~545	93	2.2	≈0	542	0.38, 0.56	12.8	[334]
mCP:PO-T2T	1:1 Bulk	~480	55	1.96	≈0.01	480	0.16, 0.28	16	[334]
CzSi:PO-T2T	1:1 Bulk	~465	24	6.3	≈0.1	465	0.16, 0.21	6.1	[334]
mCPPO1:PO-T2T	1:1 Bulk	~480	20	2.63	≈0.02	480	0.16, 0.29	6.5	[334]
Compound 1 :PO-T2T	1:1 Bulk	489	4 (air)	0.86	N/A	541	N/A	6.5	[335]
Compound 2 :PO-T2T	1:1 Bulk	470	2 (air)	0.88	N/A	546	N/A	7.8	[335]
mCP:PO-T2T	1:1 Bulk	472	7.3	N/A	0.010	476	0.17, 0.26	8.6	[336]
MAC:PO-T2T	1:1 Bulk	514	8	N/A	0.014	516	0.31, 0.55	13.3	[336]
MAC:PO-T2T	7:3 Bulk	514	8	N/A	0.014	516	0.31, 0.55	17.8	[336]
TAPC:CzPyCN	1:1 Bulk	530	N/A	1.097	N/A	536	0.38, 0.53	7.4	[337]
TAPC:CbPyCN	1:1 Bulk	520	N/A	1.014	N/A	520	0.33, 0.52	9.1	[337]
BFPD:TAPC	10:90 Bulk	488	55.1	N/A	0.04	508	N/A	7.6	[338]
BFPD:TAPC	15:85 Bulk	490	60	N/A	0.04	509	N/A	9.8	[338]
BFPD:TAPC	20:80 Bulk	492	56.6	N/A	0.04	N/A	N/A	N/A	[338]
BFPD:TAPC	50:50 Bulk	511	50.2	N/A	0.04	518	N/A	10.5	[338]
BFPD:TCTA	10:90 Bulk	475	19.1	N/A	0.2	N/A	N/A	N/A	[338]
BFPD:TCTA	50:50 Bulk	485	25.4	N/A	0.2	N/A	N/A	N/A	[338]

BFPD:**m-MTDATA**	10:90 Bulk	565	10.4	N/A	0.06	N/A	N/A	N/A	[338]
BFPD:**TPD**	10:90 Bulk	494	13.9	N/A	N/A	N/A	N/A	N/A	[338]
BFPD:**Spiro-BPA**	10:90 Bulk	475	21.6	N/A	N/A	N/A	N/A	N/A	[338]
BFPD:**m-CBP**	10:90 Bulk	407	20	N/A	N/A	N/A	N/A	N/A	[338]
BPD:**m-MTDATA**	10:90 Bulk	548	9	N/A	N/A	N/A	N/A	N/A	[338]
BPD:**TAPC**	10:90 Bulk	472	26.6	N/A	N/A	N/A	N/A	N/A	[338]
BPD:**TAPC**	20:80 Bulk	480	33.7	N/A	N/A	N/A	N/A	N/A	[338]
BPD:**TAPC**	50:50 Bulk	493	35.4	N/A	N/A	N/A	N/A	N/A	[338]
TCTA:**DCNSFX**	1:1 Bulk	520	31	4.67	0.05	520	0.33, 0.52	3.0	[339]
TCTA:**TRZSFX**	1:1 Bulk	510	81	0.18	0.03	520	0.35, 0.60	22.5	[340]
TCTA:**DTRZSFX**	1:1 Bulk	539	41	0.28	0.06	560	0.44, 0.51	9.7	[340]
mCP:**$DPOPht_2$**	1:1 Bulk	498	0.8	~0.14	N/A	N/A	N/A	N/A	[341]
mCP:**$CyPh_2Pht_2$**	1:1 Bulk	496	2	~0.15	N/A	N/A	N/A	N/A	[341]
mCP:**2-BpPht**	1:1 Bulk	494	18	~0.42	N/A	N/A	N/A	N/A	[341]
mCP:**3-BpPht**	1:1 Bulk	495	20	~0.42	N/A	N/A	N/A	N/A	[341]
mCP:**4-BpPht**	1:1 Bulk	497	26	~0.42	0.06	N/A	0.24, 0.41	2.9	[341]
CBP:**$DPOPht_2$**	1:1 Bulk	510	1.6	~0.10	N/A	N/A	N/A	N/A	[341]
CBP:**$CyPh_2Pht_2$**	1:1 Bulk	503	4	~0.13	N/A	N/A	N/A	N/A	[341]
CBP:**2-BpPht**	1:1 Bulk	504	17	~0.19	N/A	N/A	N/A	N/A	[341]
CBP:**3-BpPht**	1:1 Bulk	503	19	~0.18	N/A	N/A	N/A	N/A	[341]
CBP:**4-BpPht**	1:1 Bulk	510	22	~0.17	N/A	N/A	N/A	N/A	[341]
PVK:**$DPOPht_2$**	1:1 Bulk	540	2.5	~0.20	N/A	N/A	N/A	N/A	[341]
PVK:**$CyPh_2Pht_2$**	1:1 Bulk	530	3	~0.25	N/A	N/A	N/A	N/A	[341]
PVK:**2-BpPht**	1:1 Bulk	525	6	~0.35	N/A	N/A	N/A	N/A	[341]
PVK:**3-BpPht**	1:1 Bulk	528	6	~0.39	N/A	N/A	N/A	N/A	[341]
PVK:**4-BpPht**	1:1 Bulk	533	8	~0.29	N/A	N/A	N/A	N/A	[341]
TCTA:**$DPOPht_2$**	1:1 Bulk	570	2	~0.12	N/A	N/A	N/A	N/A	[341]
TCTA:**$CyPh_2Pht_2$**	1:1 Bulk	566	2	~0.14	N/A	N/A	N/A	N/A	[341]
TCTA:**2-BpPht**	1:1 Bulk	569	2	~0.23	N/A	N/A	N/A	N/A	[341]
TCTA:**3-BpPht**	1:1 Bulk	563	3	~0.17	N/A	N/A	N/A	N/A	[341]
TCTA:**4-BpPht**	1:1 Bulk	575	5	~0.18	N/A	N/A	N/A	N/A	[341]
Ir-817:**B2PyMPM**	2:8 Bulk	606	13.7	11.8	0.012	620	0.58, 0.42	3.10	[342]
Ir-817:**B3PyMPM**	2:8 Bulk	632	7.2	9.65	0.020	640	0.62, 0.37	1.45	[342]
Ir-817:**B4PyMPM**	2:8 Bulk	642	4.6	9.11	0.015	672	0.66,0.33	1.03	[342]
Ir-817:**$TRZ-1SO_2$**	2:8 Bulk	647	N/A	N/A	0.020	658	0.64, 0.35	0.26	[342]
Ir-817:**$TRZ-2SO_2$**	2:8 Bulk	666	N/A	N/A	0.017	700	0.68, 0.31	0.22	[342]
Ir-817:**$TRZ-3SO_2$**	2:8 Bulk	698	N/A	N/A	0.019	746	N/A	0.20	[342]

Table **S6.** Photophysical properties and device performance of exciplexes with a TADF molecule as an elemental component, reviewed in Section **8.3**.

Compound	**Medium**	**λ_{PL} / nm**	**Φ_{PL} / %**	**τ_d / μs**	**ΔE_{ST} / eV**	**λ_{EL} / nm**	**CIE_{XY}**	**EQE_{max} / %**	**Ref**
mCP:**PO-T2T**	1:1 Bulk	472	7.3 (air)	N/A	0.01	476	0.17, 0.26	8.6	[336]

MAC:**PO-T2T**	1:1 Bulk	514	8.0 (air)	N/A	0.014	516	0.31, 0.55	13.3	[336]
MAC:**PO-T2T**	8:2 Bulk	N/A	N/A	N/A	N/A	516	0.31, 0.55	13.1	[336]
MAC:**PO-T2T**	7:3 Bulk	N/A	N/A	N/A	N/A	516	0.31, 0.55	17.8	[336]
DBT-SADF:**PO-T2T**	6:4 Bulk	516	38	20.5	0.032	524	0.29, 0.55	16.9	[343]
DBT-SADF:**PO-T2T**:**CDBP**	2:5:3 Bulk		61	16.9	N/A	516	0.26, 0.53	20.5	[343]
13AB:**PO-T2T**	5:5 Bulk	522	15	14	0.047	540	0.37, 0.57	12.4	[343]
13AB:**PO:T2T**:**CDBP**	1:1:1 Bulk	N/A	40	18.6	N/A	532	0.32, 0.56	15.5	[343]
CDBP:**PO-T2T**	50:50 Bulk	494	53	17.2	N/A	494	0.19, 0.37	8.9	[344]
PO-T2T:**DABNA-1**	50:50 Bulk	550	46	14.7	N/A	550	0.45, 0.56	8.9	[344]
CDBP:PO-T2T: **DABNA-1**	47.5:47.5:5 Bulk	~550	67	15.1	N/A	N/A	0.31, 0.58	17.5	[344]
CDBP:PO-T2T:**DABNA-1**	45:45:10 Bulk	~550	69	15.1	N/A	N/A	0.34, 0.60	16.9	[344]
CDBP:**PO-T2T**:**DABNA-1**	40:40:20 Bulk	~550	50	15.1	N/A	N/A	0.37, 0.60	13.4	[344]
NPD/Xan-Cbz	Interface	N/A	N/A	N/A	N/A	525 (at 9 V)	N/A	N/A	[345]
DPSTPA:**2CzPN**	3:1 Bulk	540	79	13.9	0.095	544	0.38, 0.55	19.0	[346]
DPSTPA:**CzDBA**	3:1 Bulk	592	59	10.1	0.078	592	0.53, 0.46	14.6	[346]
DPSTPA:**4CzIPN**	3:1 Bulk	596	10	6.8	0.066	590	0.50, 0.48	3.8	[346]
TXO-TPA:**APDC-tPh**	1:1 Bulk	690	0.09	~0.3	N/A	704	N/A	1.27	[347]
TXO-TPA:**APDC-tPh**	4:1 Bulk	N/A	N/A	N/A	N/A	689	N/A	N/A	[347]
TXO-TPA:**APDC-tPh**	2:3 Bulk	N/A	N/A	N/A	N/A	710	N/A	N/A	[347]
TCTA:**APDC-tPh**	1:1 Bulk	720	N/A	0.06	N/A	730	N/A	0.09	[347]
TCTA:**APDC-tPh**	2:1 Bulk	N/A	N/A	N/A	N/A	~700	N/A	N/A	[347]
TCTA:**APDC-tPh**	1:2 Bulk	N/A	N/A	N/A	N/A	~770	N/A	N/A	[347]
PO-01:**AQDC-tPh**	5:95 Bulk	727	N/A	0.72	N/A	732	N/A	0.16	[348]
PO-01:**AQDC-tPh**	10:90 Bulk	737	N/A	N/A	N/A	744	N/A	0.17	[348]
PO-01:**AQDC-tPh**	15:85 Bulk	742	N/A	N/A	N/A	750	N/A	0.23	[348]
PO-01:**AQDC-tPh**	25:75 Bulk	752	N/A	0.48	N/A	756	N/A	0.20	[348]
PO-01:**APDC-tPh**	5:95 Bulk	N/A	N/A	N/A	N/A	800	N/A	0.14	[348]
PO-01:**APDC-tPh**	15:85 Bulk	N/A	N/A	N/A	N/A	824	N/A	0.16	[348]
PO-01:**APDC-tPh**	20:80 Bulk	N/A	N/A	N/A	N/A	844	N/A	0.12	[348]
Ir(ppy)$_2$acac:**AQDC-tPh**	5:95 Bulk	717	N/A	0.81	N/A	733	N/A	0.14	[348]
Ir(ppy)$_2$acac:**AQDC-tPh**	10:90 Bulk	721	N/A	N/A	N/A	737	N/A	0.15	[348]
Ir(ppy)$_2$acac:**AQDC-tPh**	15:85 Bulk	727	N/A	N/A	N/A	742	N/A	0.17	[348]
Ir(ppy)$_2$acac:**AQDC-tPh**	25:75 Bulk	735	N/A	0.48	N/A	748	N/A	0.19	[348]

TAPC:**3Cz-o-TRz**	1:1 Bulk	510	68	1.8	N/A	520	N/A	12.1	[349]
TPA-PXZ:**3Cz-o-TRz**	1:1 Bulk	530	36	N/A	N/A	540	N/A	10.1	[349]
m-MTDATA:**3Cz-o-TRz**	1:1 Bulk	580	5	N/A	N/A	588	N/A	1.1	[349]
3Cz-o-TRz:**B3PyMPM**	1:1 Bulk	465	19	N/A	N/A	516	N/A	5.5	[349]
3Cz-o-TRz:**B4PyMPM**	1:1 Bulk	475	25	N/A	N/A	520	N/A	6.2	[349]
3Cz-o-TRz:**PO-T2T**	1:1 Bulk	510	66	1.5	N/A	516	N/A	11.8	[349]

Table **S7.** Photophysical properties of bulk and interfacial exciplexes used to understand and improve TADF exciplex systems and their device performance, reviewed in Section **8.4**.

Compound	**Medium**	**λ_{PL} / nm**	**Φ_{PL} / %**	**τ_d / μs**	**ΔE_{ST} / eV**	**λ_{EL} / nm**	**CIE_{XY}**	**EQE_{max} / %**	**Ref**
DSDTAF:**3N-T2T**	1:1 Bulk	535	59	2.54	N/A	535	0.37, 0.58	13.2	[350]
DTAF:**3N-T2T**	1:1 Bulk	535	51	2.91	N/A	551	0.42, 0.55	11.6	[350]
CPTBF:**PO-T2T**	1:1 Bulk	~480	44	5.86	N/A	~480	0.17, 0.29	12.5	[350]
CPF:**PO-T2T**	1:1 Bulk	~480	41	2.8	N/A	~480	0.18, 0.31	9.5	[350]
m-MTDATA:**4**	1:1 Bulk	584	3.8	0.19	N/A	N/A	N/A	N/A	[351]
TCTA:**4**	1:1 Bulk	490	43.8	0.31	0.05	N/A	N/A	N/A	[351]
4/**Bphen**	Interface	N/A	N/A	N/A	N/A	~475	0.17, 0.28	2.0	[351]
m-MTDATA/**TCTA**:**4**/**Bphen**	1:1 Bulk	N/A	N/A	N/A	N/A	560	0.40, 0.52	5.8	[351]
TCTA:**4**/**4**/**Bphen**	1:1 Bulk/Interface	N/A	N/A	N/A	N/A	~490	N/A	4.2	[351]
m-MTDATA:**4**/**4**/**Bphen**	1:1 Bulk/Interface	N/A	N/A	N/A	N/A	~600	N/A	3.2	[351]
TSBPA:**PO-T2T**	1:1 Bulk	~535	58	2.4	N/A	~545	N/A	14.8	[352]
TSBPA:**PO-T2T**	1:1 Bulk 10 wt% in UGH-3	~535	63	2.2	N/A	~545	N/A	~15.5	[352]
TSBPA:**PO-T2T**	1:1 Bulk 30 wt% in UGH-3	~535	65	2.8	N/A	~540	N/A	~16.5	[352]
TSBPA:**PO-T2T**	1:1 Bulk 50 wt% in UGH-3	~530	80	3.1	N/A	~535	N/A	19.2	[352]
TSPBA:**PO-T2T**	1:1 Bulk 70 wt% in UGH-3	~525	70	3.1	N/A	~530	N/A	~14.5	[352]
TSPBA:**PO-T2T**	1:1 Bulk 90 wt% in UGH-3	~490	35	N/A	N/A	~520	N/A	N/A	[352]
TSBPA:**PO-T2T**	1:1 Bulk 10 wt% in DPEPO	~530	68	2.4	N/A	~530	N/A	~15.5	[352]
TSBPA:**PO-T2T**	1:1 Bulk 30 wt% in DPEPO	~530	45	2.5	N/A	~530	N/A	~16.0	[352]

TSBPA:**PO-T2T**	1:1 Bulk 50 wt% in DPEPO	~525	28	2.3	N/A	~530	N/A	~17.0	[352]
TSPBA:**PO-T2T**	1:1 Bulk 70 wt% in DPEPO	~520	38	2.9	N/A	~525	N/A	~13.5	[352]
TSPBA:**PO-T2T**	1:1 Bulk 90 wt% in DPEPO	~510	0.07	2.8	N/A	~520	N/A	N/A	[352]
TCTA:**PO-T2T**:**mCP**	1:1:0 Bulk	~565	13.8	1.1315	0.0695	558	N/A	3.9	[353]
TCTA:**PO-T2T**:**mCP**	1:1:0.5 Bulk	~550	21.4	1.5596	N/A	542	N/A	5.7	[353]
TCTA:**PO-T2T**:**mCP**	1:1:1 Bulk	~550	31.2	2.0103	0.0231	535	N/A	6.1	[353]
TCTA:**PO-T2T**:**mCP**	1:1:3 Bulk 5wt% **Ir(tptpy)$_2$(acac)**	~525	37.9	2.3787	N/A	523	N/A	8.0	[353]
TCTA:**PO-T2T**:**mCP**	1:1:0 Bulk **Ir(tptpy)$_2$(acac)**	N/A	N/A	N/A	N/A	~555	N/A	19.3	[353]
TCTA:**PO-T2T**:**mCP**	1:1:0.5 Bulk **Ir(tptpy)$_2$(acac)**	N/A	N/A	N/A	N/A	~555	N/A	20.9	[353]
TCTA:**PO-T2T**:**mCP**	1:1:1 Bulk **Ir(tptpy)$_2$(acac)**	N/A	N/A	N/A	N/A	~555	N/A	21.0	[353]
TCTA:**PO-T2T**:**mCP**	1:1:3 Bulk **Ir(tptpy)$_2$(acac)**	N/A	N/A	N/A	N/A	~555	N/A	21.7	[353]
TAPC:**DMA**	1:1 Bulk	475	9.8	0.284	N/A	N/A	N/A	N/A	[354]
DMA:**DCA**	1:1 Bulk	470	39.0	0.125	N/A	N/A	N/A	N/A	[354]
TAPC:**DCA**	1:1 Bulk	550	0.5	0.299	N/A	N/A	N/A	N/A	[354]
TAPC/DMA/DCA	20/0/10 (nm) Interfacial	534	N/A	0.160	N/A	445/550	N/A	0.14	[354]
TAPC/DMA/DCA	20/10/10 (nm) Interfacial	534	N/A	0.160	N/A	445/550	N/A	0.43	[354]
TAPC/DMA/DCA	20/20/10 (nm) Interfacial	534	N/A	0.253	N/A	445/550	N/A	0.37	[354]
TAPC/DMA/DCA	20/30/10 (nm) Interfacial	534	N/A	0.292	N/A	445/550	N/A	0.33	[354]
TAPC/DMA/DCA	20/40/10 (nm) Interfacial	534	N/A	N/A	N/A	445/550	N/A	0.42	[354]
TAPC/DMA/DCA	20/50/10 (nm) Interfacial	534	N/A	0.242	N/A	445/550	N/A	0.48	[354]
TAPC/DMA/DCA	20/60/10 (nm) Interfacial	534	N/A	N/A	N/A	445	N/A	0.69	[354]
TAPC/DMA/DCA	20/70/10 (nm) Interfacial	534	N/A	0.232	N/A	445	N/A	0.86	[354]
TAPC/CBP/DCA	20/1/10 (nm) Interfacial	N/A	N/A	0.162	N/A	550	N/A	0.33	[354]
TAPC/CBP/DCA	20/5/10 (nm) Interfacial	N/A	N/A	0.145	N/A	550	N/A	0.55	[354]
TAPC/CBP/DCA	20/10/10 (nm)	N/A	N/A	0.111	N/A	550	N/A	0.72	[354]

	Interfacial								
TAPC/CBP/DCA	20/15/10 (nm) Interfacial	N/A	N/A	0.0849	N/A	550	N/A	1.6	[354]
TAPC/CBP/DCA	20/20/10 (nm) Interfacial	N/A	N/A	0.0161	N/A	550	N/A	3.0	[354]
PO-T2T:**Ir(ppy)$_3$**	92:8 Bulk	N/A	23.3	2.8	0.026	604	0.55, 0.44	5	[355]
13PXZB:PO-T2T	60:40 Bulk	N/A	8.6	13.9	N/A	592	0.52, 0.47	1.9	[355]
PIPAQ	-	650	12.3	40.5	0.13	650	0.64, 0.36	2.10	[356]
Tr-Ph:**3P-T2T**	1:1 Bulk	553	39	1.95	0.10	558	0.43, 0.53	10.3	[357]
Tr-Ph:**3P-T2P**	1:1 Bulk	526	41	1.77	0.18	522	0.33, 0.54	10.4	[357]
Tr-Ph:**3P-Pyr**	1:1 Bulk	480	8	0.07	0.34	469	0.19, 0.24	0.54	[357]
Tr-Tol:**3P-T2T**	1:1 Bulk	553	33	1.73	0.10	566	0.44, 0.53	9.7	[357]
Tr-Tol:**3P-T2P**	1:1 Bulk	525	40	2.39	0.10	526	0.35, 0.54	12.8	[357]
Tr-Tol:**3P-Pyr**	1:1 Bulk	491	10	1.0	0.33	467	0.19, 0.25	0.55	[357]
Tr-Ph:**3P-T2T**	10wt% **(DT)$_2$BTh2CN**	N/A	40	0.15	N/A	674	0.69, 0.31	4.64	[357]
Tr-Ph:**3P-T2P**	10wt% **(DT)$_2$BTh2CN**	N/A	50	0.12	N/A	671	0.68, 0.31	5.52	[357]
Tr-Tol:**3P-T2T**	10wt% **(DT)$_2$BTh2CN**	N/A	37	0.10	N/A	669	0.69, 0.31	3.48	[357]
Tr-Tol:**3P-T2P**	10wt% **(DT)$_2$BTh2CN**	N/A	47	0.12	N/A	667	0.67, 0.32	4.42	[357]
Tr-Me:**PO-T2T**	1:1 Bulk (1:2 for Devices)	615	3	0.294	0.11	633	0.62, 0.40	0.48	[358]
Tr-Me:**PO-T2P**	1:1 Bulk (1:2 for Devices)	562	14	0.294	0.02	606	0.53, 0.46	2.20	[358]
Tr-Me:**PO-Pyr**	1:1 Bulk (1:2 for Devices)	549	21	0.054	0.04	551	0.41, 0.54	5.76	[358]
Tr-iBu:**PO-T2T**	1:1 Bulk (1:2 for Devices)	580	10	0.706	0.03	580	0.51, 0.48	2.28	[358]
Tr-iBu:**PO-T2P**	1:1 Bulk (1:2 for Devices)	552	37	2.34	0.02	560	0.43, 0.54	8.27	[358]
Tr-iBu:**PO-Pyr**	1:1 Bulk (1:2 for Devices)	516	32	2.39	0.10	516	0.27, 0.50	7.54	[358]
Tr-iBu:**PO-Pyr**	1:2 Bulk 3wt% **DPy2CN**	N/A	44	0.14	N/A	674	0.63, 0.35	6.28	[358]
Tr-iBu:**PO-Pyr**	1:2 Bulk 5wt% **DPy2CN**	N/A	44	0.14	N/A	678	0.65, 0.34	4.43	[358]
Tr-iBu:**PO-Pyr**	1:2 Bulk 10wt% **DPy2CN**	N/A	44	0.14	N/A	680	0.66, 0.33	4.06	[358]
mCP:**TXO-P-Si**	7:1 Bulk (96:4 for Devices)	~520	55.4	2.9	0.024	N/A	N/A	16.9	[359]
CBP:**TXO-P-Si**	7:1 Bulk (99:1 for Devices)	~534	47.6	2.1	0.0063	N/A	N/A	13.7	[359]
3,5-DCzPPy:**TXO-P-Si**	7:1 Bulk (99:1 for Devices)	~534	47.7	20	0.055	N/A	N/A	16.1	[359]

PPO21:**TXO-P-Si**	7:1 Bulk (90:10 for Devices)	~510	25.8	30	0.00064	N/A	N/A	7.3	[359]
CPTBF:**3,4-CN**	1:1 Bulk	522	18	0.12	N/A	524	0.35, 0.58	6.87	[360]
α −CPTBF:**3,4-CN**	1:1 Bulk	504	21	0.10	N/A	508	0.30, 0.56	7.57	[360]
β −CPTBF:**3,4-CN**	1:1 Bulk	504	25	0.10	N/A	510	0.30, 0.56	7.34	[360]
13PXZB:**B4PyMPM**	7:3 Bulk	543	69.6	9.8	0.035	560	0.41, 0.55	14.6	[361]
13PXZB:**B3PyMPM**	7:3 Bulk	529	46.5	12.4	0.037	552	0.40, 0.55	10.0	[361]
13PXZB:**B2PyMPM**	7:3 Bulk	525	33.1	14.0	0.032	548	0.39, 0.55	6.2	[361]
13AB:**B4PyMPM**	7:3 Bulk	N/A	29.8	13.6	N/A	548	0.36, 0.55	6.0	[361]
13AB:**B3PyMPM**	7:3 Bulk	N/A	28.1	12.4	N/A	540	0.31, 0.50	5.4	[361]
13AB:**B2PyMPM**	7:3 Bulk	N/A	25.3	11.9	N/A	524	0.29, 0.47	5.3	[361]
1:**B01**	1:1 Bulk	461	N/A	45.1	N/A	536	N/A	5.4	[362]
BTCz-PCz:**TmPyPB**	99:1 Bulk	N/A	N/A	N/A	N/A	436	0.19, 0.19	0.96	[363]
BTDCb-PCz:**TmPyPB**	99:1 Bulk	N/A	N/A	0.052	N/A	468	0.16, 0.21	2.36	[363]
DCb-PCz:**TmPyPB**	99:1 Bulk	N/A	N/A	N/A	N/A	436	0.19, 0.18	0.56	[363]
BTCz-PCz/**TmPyPB**	Interface	N/A	N/A	N/A	N/A	435/500	0.24, 0.32	1.89	[363]
BTDCb-PCz/TmPyPB	Interface	N/A	N/A	N/A	N/A	435/500	0.20, 0.31	1.05	[363]
DCb-PCz/**TmPyPB**	Interface	N/A	N/A	N/A	N/A	435/500	0.19, 0.22	2.43	[363]
BTDCb-PCz:**TmPyPB**	50:50 Bulk	N/A	N/A	N/A	N/A	500	0.21, 0.32	1.0	[363]
mCP/PO-T2T	Interface	472	N/A	N/A	N/A	497	N/A	8.2	[364]
mCP/PO-T2T	Interface Annealed	472	N/A	N/A	N/A	570	N/A	8.2	[364]
FCF/PO-T2T	Interface	475	N/A	N/A	N/A	492	N/A	6.2	[364]
FCF/PO-T2T	Interface Annealed	482	N/A	N/A	N/A	575	N/A	6.2	[364]
CFC2/PO-T2T	Interface	483	N/A	N/A	N/A	522	N/A	2.6	[364]
CFC2/PO-T2T	Interface Annealed	524	N/A	N/A	N/A	576	N/A	2.6	[364]
FFF/PO-T2T	Interface	470	N/A	N/A	N/A	477	N/A	0.8	[364]
FFF/PO-T2T	Interface Annealed	537	N/A	N/A	N/A	570	N/A	0.8	[364]
TCz1/PO-T2T	Interface	501	N/A	N/A	N/A	524	N/A	18.0	[364]
TCz1/PO-T2T	Interface Annealed	517	N/A	N/A	N/A	524	N/A	18.0	[364]
NPB/TPBi:**PPh3O/PPh3O**	5:1 Bulk	~455	N/A	1.99	N/A	435	N/A	4.0	[365]
NPB/NPB:**TPBi**	1:1 Bulk	~455	N/A	0.6	N/A	434	N/A	1.5	[365]
NPB/NPB:**TPBi/TPBi**	1:1 Bulk	~455	N/A	0.6	N/A	442	N/A	1.9	[365]
mCP:**HAP-3FDPA**:	92:8 Bulk	433	53.2	0.09	N/A	437	0.16, 0.12	10.2	[366]

Table **S8.** Photophysical properties and device performance of TADF exciplexes used either as hosts, or in solution-processed devices, reviewed in Sections **8.5** and **8.6**.

Compound	Medium	λ_{PL} / nm	Φ_{PL} / %	τ_d / μs	ΔE_{ST} / eV	λ_{EL} / nm	CIE_{XY}	EQE_{max} / %	Ref
Tris-PCz:**CN-T2T**	1:1 Bulk 1wt% **NOz-TPA**	680	42	0.131	0.025	670	N/A	4.6	[367]
Tris-PCz:**CN-T2T**	1:1 Bulk 5wt% **NOz-TPA**	697	29	0.043	0.025	689	N/A	5.0	[367]
Tris-PCz:**CN-T2T**	1:1 Bulk 10wt% **NOz-TPA**	698	29	0.031	0.025	700	N/A	4.3	[367]
Tris-PCz:**CN-T2T**	1:1 Bulk 1wt% **NOz-t-TPA**	709	28	0.252	0.025	683	N/A	7.4	[367]
Tris-PCz:**CN-T2T**	1:1 Bulk 5wt% **NOz-t-TPA**	710	26	0.091	0.025	697	N/A	6.9	[367]
Tris-PCz:**CN-T2T**	1:1 Bulk 10wt% **NOz-t-TPA**	715	20	N/A	0.025	710	N/A	6.6	[367]
DPSF:**CN-T2T**	1:1 Bulk	569	15	2.1	0.09	584	N/A	6.0	[368]
DTSF:**CN-T2T**	1:1 Bulk	594	12	2.0	0.05	607	N/A	4.9	[368]
DPSF:**CN-T2T**	1:1 Bulk 7wt% **TTDSF**	746	26	0.49	N/A	774	N/A	5.3	[368]
DTSF:**CN-T2T**	1:1 Bulk 7wt% **TTDSF**	746	25	0.76	N/A	774	N/A	4.0	[368]
CBP:**PO-T2T**	1:1 Bulk	480	N/A	N/A	N/A	N/A	N/A	N/A	[239]
CBP	15wt% **TPA–PZCN**	~635	N/A	N/A	N/A	628	0.65, 0.35	27.4	[239]
CBP:**PO-T2T**	1:1 Bulk 15wt% **TPA–PZCN**	~635	N/A	N/A	N/A	648	0.66, 0.34	28.1	[239]
CDBP:**PO-T2T**	1:1 Bulk 6 wt% **DBBPZ-DPXZ**	620	87	1.3	0.04	628	0.62, 0.38	20.8	[369]
CDBP:**PO-T2T**	1:1 Bulk 0.2 wt% **DBBPZ-DPXZ**	N/A	N/A	N/A	N/A	479,609	0.40, 0.37	20.7	[369]
TCTA:**B3PYMPM**	1:1 Bulk 7 wt% **DBBPZ-DACT-II**	~525	96	N/A	N/A	N/A	N/A	34.2	[370]
CBP/B4PyMPM	Interfacial	436	N/A	N/A	N/A	N/A	N/A	N/A	[371]
CBP/B4PyPPM	Interfacial	442	N/A	N/A	N/A	N/A	N/A	N/A	[371]
4 wt% **DACT-II**:**CBP/B4PyMPM**	Interfacial	N/A	N/A	N/A	N/A	N/A	N/A	30.4	[371]
9 wt% **DACT-II**:**CBP/B4PyMPM**	Interfacial	N/A	N/A	N/A	N/A	N/A	N/A	31.7	[371]
15 wt% **DACT-II**:**CBP/B4PyMPM**	Interfacial	N/A	N/A	N/A	N/A	N/A	N/A	30.8	[371]
9 wt% **DACT-**	Interfacial	N/A	N/A	N/A	N/A	N/A	N/A	29.8	[371]

II:**CBP/B4PyPPM**									
20 wt% **DACT-II**:**CBP/B4PyPPM**	Interfacial	N/A	N/A	N/A	N/A	534	0.37, 0.59	26.8	[371]
20 wt% **DACT-II**:**CBP/B4PyMPM**	Interfacial	N/A	N/A	N/A	N/A	N/A	N/A	27.6	[371]
20 wt% **DACT-II**:**CBP/B3PyMPM**	Interfacial	N/A	N/A	N/A	N/A	N/A	N/A	27.0	[371]
9 wt% **DACT-II**:**TCTA/B4PyPPM**	Interfacial	N/A	N/A	N/A	N/A	N/A	N/A	28.6	[371]
9 wt% **DACT-II**:**TCTA/B4PyMPM**	Interfacial	N/A	N/A	N/A	N/A	N/A	N/A	30.3	[371]
PhCNCzp-Me:**B3PyMPM**	1:1 Bulk 8wt% **$Ir(ppy)_2(acac)$**	437	N/A	0.077	0.35	N/A	0.334, 0.623	15.66	[372]
PhCzp-Me:**B3PyMPM**	1:1 Bulk 8wt% **$Ir(ppy)_2(acac)$**	449	N/A	0.160	0.26	N/A	0.338, 0.627	27.84	[372]
PhCNCzp-MeCzPh:**B3PyMPM**	1:1 Bulk 8wt% **$Ir(ppy)_2(acac)$**	438	N/A	0.114	0.28	N/A	0.335, 0.630	25.59	[372]
PhCzm-Me:**B3PyMPM**	1:1 Bulk 8wt% **$Ir(ppy)_2(acac)$**	454	N/A	0.143	0.36	N/A	0.330, 0.633	29.38	[372]
PhCNCzm-MeCzPh:**B3PyMPM**	1:1 Bulk 8wt% **$Ir(ppy)_2(acac)$**	449	N/A	0.146	0.32	N/A	0.316, 0.641	31.52	[372]
m-MTDATA:**TmPyPB**	70:30 Bulk	479	12.3	0.073	0.04	N/A	N/A	N/A	[373]
m-MTDATA:**TmPyPB**	50:50 Bulk	484	10.5	N/A	N/A	N/A	N/A	N/A	[373]
m-MTDATA:**TmPyPB**	30:70 Bulk	490	10.2	N/A	N/A	N/A	N/A	N/A	[373]
m-MTDATA:**TmPyPB**	70:30 Bulk 2wt% **FIrpic**	N/A	N/A	N/A	N/A	N/A	0.06, 0.25	0.9	[373]
m-MTDATA:**TmPyPB**	70:30 Bulk 2wt% **$Ir(ppy)_3$**	N/A	N/A	N/A	N/A	~500	0.32, 0.61	10	[373]
m-MTDATA:**TmPyPB**	70:30 Bulk 2wt% **$Ir(bt)_2(acac)$**	N/A	N/A	N/A	N/A	N/A	0.51, 0.49	18.5	[373]
m-MTDATA:**TmPyPB**	70:30 Bulk 2wt% **$Ir(piq)_2(acac)$**	N/A	N/A	N/A	N/A	~620	0.67, 0.33	10	[373]
m-MTDATA:**TmPyPB**/10wt % **FIrpic**:**TCTA**	70:30 Bulk 2wt% **$Ir(bt)_2(acac)$**	N/A	N/A	N/A	N/A	N/A	0.36, 0.41	11.9	[373]
BCzPh:**3P-T2T**	2:1 Bulk	536	68	N/A	N/A	N/A	N/A	13.5	[374]
BCzPh:**3P-T2T**	2:1 Bulk 1wt% **C545T**	516	97	N/A	N/A	N/A	N/A	15.5	[374]
BCzPh:**3P-T2T**	2:1 Bulk	523	85	N/A	N/A	N/A	N/A	29.7	[374]

	8wt% **Ir(ppy)$_2$(acac)**								
CBP	8wt% **Ir(ppy)$_2$(acac)**	N/A	96	0.785	N/A	N/A	N/A	29.5	[374]
TAPC:**PIM-TRZ**	1:3 Bulk	521	93.6	5.12	N/A	~525	0.35, 0.58	21.7	[375]
TCTA:**PIM-TRZ**	1:2 Bulk	~530	90.9	3.67	N/A	~515	0.31, 0.56	19.1	[375]
Tris-PCz:**PIM-TRZ**	1:2 Bulk	~540	65.4	5.40	N/A	~500	0.26, 0.51	18.6	[375]
TAPC:**PIM-TRZ**	1:3 Bulk 0.6wt% **C545T**	N/A	N/A	N/A	N/A	~520	0.29, 0.62	20.2	[375]
26DCzPPy/PO-T2T	1:1 Bulk	~610	N/A	3.0	0.09	N/A	N/A	N/A	[376]
26DCzPPy: **Ir(dmpq)$_2$acac /PO-T2T**	Interfacial 1wt% **Ir(dmpq)$_2$acac**	N/A	N/A	N/A	N/A	~610	N/A	24.5	[376]
26DCzPPy: **Ir(dmpq)$_2$acac /PO-T2T**	Interfacial 4wt% **Ir(dmpq)$_2$acac**	N/A	N/A	N/A	N/A	~630	N/A	28.6	[376]
26DCzPPy: **Ir(dmpq)$_2$acac /PO-T2T**	Interfacial 10wt% **Ir(dmpq)$_2$acac**	N/A	N/A	N/A	N/A	~630	N/A	26.0	[376]
26DCzPPy: **Ir(dmpq)$_2$acac/** spacer /**PO-T2T**	Interfacial 4wt% **Ir(dmpq)$_2$acac**	N/A	N/A	N/A	N/A	~630	N/A	18.6	[376]
26DCzPPy: **Ir(dmpq)$_2$acac/ TPBi**	Interfacial 4wt% **Ir(dmpq)$_2$acac**	N/A	N/A	N/A	N/A	~630	N/A	21.3	[376]
26DCzPPy: **Ir(dmpq)$_2$acac/ BCP**	Interfacial 7wt% **Ir(dmpq)$_2$acac**	N/A	N/A	N/A	N/A	~630	N/A	15.3	[376]
DEX:**PO-T2T**	1:1 Bulk	520	N/A	1.2	N/A	~520	0.29, 0.55	11.2	[377]
TCTA:**PO-T2T**	1:1 Bulk	520	N/A	N/A	N/A	~520	0.29, 0.55	4.0	[377]
DEX:**PO-T2T**	1:1 Bulk 1wt% **Ir(MDQ)$_2$(acac)**	N/A	N/A	N/A	N/A	604	0.54, 0.42	19.7	[377]
DEX:**PO-T2T**	1:1 Bulk 3wt% **Ir(MDQ)$_2$(acac)**	N/A	N/A	N/A	N/A	N/A	0.60, 0.38	22.1	[377]
DEX:**PO-T2T**	1:1 Bulk 5wt% **Ir(MDQ)$_2$(acac)**	N/A	N/A	N/A	N/A	N/A	0.62, 0.37	21.7	[377]
DEX:**PO-T2T**	1:1 Bulk 7wt% **Ir(MDQ)$_2$(acac)**	N/A	N/A	N/A	N/A	N/A	0.63, 0.36	20.8	[377]
DEX:**PO-T2T/PO-T2T**(5 nm)	1:1 Bulk 5wt% **Ir(MDQ)$_2$(acac)**	N/A	N/A	N/A	N/A	N/A	0.62, 0.37	23.0	[377]
DEX:**PO-T2T/PO-T2T**(10 nm)	1:1 Bulk 5wt% **Ir(MDQ)$_2$(a**	N/A	N/A	N/A	N/A	N/A	0.62, 0.37	23.3	[377]

	cac)								
DEX:**PO-T2T/PO-T2T**(15 nm)	1:1 Bulk 5wt% **Ir(MDQ)$_2$(acac)**	N/A	N/A	N/A	N/A	N/A	0.62, 0.37	24.5	[377]
DEX:**PO-T2T/PO-T2T(20 nm)**	1:1 Bulk 5wt% **Ir(MDQ)$_2$(acac)**	N/A	N/A	N/A	N/A	N/A	0.62, 0.37	23.8	[377]
CDBP:**2DBSOSPO**	1:1 Bulk	471	26	4.3	0.08	476	0.17, 0.23	0.82	[378]
CDBP:**3DBSOSPO**	1:1 Bulk	472	24	4.9	0.11	472	0.18, 0.23	0.75	[378]
CDBP:**4DBSOSPO**	1:1 Bulk	447	17	4.5	0.18	468	0.17, 0.21	0.55	[378]
CDBP:**DBSO**	1:1 Bulk	413	1	4	0.01	N/A	N/A	N/A	[378]
CDBP:**2DBSOSPO**	1:1 Bulk 3wt% **4CzTPNBu**	570	97	6.8	0.02	564	0.48, 0.49	30.3	[378]
CDBP:**3DBSOSPO**	1:1 Bulk 3wt% **4CzTPNBu**	571	91	11.1	0.01	564	0.47, 0.51	23.3	[378]
CDBP:**4DBSOSPO**	1:1 Bulk 3wt% **4CzTPNBu**	569	79	7.3	0.03	568	0.48, 0.51	20.0	[378]
CDBP:**DBSO**	1:1 Bulk 3wt% **4CzTPNBu**	568	78	5.2	0.04	N/A	N/A	N/A	[378]
CDBP/B4PyPPM	Interface	N/A	19.0	0.176	N/A	N/A	N/A	N/A	[379]
CDBP/B4PyPPM	Interface 5wt% **Coumarin 6** In CDBP	N/A	92.2	0.011	N/A	N/A	N/A	4.0 at 100 dc/m$_2$	[379]
CDBP/B4PyPPM	Interface 5wt% **Ir(ppy)$_2$acac** In CDBP	N/A	93.0	1.3	N/A	N/A	N/A	7.9 at 100 dc/m$_2$	[379]
CDBP/B4PyPPM	Interface 5wt% **4CzIPN** In CDBP	524	98.9	6.4	N/A	536	N/A	20.5	[379]
TCTA:**PO-T2T**	8:2 Bulk	538	59.4	0.21	N/A	556	N/A	7.4	[380]
TCTA:**PO-T2T**	8:2 Bulk 1 wt% **67dTPA-FQ**	~545	27.9	0.125	N/A	552	N/A	8.4	[380]
TCTA:**PO-T2T**	8:2 Bulk 1 wt% **267tTPA-FQ**	~545	42.5	0.148	N/A	524	N/A	9.6	[380]
TCTA:**PO-T2T**	8:2 Bulk 1 wt% **DMQA**	N/A	N/A	N/A	N/A	540	N/A	4.8	[380]
H2: **B4PyMPM**	1:1 Bulk	486	37.4	0.192	0.09	N/A	N/A	N/A	[381]
H2: **B3PyMPM**	1:1 Bulk	481	47.1	0.226	0.11	N/A	N/A	N/A	[381]
H2: **tBuCzDBA/ B4PyMPM**	Interfacial 5wt% **tBuCzDBA**	N/A	N/A	N/A	N/A	~550	0.37, 0.57	17.5	[381]
H2: **tBuCzDBA/ B4PyMPM**	Interfacial 10wt% **tBuCzDBA**	N/A	N/A	N/A	N/A	~550	0.42, 0.55	20.0	[381]
H2: **tBuCzDBA/**	Interfacial 15wt%	N/A	N/A	N/A	N/A	~550	0.42, 0.56	17.4	[381]

B4PyMPM	**tBuCzDBA**								
H2: **tBuCzDBA/ B4PyMPM**	Interfacial 20wt% **tBuCzDBA**	N/A	N/A	N/A	N/A	~550	0.42, 0.56	16.8	[381]
H2:**tBuCzDBA/ B3PyMPM**	Interfacial 5wt% **tBuCzDBA**	N/A	N/A	N/A	N/A	~550	0.37, 0.57	22.3	[381]
H2:**tBuCzDBA/ B3PyMPM**	Interfacial 10wt% **tBuCzDBA**	N/A	N/A	N/A	N/A	~550	0.42, 0.55	26.4	[381]
H2:**tBuCzDBA/ B3PyMPM**	Interfacial 15wt% **tBuCzDBA**	N/A	N/A	N/A	N/A	~550	0.42, 0.56	23.5	[381]
H2:**tBuCzDBA/ B3PyMPM**	Interfacial 20wt% **tBuCzDBA**	N/A	N/A	N/A	N/A	~550	0.42, 0.55	21.5	[381]
mCP:**OXD-7**	1:1 Bulk 10wt% **AQ-b1**	N/A	N/A	N/A	N/A	632	0.61, 0.38	2.55	[382]
mCP:**TDP-TRZ**	1:1 Bulk 10wt% **AQ-b1**	N/A	N/A	N/A	N/A	622	0.60, 0.39	2.74	[382]
mCP:**DTDP-TRZ**	1:1 Bulk 10wt% **AQ-b1**	N/A	N/A	N/A	N/A	622	0.59, 0.39	2.48	[382]
mCP:**TDP-TRZ: OXD-7**	1:1:1 Bulk 10wt% **AQ-b1**	N/A	N/A	N/A	N/A	628	0.60, 0.39	2.44	[382]
mCP:**DTDP-TRZ:OXD-7**	1:1:1 Bulk 10wt% AQ-b1	N/A	N/A	N/A	N/A	628	0.60, 0.39	1.61	[382]
TAPC:**DCz-DBTO$_2$**	30:70 Bulk (thickness: 15 nm)	~550	N/A	N/A	N/A	~550	N/A	2.7	[383]
TAPC:**DCz-DBTO$_2$**	30:70 Bulk (thickness: 21 nm)	~550	N/A	N/A	N/A	~550	N/A	6.1	[383]
TAPC:**DCz-DBTO$_2$**	30:70 Bulk (thickness: 30 nm)	~550	N/A	N/A	N/A	~550	N/A	5.4	[383]
TAPC:**DCz-DBTO$_2$**	30:70 Bulk (thickness: 60 nm)	~550	N/A	N/A	N/A	~550	N/A	8.9	[383]
BCC-36:**PO-T2T**	5:1 Bulk	490	90	1.1	0.04	N/A	0.29, 0.52	20.0	[384]
BCC-36:**PO-T2T**	5:1 Bulk 1wt% **C545T**	N/A	N/A	N/A	N/A	N/A	0.24, 0.57	12.5	[384]
BCC-36:**PO-T2T**	5:1 Bulk 12.5wt% **Ir(ppy)$_2$(acac)**	N/A	N/A	N/A	N/A	N/A	0.31, 0.64	32.5	[384]
BCC-36:**PO-T2T**	5:1 Bulk 7.5wt% **4CzIPN**	N/A	N/A	N/A	N/A	N/A	0.26, 0.56	26.5	[384]
BCC-36:**3P-T2T**	5:2 Bulk	492	80	1.8	0.12	N/A	0.27, 0.51	5.4	[384]

Table **S9.** Photophysical properties and device performance of exciplexes applied towards fundamental studies of TADF exciplex systems, reviewed in Section **8.7**.

Compound	Medium	λ_{PL} / nm	Φ_{PL} / %	τ_d / µs	ΔE_{ST} / eV	λ_{EL} / nm	CIE_{XY}	EQE_{max} / %	Ref
m-MTDATA:**3TPYMB**	1:1 Bulk	534	N/A	N/A	N/A	~550	N/A	12.9	[385]
CN-Cz2:**PO-T2T**	2:1 Bulk	N/A	56	N/A	N/A	N/A	N/A	13.7	[386]
CN-Cz2:**PO-T2T**	1:1 Bulk	N/A	55	3.39	N/A	~490	0.20, 0.40	16.0	[386]
CN-Cz2:**PO-T2T**	1:2 Bulk	N/A	51	N/A	N/A	N/A	N/A	14.9	[386]
m-MTDATA:**3TPYMB**	1:1 Bulk	N/A	45	N/A	0.023	N/A	N/A	N/A	[387]
m-MTDATA:**3TPYMB**	1:1 Bulk	545	45	12	N/A	550	N/A	11.0	[388]
m-MTDATA:**Bphen**	1:1 Bulk	~560	N/A	0.2	N/A	~560	N/A	N/A	[388]
THCA:**BPhen**	1:1 Bulk	~570	N/A	3	N/A	~600	N/A	N/A	[388]
Tris-PCz:**3Cz-TRZ**	1:1 Bulk	511	N/A	2.8	N/A	510	0.26, 0.53	8.9	[389]
Tris-PCz:**BCz-TRZ**	1:1 Bulk	499	N/A	2.8	N/A	505	0.26, 0.50	11.9	[389]
Tris-PCz:**Cz-TRZ**	1:1 Bulk	517	N/A	3.0	N/A	515	0.29, 0.55	9.5	[389]
Tris-PCz:**T2T**	1:1 Bulk	518	N/A	3.5	N/A	510	0.28, 0.54	11.5	[389]
Tris-PCz:**SF3-TRZ**	1:1 Bulk	504	N/A	2.6	N/A	505	0.25, 0.52	8.7	[389]
DA-o	1 wt% in PMMA	498	24	3.1	0.02	N/A	N/A	N/A	[390]
DA-m	1 wt% in PMMA	481	34	3.7	0.10	N/A	N/A	N/A	[390]
DA-p	1 wt% in PMMA	484	41	6.2	0.18	N/A	N/A	N/A	[390]
dPhDA-p	1 wt% in PMMA	504	52	7.8	0.20	N/A	N/A	6.1%	[390]

Table **S10.** Photophysical properties and device performance of TADF exciplex WOLEDs, reviewed in Section **8.8**.

Compound	Medium	λ_{PL} / nm	Φ_{PL} / %	τ_d / µs	ΔE_{ST} / eV	λ_{EL} / nm	CIE_{XY}	EQE_{max} / %	Ref
1:**BPhen**	1:1 Bulk	475	13.64	0.12	N/A	N/A	N/A	N/A	[391]
2:**BPhen**	1:1 Bulk	442	12.62	0.08	N/A	N/A	N/A	N/A	[391]
3:**BPhen**	1:1 Bulk	483	12.64	0.13	N/A	N/A	N/A	N/A	[391]
4:**BPhen**	1:1 Bulk	447	15.71	0.08	N/A	N/A	N/A	N/A	[391]
1:**BCP**	1:1 Bulk	447	N/A	0.10	N/A	N/A	N/A	N/A	[391]
2:**BCP**	1:1 Bulk	427	12.68	0.05	N/A	N/A	N/A	N/A	[391]
3:**BCP**	1:1 Bulk	460	N/A	0.15	N/A	N/A	N/A	N/A	[391]
4:**BCP**	1:1 Bulk	447	23.96	0.04	N/A	N/A	N/A	N/A	[391]
26DCzPPY:**B4PyMPM**	1:1 Bulk	439	N/A	6.9	N/A	N/A	N/A	N/A	[392]
mCP:**B4PyMPM**	1:1 Bulk 15wt% FIrpic	N/A	N/A	N/A	N/A	472	0.17, 0.35	N/A	[392]
26DCzPPY:**B4PyMPM**	1:1 Bulk 15wt%	N/A	N/A	N/A	N/A	472	0.17, 0.36	N/A	[392]

	FIrpic								
26DCzPPy:**PO-01**/**26DCzPPY**:**B4PyMPM**:15wt%**FIrpic**	0.5wt% **PO-01**	N/A	N/A	N/A	N/A	N/A	0.36, 0.44	21.9	[392]
26DCzPPy:**PO-01**/**26DCzPPY**:**B4PyMPM**:15wt%**FIrpic**	1.0wt% **PO-01**	N/A	N/A	N/A	N/A	N/A	0.41, 0.46	24.4	[392]
26DCzPPy:**PO-01**/**26DCzPPY**:**B4PyMPM**:15wt%**FIrpic**	2.0wt% **PO-01**	N/A	N/A	N/A	N/A	N/A	0.45, 0.47	25.3	[392]
26DCzPPy:**PO-01**/**26DCzPPY**:**B4PyMPM**:15wt%**FIrpic**	4.0wt% **PO-01**	N/A	N/A	N/A	N/A	N/A	0.45, 0.48	28.5	[392]
26DCzPPy:**PO-T2T**	1:1 Bulk	477	N/A	N/A	N/A	N/A	0.17, 0.33	7.8	[393]
26DCzPPy:**PO-T2T**	1:1 Bulk 0.3wt% TBRb	N/A	N/A	N/A	N/A	N/A	N/A	6.2	[393]
26DCzPPy:**PO-T2T**	1:1 Bulk 0.5wt% TBRb	N/A	N/A	N/A	N/A	N/A	N/A	6.0	[393]
26DCzPPy:**PO-T2T**	1:1 Bulk 0.8wt% TBRb	N/A	N/A	N/A	N/A	N/A	N/A	5.8	[393]
26DCzPPy:**PO-T2T**	1:1 Bulk 1.0wt% TBRb	N/A	N/A	N/A	N/A	N/A	N/A	5.6	[393]
26DCzPPy:**PO T2T**:0.3wt%**TB Rb**/**26DCzPPy**:**PO-T2T**	1:1 Bulk	N/A	N/A	N/A	N/A	N/A	0.27,0.43	7.0	[393]
26DCzPPy:**PO T2T**:0.3wt%**TB Rb**/**26DCzPPy**:**PO-T2T**:0.3wt%**TBRb**	1:1 Bulk	N/A	N/A	N/A	N/A	N/A	0.36,0.53	10.1	[393]
26DCzPPy:**PO T2T**:0.3wt%**TB Rb**/**26DCzPPy**:**PO-T2T**	TCTA interlayer	N/A	N/A	N/A	N/A	N/A	N/A	8.6	[393]
mCP:**PO-T2T**	1:1 Bulk	471	17.8	7.38	N/A	476	0.18, 0.28	6.85	[394]
TPD:**PO-T2T**	1:1 Bulk	565	4.9	0.05	N/A	592	0.53, 0.46	1.47	[394]
TPD:**Bphen**	1:1 Bulk	462	6.2	0.04	N/A	480	0.20, 0.46	0.46	[394]
mCP:**PO-T2T**/**PO-T2T**:**TPD**/**Bphen**:**TPD**	1:1/1:1/1:1	N/A	N/A	N/A	N/A	N/A	0.24, 0.33	4.53	[394]
mCP:**PO-T2T**/**PO-T2T**:**TPD**/**Bphen**:**TPD**	1:1/3:1/1:1	N/A	N/A	N/A	N/A	N/A	0.24, 0.32	5.21	[394]
DTS-XA/**TCTA**	Interface	~450	N/A	N/A	N/A	433	N/A	9.1	[395]
DTS-XA/**m-MTDATA**	Interface	~525	N/A	N/A	N/A	524	N/A	8.3	[395]
DTS-XA/**TCTA** /spacer/**DTS-XA**/**m-MTDATA**	Spacer = TSPO1	N/A	N/A	N/A	N/A	N/A	0.29, 0.37	10.6	[395]
mCP:**pDPBITPO**	65:35 Bulk	415	11	5.7	0.01	N/A	N/A	N/A	[396]
mCP:**DpPBITPO**	65:35 Bulk	412	14	5.5	0.01	N/A	N/A	N/A	[396]

mCP:**pDPBITPO**	65:35 Bulk 35% **DMAC-DPS**:0.5% **4CzTPNBu**	471, 555 (30% DMAC-DPS)	92 (30% DMAC-DPS)	0.62, 1.1/0.74 (30% DMAC-DPS)	N/A	476, 564	0.43, 0.48	30.6	[396]
mCP:**DpPBITPO**	65:35 Bulk 35% **DMAC-DPS**:0.2% **4CzTPNBu**	N/A	N/A	N/A	N/A	476, 556	0.31, 0.35	26.5	[396]
mCP:**DpPBITPO**	65:35 Bulk 35% **DMAC-DPS**:0.5% **4CzTPNBu**	474, 551 (30% DMAC-DPS)	97 (30% DMAC-DPS)	0.39, 0.69/0.37 (30% DMAC-DPS)	N/A	476, 560	0.44, 0.47	32.7	[396]

Table **S11.** Photophysical properties of the Metal TADF complexes reviewed in Section **9**.

	Solution					Solid State					
Complex	**Solvent**	**λ_{PL} / nm**	**Φ_{PL} / %**	**τ_{PL} / ms**	**ΔE_{ST} / meV**	**Medium**	**λ_{PL} / nm**	**Φ_{PL} / %**	**τ_{PL} / ms**	**ΔE_{ST} / meV**	**Reference**
Copper											
$[Cu(dmp)_2]BF_4$	DCM	670	0.021	0.09	-	-	-	-	-	-	[397]
$[Cu(bcp)_2]BF_4$	DCM	770	0.032	0.08	-	-	-	-	-	-	[398]
$[Cu(dnp)_2]BF_4$	DCM	715	0.12	0.25	-	-	-	-	-	-	[398]
$[Cu(tmbp)_2]BF_4$	DCM	775	0.007	0.018	-	-	-	-	-	-	[398]
$[Cu(dpp)_2]BF_4$	DCM	710	0.11	0.25	-	-	-	-	-	-	[398]
$[Cu(tpp)_2]BF_4$	DCM	745	0.145	0.23	-	-	-	-	-	-	[398]
$[Cu(dhp)_2]BF_4$	DCM	724	0.10	0.132	-	-	-	-	-	-	[399]
$[Cu(dpOHp)_2]BF_4$	DCM	724	0.08	0.107	-	-	-	-	-	-	[399]
$[Cu(dpOAcp)_2]BF_4$	DCM	718	0.11	0.152	-	-	-	-	-	-	[399]
$[Cu(dbp)_2]BF_4$	DCM	718	0.12	0.224	-	-	-	-	-	-	[399]
$[Cu(dbpp)_2]BF_4$	DCM	745	0.04	0.130	-	-	-	-	-	-	[399]
$[Cu(dtbp)_2]BF_4$	DCM	599	5.6	3.26	-	-	-	-	-	-	[400]
$[Cu(dchtmp)_2]PF_6$	DCM	631	5.5	2.6	-	-	-	-	-	-	[401]
$[Cu(dipp)_2]BF_4$	DCM	679	0.4	0.342	-	-	-	-	-	-	[402]
$[Cu(L_1)_2]PF_6$	DCM	678	0.17	0.127	-	-	-	-	-	-	[403]
$[Cu(L_{Cl})_2]PF_6$	DCM	715	0.024	0.063	-	-	-	-	-	-	[404]
$[Cu(L_{Br})_2]PF_6$	DCM	700	0.081	0.106	-	-	-	-	-	-	[404]
$[Cu(L_I)_2]PF_6$	DCM	700	0.088	0.11	-	-	-	-	-	-	[404]
$[Cu(dmp)(PPh_3)_2]BF_4$	DCM	560	0.014	0.33	-	-	-	-	-	-	[405]
$[Cu(dmp)(POP)]BF_4$	DCM	570	15	14.3	-	powder	538	80	18	113	[406,407]
$[Cu(dmp)(phanephos)]BF_4$	DCM	558	40	10	-	powder	530	80	14	124	[408]
$[Cu(pypz)(POP)]BF_4$	DCM	590	2.1	1.6	-	powder	490	56	20.4	180	[409]
$[Cu(pympz)(POP)]BF_4$	DCM	536	45	11.9	-	powder	465	87	12.2	170	[409]
$[Cu(pytfmpz)(POP)]BF_4$	DCM	540	30	13.3	-	powder	492	75	22.8	180	[409]
$[Cu(dmbpy)(POP)]BF_4$	Ethanol	655	<1	0.02	-	powder	575	9	-	-	[410]
$[Cu(tmbpy)(POP)]BF_4$	Ethanol	575	6	2.5	-	powder	555	74	13	89	[410]
$[Cu(L_1)(POP)]BF_4$	-	-	-	-	-	powder	464	82	41	80	[411]
$[Cu(L_2)(POP)]BF_4$	-	-	-	-	-	powder	477	99	39	80	[411]
$[Cu(L_3)(POP)]BF_4$	-	-	-	-	-	powder	479	83	42	90	[411]
$[Cu(L_4)(POP)]BF_4$	-	-	-	-	-	powder	471	84	34	90	[411]
$[Cu(L_5)(POP)]BF_4$	-	-	-	-	-	powder	481	87	33	90	[411]
$[Cu(ECAF)(POP)]PF_6$	DCM	616	-	-	-	powder	550	22.4	5.7	80	[412]
$[Cu(EHCAF)(POP)]PF_6$	DCM	616	-	-	-	powder	549	18.5	5.7	90	[412]
$[Cu(PCAF)(POP)]PF_6$	DCM	616	-	-	-	powder	556	20.0	5.7	40	[412]
$[Cu(czpzpy)(PPh_3)_2]BF_4$	DCM	540	-	-	-	powder	495	45	134	180	[413]

[Cu(czpzpy)(POP)]BF_4	DCM	569	-	-	-	powder	518	98	23	130	[413]
[Cu(PNNA)(POP)]BF_4	DCM	518	16	4.6	-	powder	493	60.9	145	120	[414]
[Cu(PNNA)(xant)]BF_4	DCM	518	19	7.2	-	powder	475	40.7	51	120	[414]
[Cu(m42)(POP)]BF_4	DCM	568	19.7	9.0	-	powder	538	24	17.1	111	[415]
[Cu(dcbq)(PPh_3)$_2$]PF_6	DCM	704	-	-	-	powder	669	26	0.71	-	[416]
[Cu(dcbq)(POP)]PF_6	DCM	709	-	-	-	powder	676	35	0.58	-	[416]
[Cu(dcbq)(xant)]PF_6	DCM	701	-	-	-	powder	671	56	0.63	-	[416]
S1	DCM	610	-	-	-	10% in PMMA	577	4	1.1	210	[417]
S2	DCM	615	-	-	-	10% in PMMA	592	8	1.1	170	[417]
Se1	DCM	624	-	-	-	10% in PMMA	594	6	1.2	140	[417]
Se2	DCM	637	-	-	-	10% in PMMA	605	8	0.8	120	[417]
[Cu(Ph-BenIm-methPy)(POP)]PF_6	-	-	-	-	-	powder	493	96	63	128	[418]
[Cu(Ph-Im-methPy)(POP)]PF_6	-	-	-	-	-	powder	487	100	56	108	[418]
[Cu(DMAC-PyPI)(POP)]BF_4	DCM	514	6	-	-	10% in DPEPO	534	21.4	62	110	[419]
[Cu(DMAC-PyPI)(xant)]BF_4	DCM	518	9.5	-	-	10% in DPEPO	533	24.1	71	80	[419]
[Cu(PXZ-PyPI)(POP)]BF_4	DCM	534	5	-	-	10% in DPEPO	565	5.8	48	70	[419]
[Cu(PXZ-PyPI)(xant)]BF_4	DCM	537	4.2	-	-	10% in DPEPO	564	4.3	42	50	[419]
[Cu(^{t}Bupzmpy)(POP)]BF_4	-	-	-	-	-	powder	523	91	13.4	100	[420]
[Cu(Phpzmpy)(POP)]BF_4	-	-	-	-	-	powder	500	71	32.9	90	[420]
[Cu(Adpzmpy)(POP)]BF_4	-	-	-	--	-	powder	498	77	34.1	90	[420]
[Cu(pz-S-pz)(POP)]PF_6	-	-	-	-	-	powder	581	23.7	10.5	74	[421]
[Cu(pq-S-pz)(POP)]PF_6	-	-	-	-	-	powder	642	57.8	6.47	128	[421]
[Cu(pz-S-CF_3pm)(POP)]PF_6	-	-	-	--	-	powder	650	7.7	7.74	64	[421]
Cu(POP)(pz_2BH_2)	DCM	535	9	1.3	-	powder	436	45	20	-	[422]
Cu(POP)(pz_4B)	DCM	500	2	0.5	-	powder	447	90	22	-	[422]
Cu(POP)(pz_2BPh_2)	DCM	498	8	1.8	-	powder	464	90	23	81 [a]	[422,423]
Cu(dppb)(Ph_2Bpz_2)	2-MeTHF	609	0.1	0.08	-	10% in mCP	545	50	3.8	46 [a]	[423,424]
Cu(dppb-F)(Ph_2Bpz_2)	2-MeTHF	614	0.5	0.13	-	10% in mCP	534	63	3.6	-	[424]
Cu(dppb-CF_3)(Ph_2Bpz_2)	2-MeTHF	616	2	0.35	-	10% in mCP	523	68	8.2	-	[424]
Cu(PP)(PS)	-	-	-	-	-	powder	521	52	1.73	-	[425]
TTPPCuCl	-	-	-	-	-	Neat Film	530	76	19	-	[426]
TTPPCuBr	-	-	-	-	-	Neat Film	523	79	16	-	[426]
TTPPCuI	-	-	-	-	-	Neat Film	521	83	11	-	[426]

CuCl(PPh_3)(dpmb)	-	-	-	-	-	powder	479	53	5.1	-	[427]
CuBr(PPh_3)(dpmb)	-	-	-	-	-	powder	465	28	5.7	-	[427]
CuI(PPh_3)(dpmb)	-	-	-	-	-	powder	464	23	4.3	-	[427]
CuI(PPh_3)(dpmt)	-	-	-	-	-	powder	459	24	361	-	[428]
CuBr(PPh_3)(dpmt)	-	-	-	-	-	powder	465	4	209	-	[428]
[CuCl(PPh_3)(dpmt)]	-	-	-	-	-	powder	484	4	106	-	[428]
Cu(NCS)(P^3)	-	-	-	-	-	powder	520	57	4.8	62	[429]
Cu(NCS)(P^4)	-	-	-	-	-	powder	543	27	4.9	80	[429]
[CuI(dpts)(PPh_3)]	-	-	-	-	-	powder	485	41	36.4	59	[430]
[CuBr(dpts)(PPh_3)]	-	-	-	-	-	powder	506	52	48.9	127	[430]
[CuCl(dpts)(PPh_3)]	-	-	-	-	-	powder	535	29	20.8	128	[430]
[CuI(dppt)(PPh_3)]	-	-	-	-	-	powder	515	18	9.0	57	[430]
[CuBr(dppt)(PPh_3)]	-	-	-	-	-	powder	535	7	10.0	104	[430]
[CuCl(dppt)(PPh_3)]	-	-	-	-	-	powder	516	3	4.2	105	[430]
[Cu(dmpzpp)Br]	-	-	-	-	-	powder	541	83	9	-	[431]
[Cu(dmpzpp)I]	-	-	-	-	-	powder	530	82	7	-	[431]
[Cu(dmpzpp)SPh]	DCM	544	1	4	-	powder	540	90	5	74	[431]
[Cu(3,4-dppTp)(pz_2-BH_2)] 1B	-	-	-	-	-	Neat Film	472	59	22	-	[431]
[Cu(3,4-dppTp)(pz_2-BH_2)] 1Y	-	-	-	-	-	Neat Film	528	78	19	-	[432]
[Cu(3,4-dppTp)(pz_2-BH_2)] 1G	-	-	-	-	-	Neat Film	550	34	15	-	[432]
[Cu(dppnc)(thzbzi)]	-	-	-	-	-	Solid state	547	16	25.8	114	[433]
Cu(PPh_3)$_2$(PyrTet)	-	-	-	-	-	Solid state	512	85	20.6	-	[434]
Cu(DPEPhos)(PyrTet)	-	-	-	-	-	Solid state	510	78	19.9	-	[434]
Cu(Xantphos)(PyrTet)	-	-	-	-	-	Solid state	545	76	26.6	-	[434]
Cu(PTEPhos)(PyrTet)	-	-	-	-	-	Solid state	502	89	17.8	-	[434]
[Cu(PPh_3)$_2$(PyrTetH)]BF_4	-	-	-	-	-	Solid state	522	46	13.5	-	[434]
[Cu(DPEPhos)(PyrTetH)]BF_4	-	-	-	-	-	Solid state	518	21	15.3	-	[434]
[Cu(Xantphos)(PyrTetH)]BF_4	-	-	-	-	-	Solid state	559	6	5.9	-	[434]
[Cu(Xantphos)(PyrTetH)]BF_4	-	-	-	-	-	Solid state	569	4	5.2	-	[434]
Cu(PPh_3)$_2$(fptz)	DCM	529	2.7	6.9	-	Solid state	496	53.3	30.3	-	[435]
[Cu(PPh_3)$_2$(fptzH)]ClO_4	DCM	547	4.8	7.9	-	Solid state	472	67.1	20.2	-	[435]
(L_{Me})CuCl	DCM	534	43	4.9	-	10% in mCP	520	68	6.1	-	[436]
(L_{Me})CuBr	DCM	527	47	5.4	-	10% in mCP	514	71	5.5	-	[436]
(L_{Me})CuI	DCM	517	60	6.5	-	10% in mCP	504	57	3.2	-	[436]
(L_{Et})CuBr	DCM	516	43	3.8	-	powder	487	80	6.5	74	[437]
(L_{iPr})CuBr	DCM	517	50	8.3	-	powder	486	95	8.9	88	[437]
Cu(L_{Me})(SPh)	2-MeTHF	592	24	1.4	-	powder	488	95	6.6	85	[438]
Cu(LiPr)(SPh)	2-MeTHF	546	15	1.0	-	powder	500	95	5.0	78	[438]
CuI(mpdp)	-	-	-	-	-	powder	493	5.4	7.2	69.4	[439]
CuBr(mpdp)	-	-	-	-	-	powder	527	<1	16.6	43.8	[439]

CuCl(mpdp)	-	-	-	-	-	powder	533	1.1	415.9	51.3	[439]
CuI(benzimPP)	-	-	-	-	-	powder	630	65	64.4	-	[440]
CuBr(benzimPP)	-	-	-	-	-	powder	615	72	61.6	-	[440]
CuI(dtbp)	-	-	-	-	-	powder	624	15	3.7	-	[441]
CuBr(dtbp)	-	-	-	-	-	powder	658	2	1.1	-	[441]
CuCl(dtbp)	-	-	-	-	-	powder	677	<1	0.9	-	[441]
(IPr)Cu(py2-BMe2)	-	-	-	-	-	powder	475	76	11	88	[442]
[Cu(IPr)(L_1)]PF_6	-	-	-	-	-	powder	463	22	13	-	[443]
[Cu(^{Me}IPr)(L_1)]PF_6	-	-	-	-	-	powder	475	48	24	-	[443]
[Cu(IPr^{MeO})(L_1)]PF_6	-	-	-	-	-	powder	481	31	29	-	[443]
[Cu(^{Me}IPr^{MeO})(L_1)]PF_6	-	-	-	-	-	powder	479	64	30	-	[443]
[Cu(^{Cl}IPr)(L_1)]PF_6	-	-	-	-	-	powder	467	17	10	-	[443]
[Cu(IPr)(L_2)]PF_6	-	-	-	-	-	powder	505	55	32	-	[443]
[Cu(IPr)(L_3)]PF_6	-	-	-	-	-	powder	550	<5	5	-	[443]
[Cu(IPr)(L_4)]PF_6	-	-	-	-	-	powder	420	<5	20	-	[443]
[Cu(IPr)(L_5)]PF_6	-	-	-	-	-	powder	521	20	7	-	[443]
[Cu(IPr)(L_6)]PF_6	-	-	-	-	-	powder	473	36	25	-	[443]
[Cu(IPr)(dpya)]PF_6	-	-	-	-	-	powder	481	22	13	-	[444]
[Cu(IPr)(dpym)]PF_6	-	-	-	-	-	powder	483	15	6	-	[444]
[Cu(IPr)(dpyp)]PF_6	-	-	-	-	-	powder	482	73	14	-	[444]
[Cu(IPr)(PPhPy$_2$)]PF_6	-	-	-	-	-	powder	519	86	13	-	[444]
CuO1	-	-	-	-	-	powder	467	57	0.47	-	[445]
CuO2	-	-	-	-	-	powder	460	22	0.58	-	[445]
CuO4	-	-	-	-	-	powder	466	57	0.66	-	[445]
CuO5	-	-	-	-	-	powder	467	38	0.45	-	[445]
CuN1	-	-	-	-	-	powder	500	11	0.45	-	[445]
CuN2	-	-	-	-	-	powder	513	4.5	0.28	-	[445]
$^{(Ad)}$LCuSPh	-	-	-	-	-	powder	484	62	0.50	-	[445]
[Cu(ITr)(4-CO-py)]BF_4	DCM	600	-	-	-	10 wt% in PMMA	545	25	4.0	-	[446]
[Cu(ITr)(4-CN-py)]BF_4	DCM	665	-	-	-	10 wt% in PMMA	531	12	5.7	-	[446]
CuI:CzBPDCb	-	-	-	-	-	8 wt% CuI in CzBPDCb	520	22	1.05	120	[447]
CuCl:azaSPF	-	-	-	-	-	7 wt% CuCl in azaSPF	553	48.8	5.3	-	[448]
CuBr:azaSPF	-	-	-	-	-	7 wt% CuBr in azaSPF	537	77.9	5.5	-	[448]
CuI:azaSPF	-	-	-	-	-	9 wt% CuI in azaSPF	526	63.7	5.3	-	[448]
CuI:α-aza-SBF	DMF	517 [c]	-	55.8 [c]	-	5 wt% CuI in	548	4.6	5.5	-	[449]

						α-aza-SBF					
CuI:β-aza-SBF	DMF	625 [c]	-	18.1[c]	-	5 wt% CuI in β-aza-SBF	580	52.4	2.2	-	[449]
CuI:γ-aza-SBF	DMF	580 [c]	-	21.1[c]	-	5 wt% CuI in γ-aza-SBF	538	60.4	2.9	-	[449]
CuI:δ-aza-SBF	DMF	550 [c]	-	40.6 [c]	-	5 wt% CuI in δ-aza-SBF	550	92.2	4.2	-	[449]
[Cu(mI)dppb]$_2$	-	-	-	-	-	powder	495	-	10.4	-	[450]
{Cu(PNP-^{t}Bu)}$_2$	2-MeTHF	-	57	11.5	100	1 wt% TAPC	524	-	-	-	[451]
1-Cu	-	-	-	-	-	neat film	540	83	3.6 [a]	-	[452]
Cu$_2$Cl$_2$(N^P)$_2$	-	-	-	-	-	powder	485	92	8.3	124	[453]
Cu$_2$Br$_2$(N^P)$_2$	-	-	-	-	-	powder	501	52	12.4	118	[453]
Cu$_2$I$_2$(N^P)$_2$	-	-	-	-	-	powder	484	76	7.3	136	[453]
[Cu(μ-Cl)dpmb]$_2$	-	-	-	-	-	powder	498	32	2.5	120	[454]
[Cu(μ-Br)dpmb]$_2$	-	-	-	-	-	powder	511	28	12.5	120	[454]
[Cu(μ-I)dpmb]$_2$	-	-	-	-	-	powder	527	29	4.8	140	[454]
[Cu$_2$(μ-I)$_2$(dmphen)$_2$]	-	-	-	-	-	powder	667	18	6.4	-	[441]
[Cu$_2$Cl$_2$(IMesPic^{Cl})$_2$]	-	-	-	-	-	powder	550	49	11.0	92	[455]
[Cu$_2$Cl$_2$(IMesPic)$_2$]	-	-	-	-	-	powder	520	59	11.0	88	[455]
[Cu$_2$Cl$_2$(IMesPic^{Me})$_2$]	-	-	-	-	-	powder	523	68	9.2	79	[455]
[Cu$_2$I$_2$(MePyrPHOS)(P(mTol)$_3$]	toluene	593	-	-	-	powder	550	75	6.9	-	[456]
[Cu$_2$(pytzph)(POP)$_2$](BF$_4$)$_2$	-	-	-	-	-	crystalline	509	43	5.5	89	[457]
[Cu$_2$(pytzphcf)(POP)$_2$](BF$_4$)$_2$	-	-	-	-	-	crystalline	519	29	16	139	[457]
[Cu$_2$(pytzphcz)(POP)$_2$](BF$_4$)$_2$	-	-	-	-	-	crystalline	503	79	5.5	94	[457]
(PNNP)Cu$_2$Br$_2$	-	-	-	-	-	powder	517	42	13	90	[458]
(PNNP)Cu$_2$I$_2$	-	-	-	-	-	powder	494	58	8.8	100	[458]
[(P^N)Cu(m-I)]$_2$	-	-	-	-	-	powder	585	36.9	5.85	20	[459]
Cu-1b	-	-	-	-	-	powder	524	93	5.8	-	[460]
Cu-1c	-	-	-	-	-	powder	541	70	5.5	-	[460]
Cu-1d	-	-	-	-	-	powder	528	80	10.2	-	[460]
Cu-2b	-	-	-	-	-	powder	519	89	5.5	-	[460]
Cu-2c	-	-	-	-	-	powder	524	90	5.5	-	[460]
Cu-2d	-	-	-	-	-	powder	524	76	6.8	-	[460]
Cu-3a	-	-	-	-	-	powder	549	73	5.1	-	[460]
Cu-3b	-	-	-	-	-	powder	539	73	7.3	-	[460]
Cu-4a	-	-	-	-	-	powder	547	79	5.5	-	[460]
Cu-4b	-	-	-	-	-	powder	519	88	6.3	-	[460]
Cu$_2$(Py$_3$P)$_2$Cl$_2$	-	-	-	-	-	crystalline	550	55	14.5	186	[461]
Cu$_2$(Py$_3$P)$_2$Br$_2$	-	-	-	-	-	crystalline	530	53	18.3	155	[461]
Cu$_2$(Py$_3$P)$_2$I$_2$	-	-	-	-	-	crystalline	520	51	20.0	124	[461]
Cu$_2$(Py$_2$AsPh)$_2$Cl$_2$	-	-	-	-	-	powder	530	50	9	167	[462]

$Cu_2(Py_2AsPh)_2Br_2$	-	-	-	-	-	powder	510	20	3.5	157	[462]
$Cu_2(Py_2AsPh)_2I_2$	-	-	-	-	-	powder	500	22	2	136	[462]
$[Cu_2(Py_2AsPh)_2(MeCN)_2](BF_4)_2$	-	-	-	-	-	powder	465	2	4	-	[462]
$(DBFDP)_2Cu_4I_4$	DCM	496	5.7	-	-	neat film	494	5.1	1.96	160	[463]
$(DCzDBFDP)_2Cu_4I_4$	DCM	514	53	-	-	neat film	491	46	1.05	70	[464]
$(DtBDCzDBFDP)_2Cu_4I_4$	DCM	510	70	-	-	neat film	480	65	10.2	100	[464]
$Cu_4Br_4(dppMeCz)_2$ (1Y)	-	-	-	-	-	powder	549	3.7	3.6	-	[465]
$[(3,5\text{-}(CF_3)_2Pz)Cu]_3(dppm)$	DCE	532	-	1.6	-	powder	514	-	32.7	-	[466]
$[Cu_4(PCP)_3]BF_4$	THF	525	79	11		powder	518	50	9.8	72	[467]
CuL^3 $[Cu_4I_4(dppp)_2(3\text{-acepy})_2]$	-	-	-	-	-	powder	562	26.3	2.52	36	[468]
CuL^3 $[Cu_4I_4(dppp)_2(4\text{-acepy})_2]$	-	-	-	-	-	powder	580	30.6	10.78	35	[468]
Silver											
Ag(dppb)(PS)	-	-	-	-	-	neat film	505	32	0.6, 2.2	20	[425]
Ag(phen)(P2-nCB)	DCM	-	< 1	-	-	1% in PMMA	577	26	2.0 [a]	-	[51]
Ag(idmp)(P2-nCB)	DCM	-	< 1	-	-	1% in PMMA	565	38	1.7 [a]	-	[51]
Ag(dmp)(P2-nCB)	DCM	-	-	-	-	1% in PMMA	540	75	2.8 [a]	80 [a]	[51]
Ag(dbp)(P2-nCB)	DCM	585	3	-	-	1% in PMMA	535	85	1.4 [a]	80 [a]	[50]
[Ag(xant)(4,4'-MeO-bpy)]BF4	DCM	493	57	-	-	-	-	-	-	-	[469]
$Ag(P_3)(SCN)$	-	-	-	-	-	neat film	538	32	5.5, 16.2	-	[429]
$Ag(P_4)(SCN)$	-	-	-	-	-	neat film	552	27	1.3, 5.4	-	[429]
$Ag(P_3)(SCN\text{-}B(C_6F_5)_3)$	-	-	-	-	-	neat film	475	11	1.3, 4.7	-	[429]
$Ag(P_4)(SCN\text{-}B(C_6F_5)_3)$	-	-	-	-	-	neat film	482	12	24.1, 10.1	-	[429]
$(L_{Me})AgBr$	DCM	499	20	-	-	powder	487	0.56	-	105	[470]
$(L_{Et})AgBr$	DCM	499	25	-	-	powder	463	0.70	-	110	[470]
$(L_{iPr})AgBr$	DCM	492	32	-	-	powder	463	0.98	-	99	[470]
Ag(DMAC-MPyPz)(POP)	DCM	502	61	4.23	-	15 wt% PMMA	472	95	6.3	170	[471]
Ag(DMAC-MPyPz)(xant)	DCM	500	60	4.24	-	15 wt% PMMA	471	99	6.5	150	[471]
Ag(PI-DMAC)(POP)	DCM	502	-	-	-	10 wt% DPEPO	520	48 [b]	4.7	210	[472]
Ag(PI-DMAC)(xant)	DCM	506	-	-	-	10 wt% DPEPO	524	34 [b]	7.4	210	[472]
Ag(PI-PXZ)(POP)	DCM	533	-	-	-	10 wt% DPEPO	573	62 [b]	3.5	160	[472]
Ag(PI-PXZ)(xant)	DCM	533	-	-	-	10 wt% DPEPO	535	50 [b]	3.7	220	[472]

$P(Ph)_2Me$-Ag-TCzBN-PyPz	-	-	-	-	-	powder	522	28.5	0.59	30	[473]
$[Ag(spiro\text{-}2N)(POP)]BF_4$	-	-	-	-	-	10 wt% PMMA	486	65	5.3	90	[474]
$[Ag(spiro\text{-}2N)(xanthene)]BF_4$	-	-	-	-	-	10 wt% PMMA	495	74	5.8	50	[474]
$Ag(^{Ad}CAAC)Cl$	-	-	-	-	-	powder	432	4.5	15.0	-	[475]
$Ag(^{Ad}CAAC)Br$	-	-	-	-	-	powder	437	5	8.1	-	[475]
$Ag(^{Ad}CAAC)I$	-	-	-	-	-	powder	443	0.5	6.7	-	[475]
$Ag(Et_2CAAC)(maloNHC)$	Toluene	459	-	-	-	5 wt% PS	440	0.3	11.6	-	[476]
$[Ag(PPh_3)(Cl)]_2(tpbz)$	-	-	-	-	-	5 wt% PMMA	531	34	5.4	-	[477]
$[Ag(PPh_3)(Br)]_2(tpbz)$	-	-	-	-	-	5 wt% PMMA	519	40	4.5	-	[477]
$[Ag(PPh_3)(I)]_2(tpbz)$	-	-	-	-	-	5 wt% PMMA	517	16	4.0	-	[477]
$Ag_2(tpbz)(P_2\text{-}n CB)_2$	-	-	-	-	-	powder	555	70	1.9	59	[478]
$[Ag(^{Et2}CAAC)Cl]_2$	-	-	-	-	-	powder	454	5	18.9	-	[475]
$[Ag(\mu_2\text{-}\kappa^2\text{-}SCN)(dppb)]_2$	-	-	-	-	-	powder	505	35	12.0	90	[429]
$[Ag_2(Py_3P)_3(SCN)_2]$	Chloroform	478	70	9	-	powder	469	16	2.2	-	[479]
$[Ag_2(Py_3P)_3(SCN)_2]$	DCM	483	71	12	-	-	-	-	-	-	[479]
$[Ag_2(\mu_3,\kappa^2\text{-}SCN)(P_4)]_2(CF_3SO_3)_2$	-	-	-	-	-	powder	468	43	4.7	113	[429]
$[Ag_2(\mu_3,\kappa^2\text{-}SCN)(t\text{-}SCN)(P_4)]_2$	-	-	-	-	-	powder	475	11	18.3	-	[429]
$[Ag(dppb)(Cl)]_2$	-	-	-	-	-	5 wt% PMMA	515	47	35	-	[480]
$[Ag(dppb)(NO_3)]_2$	-	-	-	-	-	5 wt% PMMA	482	24	21	-	[480]
$[Ag(dppb)(ClO_4)]_2$	-	-	-	-	-	5 wt% PMMA	492	44	63	-	[480]
$[Ag(dppb)(CF_3COO)]_2$	-	-	-	-	-	5 wt% PMMA	496	53	61	-	[480]
$[Ag(dppb)(CF_3SO_3)]_2$	-	-	-	-	-	5 wt% PMMA	500	28	41	-	[480]
$[Ag_4(\mu\text{-}DMPTP)_2(POP)_3][BF_4]_2$	-	-	-	-	-	powder	527	76	0.65	80	[61]
Ag_6L_6/D_6	-	-	-	-	-	powder	556	56	18.6	96	[481]
Ag_6PL_6/PD_6	-	-	-	-	-	powder	575	95	16.3	41	[481]
Gold											
Au(dppb)(PS)	-	-	-	-	-	Neat film	610	12	1.66	-	[425]
(LiPr)AuCl	2-MeTHF	607	2		-	Neat film	558	82	13	118	[482]
(LiPr)AuI	2-MeTHF	596	4		-	Neat film	549	92	9	108	[482]
$[(dppb)_2Au](NO_3)$	-	-	-	-	-	Neat film	485	95	3.8	77	[482]
$[AuC_6F_5(dppBz)]$	-	-	-	-	-	Neat film	560	29	10.3	58	[483]

[AuC_6m-Cl_2F_3(dppBz)]	-	-	-	-	-	Neat film	545	16	20.8	100	[483]
[AuC_6Cl_5(dppBz)]	-	-	-	-	-	Neat film	555	11	19.9	114	[483]
[Au_O-C_6BrF_4(dppBz)]	-	-	-	-	-	Neat film	566	13	22.6	89	[484]
[Au_p-C_6BrF_4(dppBz)]	-	-	-	-	-	Neat film	590	37	9.9	-	[484]
[Au_O-C_6F_4I(dppBz)]	-	-	-	-	-	Neat film	616	4	9.6	-	[484]
[Au_p-C_6F_4I(dppBz)]	-	-	-	-	-	Neat film	595	8	9.5	-	[484]
Au(*malo*NHC)(^{Et2}CAAC)	Toluene	453	-	-	-	5 wt% PS	464	2.9	22	-	[476]
AuDAC^{NPh3}	2-MeTHF	680	0.2	0.004	-	1 wt% PS	620	38	0.65	-	[485]
AuMAC^{NPh3}	2-MeTHF	522	12	0.210	-	1 wt% PS	462	19	2.3	-	[485]
AuMAC^{NMe2}	2-MeTHF	583	3.5	0.083	-	1 wt% PS	504	28	1.3	-	[485]
AuMAC^{Xy}	2-MeTHF	594	5.5	0.310	-	1 wt% PS	520	77	4.1	-	[485]
AuMAC^{Jul}	2-MeTHF	604	1.3	0.015	-	1 wt% PS	544	61	2.5	-	[485]
AuMAC^{MeJul}	2-MeTHF	620	2.1	0.128	-	1 wt% PS	554	61	3.0	-	[485]
Au-CC-1	Toluene	435	-	0.21	330	5 wt% PMMA	427	36	65	-	[486]
Au-CC-2	Toluene	540	-	0.64	110	5 wt% PMMA	515	76	127.3	144	[486]
Au-CC-3	Toluene	536	-	0.51	0	5 wt% PMMA	520	60	53.7	82	[486]
Au-CC-4	Toluene	565	-	0.89	160	5 wt% PMMA	545	55	224.6	162	[486]
(SIPr)AuBN	THF	511	88	7.9	-	1 wt% PMMA	505	99	114	-	[487]
(BzIPr)AuBN	THF	514	86	6.9	-	2 wt% PMMA	511	90	5.8	-	[487]
(PyIPr)AuBN	THF	511	93	7.3	-	2 wt% PMMA	513	91	5.5	-	[487]
(PzIPr)AuBN	THF	510	78	6.5	-	2 wt% PMMA	514	88	5.9	-	[487]
(IPr)AuBN	THF	511	83	7.2	-	2 wt% PMMA	515	92	5.5	-	[487]
(BzIPr)AuBNO	THF	471	89	27	-	2 wt% PMMA	457	97	600	-	[487]
IPzIDCz	2-MeTHF	587	-	-	-	10 wt% DPEPO	525	66	2.9		[488]
ImIDCz	2-MeTHF	475	-	-	-	10 wt% DPEPO	478	51	704		[488]
IPzTPA	2-MeTHF	612	-	-	-	10 wt% DPEPO	529	66	1.2		[488]
(C^Npz^C)AuCl	DCM	-	-	-	-	Neat film	560 [a]	-	-	-	[489]
(C^Npz^C)AuCN	DCM	536	0.184	0.00596	-	Neat film	535	2.9	-	-	[489]
(C^Npz^C)Au(PyZ)	DCM	572	0.008	0.0154	-	Neat film	531	-	-	-	[489]

(C^Npz^C)AuC≡CPh	DCM	526	0.462	0.161	-	Neat film	523	4.5	-	-	[489]
(C^Npz^C)AuC≡*t*Bu	DCM	525	0.512	0.13	-	Neat film	523	8.3	-	-	[489]
Me(C^Npz^C)AuClBF$_4$$^-$	DCM	460	3.75	0.00346	-	Neat film	623	-	-	-	[489]
(C^N^C)AuPh	Toluene	503	14	61.5	-	4 wt% PMMA	504	14	51	-	[490]
(C^N^C)Au(PhN(Ph)$_2$)	Toluene	534	74	1.03	-	4 wt% PMMA	523	66	1.35	-	[490]
(C^N^C)AuPhNMe2	Toluene	596	18	0.32	-	4 wt% PMMA	564	42	0.74	-	[490]
(C^N^C)AuPhCz	Toluene	503	13	43.5	-	4 wt% PMMA	504	13	34	-	[490]
(F$_2$C^NOEt^CF$_2$)Au(PhN(Ph)$_2$)	Toluene	524	79	0.71	-	4 wt% PMMA	517	84	0.72	-	[490]
(CF$_2$^NOEt^CF$_2$)AuPhN(p-FC$_6$H$_4$)$_2$	Toluene	511	68	0.75	-	4 wt% PMMA	513	78	0.85	-	[490]
(C^Niq^C)AuPhN(C$_6$H$_5$)$_2$	Toluene	641	6.5	29.4	-	4 wt% PMMA	642	3.1	16.5	-	[490]
(CtBu^N$_2$MePh^CtBu)AuPhtBuDPA	Toluene	527	75	1.10	-	4 wt% PMMA	521	67	1.10	-	[490]
(CF$_2^N^{Nme2}$^CF$_2$)Au(PhN(Ph)$_2$)	Toluene	495	81	0.68	-	4 wt% PMMA	484	82	0.97	-	[491]
(CF$_2^N^{Nme2}$^CF$_2$)Au(PhN(p-FC$_6$H$_4$)$_2$)	Toluene	483	60	0.67	-	4 wt% PMMA	470	34	0.95	-	[491]
(CF$_2$^N^CF$_2$)Au(PhN(Ph)$_2$)	Toluene	566	93	0.84	-	4 wt% PMMA	550	81	0.69	-	[491]
(CF$_2$^N^CF$_2$)Au(C≡CPh)	Toluene	466	0.2	0.34	-	4 wt% PMMA	468	2.8	22.4	-	[492]
(CF$_2$^N^CF$_2$)Au(C≡CPh-*p*NPh$_2$)	Toluene	574	60	0.78	-	4 wt% PMMA	577	88	0.85	-	[492]
(CF$_2$^N^CF$_2$)Au(C≡CPh-*m*NPh$_2$)	Toluene	545	21	1.25	-	4 wt% PMMA	546	29	3.78	-	[492]
(CF$_2$^N^CF$_2$)Au(C≡CPh-*p*DMAC)	Toluene	562	49	0.80	-	4 wt% PMMA	560	67	1.43	-	[492]
(CF$_2$^N^CF$_2$)Au(C≡C-Ph-PXZ)	Toluene	603	57	0.84	-	4 wt% TCTA :TPBi	567	65	1.46	-	[492]
(CF$_2$^N^CF$_2$)Au(C≡C-Me$_2$Ph-*p*NPh$_2$)	Toluene	594	25	0.33	-	4 wt% TCTA :TPBi	568	80	1.19	-	[492]
(C^{tBu}^N$_{pz}^{C}^{tBu}$)Au(C≡C-Me$_2$Ph-*p*NPh$_2$)	Toluene	632	2	0.20	-	4 wt% MCP	595	56	0.77	-	[492]
(C^{tBu}^N$_{pz}^{C}^{tBu}$)Au(C≡C-Ph-PXZ)	Toluene	625	8	0.25	-	4 wt% PMMA	605	9	0.33	-	[492]
[Au{^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N(1-	Toluene	647	20	0.3	-	5 wt% mCP	554	83	3.3	-	[493]

thpy)}(Cbz)]											
[Au{^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N(1-thpy)}(^{t}Bu$_2$Cbz)]	Toluene	690	4	0.1	-	5 wt% mCP	592	60	1.4	-	[493]
[Au{^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N(1-thq)}(Cbz)]	Toluene	727	2	0.1	-	5 wt% mCP	604	57	4.5	-	[493]
[Au{^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N(2-thpy)}(Cbz)]	Toluene	635	22	0.3	-	5 wt% mCP	557	81	8.1	-	[493]
[Au{^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N(2-thpy)}(^{t}Bu$_2$Cbz)]	Toluene	671	6	0.1	-	5 wt% mCP	580	71	1.8	-	[493]
[Au{^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N(2-thq)}(Cbz)]	Toluene	710	3	0.1	-	10 wt% mCP	600	57	3.9	-	[493]
[Au{^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N}(Cbz)]	Toluene	607	4	0.5	3	20 wt% mCP	547	82	3.5	-	[494]
[Au{^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N}{(Cbz)-(Cbz)$_2$}]	Toluene	624	3.6	0.2	-	5 wt% mCP	532	74	1.2	-	[494]
[Au{^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N}{(Cbz)-(Cbz)$_2$-(Cbz)$_4$}]	Toluene	584	9.1	0.5	-	20 wt% mCP	535	75	1.4	-	[494]
[Au{4-^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N}(3-CN-Cbz)]	Toluene	540	15	2.0	-	15 wt% mCP	497, 526	41	67	-	[495]
[Au{^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N}(3-(P(O)Ph$_2$)-Cbz)]	Toluene	570	14	0.6	-	10 wt% mCP	497, 523	63	64.6	-	[495]
[Au{^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N}(3-(C$_6$H$_4$-NPh$_2$)-Cbz)]	Toluene	659	0.3	0.04	-	5 wt% mCP	557	44	1.7	-	[495]
[Au{^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N}(3-(MeC$_6$H$_3$-NPh$_2$)-Cbz)]	Toluene	637	1	0.1	-	10 wt% mCP	554	60	2.0	-	[495]
[Au{^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N}(2-(C$_6$H$_4$-NPh$_2$)-Cbz)]	Toluene	600	5	0.5	-	15 wt% mCP	539	68	7.2	-	[495]
[Au{^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N}(2-(MeC$_6$H$_3$-NPh$_2$)-Cbz)]	Toluene	599	7	0.5	-	10 wt% mCP	535	79	5.9	-	[495]
Au(C^C^{Oph}^NphOMe^C^{t}Bu)	Toluene	495, 526, 565	54	93.1	-	4 wt% PMMA	492, 523, 560	20	43.8	-	[496]
Au(C^C^{Oph}^NPh^{t}Bu$_2$^CBr)	Toluene	498, 526, 527	40	77.1	-	4 wt% PMMA	490, 522, 562	4	90.1	-	[496]
Au(C^C^{Oph}^NPh^{t}Bu$_2$^CDPA)	Toluene	524, 550	77	94.3	-	4 wt% PMMA	550	47	56.8	-	[496]
Au(C^C^{Oph}^NPh^{t}Bu$_2$^CPXZ)	Toluene	612	47	0.62	-	16 wt% TCTA	568	89	1.69	-	[496]
Au(C^C^{Me}^N^C)	Toluene	493, 521	28	225	-	4 wt% PMMA	489, 519, 555	6	147	-	[496]
Au(CBr^C^{Me}^N^C)	Toluene	485, 518,	26	152	-	4 wt% PMMA	486, 518, 555	6	90.4	-	[496]

		552									
Au(CDPA^C^{Me}^N^C)	Toluene	533	94	1.61	-	8wt% TCTA	520	82	2.08	-	[496]
Au(CPXZ^C^{Me}^N^C)	Toluene	580	74	0.79	-	4wt% TCTA	568	71	2.54	-	[496]
[Au{C^CPh^(N^C)fluorene)}]	Toluene	480, 513, 557	0.3	1.04	-	4 wt% PMMA	482, 515, 552	6	36.01	-	[496]
Au-1	Toluene	547	84	0.56	-	4 wt% DPEPO/TCTA	530	98	0.56	-	[497]
Au-2	Toluene	537	85	0.47	-	4 wt% DPEPO/TCTA	521	93	0.51	-	[497]
Au-3	Toluene	525	83	1.53	-	4 wt% PMMA	513	29	79.2	-	[497]
Au-4	Toluene	532	88	0.69	-	4 wt% DPEPO/TCTA	528	99	0.54	-	[497]
CMA											
Ag-1	toluene	521	74	0.46	-	neat film	496	19	0.38	80	[498]
Ag-2	toluene	546	55	0.305	-	neat film	514	45	0.42	60	[498]
CAAC-1a	2-MeTHF	492	100	2.5	-	1% in PS	474	100	2.8	-	[499]
CAAC-1b	2-MeTHF	510	68	2.3	-	-	-	-	-	-	[499]
CAAC-1c	2-MeTHF	500	56	1.8	-	-	-	-	-	-	[499]
CAAC-1d	2-MeTHF	510	11	0.54	-	-	-	-	-	-	[499]
CAAC-2b	2-MeTHF	542	12	1.46	-	-	-	-	-	-	[499]
CAAC-3	2-MeTHF	428	11	8.3	-	1% in PS	426	82	980	-	[499]
CAAC-4	2-MeTHF	558	25	0.28	-	1% in PS	518	100	2.3	-	[499]
CAAC-5	2-MeTHF	580	16	0.87	-	1% in PS	532	78	2.6	-	[499]
MAC*-1	2-MeTHF	448	24	2.3	-	1% in PS	432	80	12.4	-	[500]
MAC*-2	2-MeTHF	492	100	1.2	-	1% in PS	468	100	1.3	-	[500]
MAC*-3	2-MeTHF	542	55	1.1	-	1% in PS	506	90	1.4	-	[500]
DAC*-4	2-MeTHF	602	5	0.08	-	1% in PS	548	78	1.2	-	[500]
DAC*-5	2-MeTHF	666	2	0.052	-	1% in PS	616	30	0.75	-	[500]
DAC*-6	2-MeTHF	-	-	-	-	1% in PS	704	3	0.19	-	[500]
(^{Ad}L)Cu(G_1)	toluene	511	28	0.79	40	20% in PVK	502	33	3.0	-	[501]
(^{Ad}L)Cu(G_2)	toluene	491	2.6	0.83	30	20% in PVK	498	6	1.97	-	[501]
(^{Ad}L)Au(G_1)	toluene	526	52	0.67	130	20% in PVK	510	68	0.66	-	[501]
(^{Ad}L)Au(G_2)	toluene	505	78	0.79	30	20% in PVK	508	48	1.06	-	[501]
Cu^{CAAC}	2-MeTHF	474	100	2.5	-	1% in PS	470	100	2.8	-	[502]
Ag^{CAAC}	2-MeTHF	512	71	.37	-	1% in PS	472	100	0.50	-	[502]
Au^{CAAC}	2-MeTHF	502	95	1.20	-	1% in PS	472	100	1.14	-	[502]

Cu^{MAC}	2-MeTHF	542	55	1.10	-	1% in PS	506	90	1.40	-	[502]
Ag^{MAC}	2-MeTHF	568	06	0.04	-	1% in PS	512	79	0.33	-	[502]
Au^{MAC}	2-MeTHF	544	50	0.79	-	1% in PS	512	85	0.83	-	[502]
Cu^{BZI}	toluene	450	75	1.50	-	1% in PS	434	86	4.41	-	[503]
Ag^{BZI}	toluene	458	50	3.27	-	1% in PS	438	85	4.90	-	[503]
Au^{BZI}	toluene	448	94	1.11	-	1% in PS	432	100	3.17	-	[503]
Cu^{C6}	toluene	556	3.6	1.37	-	1% Zeonex	519	6	9.8	-	[504]
Au^{C6}	toluene	570	22	0.26	-	1% Zeonex	523	54	1.0	-	[504]
Cu^{BIC}	toluene	502	100	3.3	-	1% Zeonex	493	64	5.0	-	[504]
Ag^{BIC}	toluene	526	82	0.5	-	1% Zeonex	496	84	0.9	-	[504]
Au^{BIC}	toluene	512	100	1.1	-	1% Zeonex	490	100	1.3	-	[504]
MCMA	-	-	-	-	-	1% in PMMA	510	-	1.37	-	[505]
ECMA	-	-	-	-	-	1% in PMMA	510	-	1.87	-	[505]
BCMA	-	-	-	-	-	1% in PMMA	510	91	0.52	-	[505]
PCMA	-	-	-	-	-	1% in PMMA	520	89	0.35	-	[505]
Au^{CAAC}-1	toluene	495	96	0.74	110	neat film	484	-	0.99	-	[506]
Au^{CAAC}-2	toluene	456	61	11.5	120	neat film	425	-	10.8	-	[506]
Au^{CAAC}-3	toluene	528	98	1.25	200	neat film	500	-	0.76	-	[506]
Au^{CAAC}-4	toluene	552	95	0.84	300	neat film	540	-	0.69	-	[506]
Cu1	toluene	489	50	1.13	-	5% in PS	458	26	8.5	-	[507]
Au1	toluene	505	90	0.74	-	5% in PS	464	66	0.87	-	[507]
Cu2	toluene	589	20	0.58	-	5% in PS	528	37	3.6	-	[507]
Au2	toluene	603	20	0.15	-	5% in PS	563	40	0.61	-	[507]
Cu3	toluene	607	3	0.43	-	5% in PS	490	1.7	4.1	-	[507]
Au3	toluene	620	1.7	0.19	-	5% in PS	574	50	1.5	-	[507]
Au4	toluene	629	2	0.14	-	5% in PS	607	33	0.15	-	[507]
Au5	toluene	574	0.4	0.27	-	5% in PS	615	30	2.82	-	[507]
Cu6	toluene	661	-	0.11	-	5% in PS	614	-	-	-	[507]
Au6	toluene	672	1	0.25	-	5% in PS	637	17	0.77	-	[507]
Au7	toluene	654	8	0.6	-	5% in PS	649	8.5	2.2	-	[507]
Au8	toluene	689	<0.1	0.04	-	5% in PS	-	-	-	-	[507]
[Cu(Cz)(^{Dipp}CAArC)	THF	738	<0.01	0.009	-	Powder	621	32	0.37	-	[508]
Au^{C}	2-MeTHF	558	36	0.77	-	1% in PS	526	62	0.93	-	[509]
Au_2^{CC}	2-MeTHF	496	20	0.21	-	1% in PS	480	80	0.52	-	[509]
CMA1	toluene	528	95	1.2	240	3% in PS	498	73	1.2	-	[510]
Aza1	toluene	474	73	5.1	90	3% in PS	449	23	-	-	[510]
Aza2	toluene	500	95	1.9	70	3% in PS	478	27	-	-	[510]
Aza3	toluene	486	61	0.8	90	3% in PS	450	66	2.1	-	[510]
Aza4	toluene	506	100	1.7	30	3% in PS	454	32	-	-	[510]
3,6-DiAza	toluene	433	16	3.2	70	3% in PS	419	6	-	-	[510]
Me-Cu^{CN}	-	-	-	-	-	1% in PS	482	77	1.4	83	[511]

Ph-Cu^{CN}	-	-	-	-	-	1% in PS	500	83	1.1	55	[511]
Me-Cu	-	-	-	-	-	1% in PS	534	58	1.5	64	[511]
Ph-Cu	-	-	-	-	-	1% in PS	556	70	0.97	55	[511]
Me-Ag^{CN}	-	-	-	-	-	1% in PS	476	83	0.41	16	[511]
Ph-Ag^{CN}	-	-	-	-	-	1% in PS	498	88	0.60	10	[511]
Me-Ag	-	-	-	-	-	1% in PS	530	77	0.41	14	[511]
Ph-Ag	-	-	-	-	-	1% in PS	558	56	0.53	14	[511]
Me-Au^{CN}	-	-	-	-	-	1% in PS	484	50	0.81	78	[511]
Ph-Au^{CN}	-	-	-	-	-	1% in PS	504	100	0.82	61	[511]
Me-Au	-	-	-	-	-	1% in PS	528	50	1.1	75	[511]
Ph-Au	-	-	-	-	-	1% in PS	554	77	0.80	59	[511]
Cu$_{BCz}^{BZAC}$	toluene	502	>95	0.71	-	1% in PS	459	93	1.24	-	[512]
Au$_{BCz}^{BZAC}$	toluene	500	>95	0.56	-	1% in PS	484	>95	0.72	-	[512]
Cu$_{BCz}^{PAC}$	toluene	595	47	0.56	-	1% in PS	594	75	0.95	-	[512]
Ag$_{BCz}^{PAC}$	toluene	610	10	0.58	-	1% in PS	588	51	0.26	-	[512]
Au$_{BCz}^{PAC}$	toluene	588	42	0.44	-	1% in PS	586	76	0.74	-	[512]
Au$_{Cz}^{PZI}$	toluene	600	62	0.41	230	1% in PS	570	92	0.45	-	[512]
Au$_{Cz}^{PAC}$	toluene	546	73	0.74	250	1% in PS	546	>95	0.81	-	[512]
Au$_{Cz}^{BZAC}$	toluene	480	>95	0.69	230	1% in PS	479	>95	1.98	-	[512]
Au$_{bim}^{PZI}$	toluene	600	31	0.21	160	1% in PS	552	91	0.24	-	[512]
Au$_{bim}^{PAC}$	toluene	562	30	0.17	190	1% in PS	532	81	0.27	-	[512]
Au$_{bim}^{MAC}$	toluene	548	19	0.17	180	1% in PS	506	88	0.40	-	[512]
Au$_{bim}^{CAAC}$	toluene	514	87	0.63	220	1% in PS	476	>95	0.55	-	[512]
Au$_{bim}^{BZAC}$	toluene	484	>95	0.43	170	1% in PS	452	>95	0.28	-	[512]
Au$_{bim}^{BZI}$	toluene	454	>95	0.42	180	1% in PS	429	>95	0.25	-	[512]
Au$_{bim}^{IPr}$	toluene	340	<1	-	300	1% in PS	400	<5	13	-	[512]
Au$_{Mbim}^{BZI}$	toluene	460	>95	0.42	-	1% in PS	436	>95	0.29	-	[512]
Au$_{Obim}^{BZI}$	toluene	480	92	0.37	-	1% in PS	450	>95	0.38	-	[512]
Cu1	toluene	624	29	0.18	-	2% in mCP	567	88	0.41	-	[513]
Cu2	toluene	555	58	0.36	-	2% in mCP	508	89	0.41	-	[513]
Cu3	toluene	660	14	0.11	-	2% in mCP	581	66	0.37	-	[513]
Cu4	toluene	635	15	0.12	-	2% in mCP	568	76	0.36	-	[513]
Cu5	toluene	502	74	0.55	-	5% in mCP	470	52	0.47	-	[513]
(BZI)Au(TMCz)	toluene	484	79	1.1	-	5% in zeonex	466	95	0.38	-	[514]
Au-tCz	2-MeTHF	650	-	-	-	5% in mCP	562	75	0.37	88	[515]
Au-Ph	2-MeTHF	650	-	-	-	5% in mCP	565	89	0.46	-	[515]
Au-DPXZ	2-MeTHF	650	-	-	-	5% in mCP	570	73	1.11	-	[515]
Au-PCz	2-MeTHF	650	-	-	-	5% in mCP	570	78	0.67	-	[515]
Au-PDMAC	2-MeTHF	650	-	-	-	5% in mCP	565	94	0.61	-	[515]
Au-PPXZ	2-MeTHF	650	-	-	-	5% in mCP	565	82	0.57	-	[515]
(rac)-PSIPr*-Cu-DMAC	toluene	531	24	0.19	0.92	1% in PS	512	13	0.68	-	[516]

MAC*-Cu-DPAC	toluene	638	12	0.11	-	5% in PS	609	24	0.42	55	[517]
Palladium											
PdN3N	DCM	534	-	-	-	6 % in PMMA	528	72	142	-	[518]
PdN3O	-	-	-	-	-	6 % in PMMA	523	73	205	-	[518]
PdN1N	DCM	472	70	40	-	-	-	-	-	-	[519]
PdN1N-dm	DCM	470	77	52	-	-	-	-	-	-	[519]
PdN6N	DCM	476	59	61	-	-	-	-	-	-	[519]
Pd(tzp-OCzPy)	DCM	498, 537, 582	0.21	30.5	-	PMMA	461, 498, 536, 580	-	89.4	-	[520]
Pd(tzp-OCzPy-Me)	DCM	498, 536, 580	0.52	26.7	-	PMMA	462, 498, 536, 579	-	79.9	-	[520]
Pd(tzp-OCzPy-OMe)	DCM	513, 550	1.34	153	-	PMMA	457, 513, 548	-	110	-	[520]
Pd(tzp-OCzPy-DM-tBu)	DCM	513, 550	1.72	119	-	PMMA	456, 515, 551	-	57.0	-	[520]
Pd(ACzCz-1)	DCM	479	4	0.1	-	5% in PMMA	459	11	17.8	-	[521]
Pd(AzCzCz-2)	DCM	506	9	0.7	-	5% in PMMA	467	10	22.7	-	[521]
Pd-O-S	Toluene	640, 772	1	161	331	PS	-	19	-	-	[522]
Pd-T-S	Toluene	639, 786	0.3	157	363	PS	-	16	-	-	[522]
Pd-T-I	Toluene	652, 786	0.4	53	324	PS	-	15	-	-	[522]
Platinum											
$Pt(BINAP)_2$	Toluene	763	12	1.25	-	-	-	-	-	-	[523]
Pt-1	DCM	537	79	10	-	-	-	-	-	-	[524]
Pt-2	Toluene	612	68	1.2	-	0.1% in Zeonex	605	-	2	66	[525]
Pt-Cl	Toluene	617	16	1.2	-	0.1% in PS	640	11	5.7	-	[526]
Pt-I	Toluene	628	43	1.0	116	PS	618	-	2.5	58	[527]
Pt-O-S	Toluene	625, 742	0.4	33	313	PS	-	47	-	-	[522]
Pt-T-S	Toluene	624, 756	0.2	41	347	PS	-	34	-	-	[522]
Pt-T-I	Toluene	639, 755	0.2	12	298	PS	-	33	-	-	[522]
Zinc											
$Zn(p\text{-}PX\text{-}BOX)_2$	-	-	-	-	-	6 wt% mCBP	542	78.4	37.8	60	[528]

Zn(m-PX-BOX)$_2$	-	-	-	-	-	6 wt% mCBP	523	58.2	-	180	[528]
[Zn(PhOPy-PXZ)$_2$]$_2$	-	-	-	-	-	powder	538	13	2.09	100	[529]
[Zn(PhOPy-DMAC)$_2$]$_2$	-	-	-	-	-	powder	497	50	2.45	70	[529]
Zn(HL)Cl$_2$ (*enol*)	-	-	-	-	-	powder	565	7	-	110	[530]
Zn(HL)Cl$_2$ (*keto*)	-	-	-	-	-	powder	640	0.02	-	-	[530]
Zn(R/S)-6-MeOsalen	THF	491	-	-	-	thin film	576	-	8.42 (R), 7.39 (S)	-	[531]
Zn-Schiff-1	Toluene	542	31	2.1 x 10^3	310	PS	542	30	7.41 x 10^3	-	[532]
Zn-Schiff-2	Toluene	547	41	435	280	PS	547	65	1.45 x 10^3	-	[532]
ZnPZ-Cz	-	-	-	-	-	PS	626	7.1	132	-	[533]
ZnPZ-Ph-Cz	-	-	-	-	-	PS	611	2.3	991	-	[533]
ZnPH-Cz	-	-	-	-	-	PS	554	31.7	1.24 x 10^3	-	[533]
ZnPH-Ph-Cz	-	-	-	-	-	PS	555	10.9	3.53 x 10^3	-	[533]
Zn-OS	Toluene	667	-	> 1 x 10^3	-	PSAN	675	3.3	7.87 x 10^3	-	[534]
Zn-NPN-5	-	-	-	-	-	powder	480	100	24.5	120	[535]
Other Metals											
SNF$_2$-Copro III	-	-	-	-	-	Neat film	571	-	-	400	[536]
SNF$_2$-Meso IX	-	-	-	-	-	Neat film	570	-	-	400	[536]
SNF$_2$-Hemato IX	-	-	-	-	-	Neat film	576	-	-	370	[536]
SNF$_2$-Proto IX	-	-	-	-	-	Neat film	579	-	-	380	[536]
SNF$_2$-OEP	-	-	-	-	-	Neat film	571	-	-	400	[536]
SNF$_2$-Etio I	-	-	-	-	-	Neat film	569	-	-	400	[536]
Si(^{Me}PDP^{Ph})$_2$	THF	527	47	900	243	-	-	-	-	-	[537]
Ge(^{Me}PDP^{Ph})$_2$	THF	519	49	1000	260	-	-	-	-	-	[537]
Sn(^{Me}PDP^{Ph})$_2$	THF	512	32	2000	313	-	-	-	-	-	[537]
W(CNdippPh)$_6$	Toluene	617	41	1.73	-	-	-	-	-	-	[538]
W(CNdippPh^{Ph})$_6$	Toluene	629	44	1.53	-	-	-	-	-	-	[538]
W(CNdippPh^{OMe2})$_6$	Toluene	618	42	1.65	-	-	-	-	-	-	[538]
W(CNdippPh^{Ome3})$_6$	Toluene	612	41	1.83	-	-	-	-	-	-	[538]
W(O)$_2$(N-Ar$_3$-Salen)	Toluene	554	56	14.7	-	5 wt% mCP	554	84	2.0	-	[539]
Zr(^{Mes}PDP^{Ph})$_2$	THF	581	45	350	200	-	-	-	-	-	[540]
Zr(^{Mes}PDP^{Ph})$_2$	Benzene	521	34	313	-	-	-	-	-	-	[541]
Zr(^{Mes}PDP^{Ph})$_2$	Benzene	532	27	474	-	-	-	-	-	-	[541]
Zr(^{Mes}PDP^{Ph})$_2$	Benzene	524	10	260	-	-	-	-	-	-	[541]

$Zr(^{Mes}PDP^{Ph})_2$	Benzene	531	22	576	-	-	-	-	-	-	[541]
$Zr(^{Mes}PDP^{Ph})_2$	Benzene	547	11	190	-	-	-	-	-	-	[541]
$Zr(^{H}PDP^{H})_2$	Benzene	482	28	413	-	-	-	-	-	-	[541]
$Zr(^{H}PDP^{H})_2(THF)_2$	Benzene	430	12	619	-	-	-	-	-	-	[541]
Mg(p-PX-BOX)$_2$	-	-	-	-	-	6 wt% mCBP	516	70.6	-	80	[528]
Li(p-PX-BOX)	-	-	-	-	-	6 wt% mCBP	510	70.4	-	80	[528]
[Al(p-PX-BOX)$_2$(μ-OH)$_2$]	2-MeTHF	522	-	-	60	6 wt% mCP	530	86.7	-	-	[528]
[Li_2{(R)-PEPIA}$_2$]	-	-	-	-	-	Neat film	465	8	4.1	-	[542]
[Na_2{(R)-PEPIA}$_2$]	-	-	-	-	-	Neat film	476	36	6.9	78	[542]
[K_2{(R)-PEPIA}$_2$]	-	-	-	-	-	Neat film	462	21	12.5	73	[542]
[Rb_2{(R)-PEPIA}$_2$]	-	-	-	-	-	Neat film	476	21	14.8	90	[542]
Ca(NPN)$_2$	-	-	-	-	-	Neat film	470	22	24	148	[543]
Al(*t*Bu-acac-PhDMAC)$_3$	Toluene	495	32	2.4	-	30 wt% CBP	497	65	4.4	210	[544]
Al(Ph-acac-PhDMAC)$_3$	Toluene	527	61	1.0	-	30 wt% CBP	534	79	3.9	80	[544]
Ir-5	Chlorobenzene	461, 489, 565	30	0.83, 0.79	-	-	-	-	-	-	[545]
Ir-6	Chlorobenzene	469, 499, 583	13	0.52, 0.49	-	-	-	-	-	-	[545]
BG	Toluene	530	76	-	-	0.4 mol% mCPCN	-	76	-	-	[546]
GG	Toluene	540	54	-	-	0.4 mol% mCPCN	-	60	-	-	[546]
BR	Toluene	610	42	-	-	0.1 mol% TCTA	-	66	-	-	[547]
GR	Toluene	610	64	-	-	0.1 mol% TCTA	-	52	-	-	[547]

[a]Measured from a powdered sample, [b]Measured at 10% w/w doped mCP film.

Table **S12.** Performance data for OLEDs fabricated with metal TADF complexes reviewed in Section **9**.

Complex	Emissive layer	λ_{EL} / nm	CIE	EQE_{MAX} / %	EQE_{100} / %	EQE_{1000} / %	Reference
Copper							
[Cu(pypz)(POP)]BF_4	Solution, 20% in 26mCPy	516	(0.21, 0.36)	3.18	-	-	[409]
[Cu(pympz)(POP)]BF_4	Solution, 20% in DPEPO	484	(0.17, 0.21)	3.72	-	-	[409]
[Cu(pytfmpz)(POP)]BF_4	Solution, 20% in 26mCPy	508	(0.21, 0.33)	8.47	-	-	[409]
[Cu(ECAF)(POP)]PF_6	10% in mCP	5444	(0.37, 0.55)	14.81	-	-	[412]

[Cu(EHCAF) (POP)]PF_6	10% in mCP	544	(0.38, 0.55)	11.17	-	-	[412]
[Cu(PCAF)(POP)]PF_6	10% in mCP	544	(0.38, 0.54)	6.67	-	-	[412]
[Cu(czpzpy)(POP)]BF_4	Solution, 20% in czpzpy	514	(0.26, 0.49)	6.34	6.29	-	[413]
[Cu(PNNA)(POP)]BF_4	Solution, 20% in mCP	490	(0.17, 0.37)	5.83	5.70	-	[414]
[Cu(PNNA)(xant)]BF_4	Solution, 20% in mCP	501	(0.21, 0.43)	7.42	7.41	-	[414]
[Cu(m42)(POP)]BF_4	Solution, 15% in BCPO	-	(0.32, 0.53)	10.5	-	-	[415]
[Cu(DMAC-PyPI)(xant)]BF_4	Solution, 24% in PYD2	-	(0.43, 0.54)	5.91	-	-	[419]
[Cu(PXZ-PyPI)(POP)]BF_4	Solution, 16% in PYD2	-	(0.51, 0.41)	7.96	-	-	[419]
Cu(Ph_2Bpz_2)(dppb)	10% in mCP	552	[0.40, 0.53]	11.9	-	-	[424]
Cu(Ph_2Bpz_2)(dppb-F)	10% in mCP	545	[0.37, 0.54]	16.0	-	-	[424]
Cu(Ph_2Bpz_2) (dppb-CF_3)	10% in mCP	528	[0.34, 0.54]	17.7	-	-	[424]
Cu(PP)(PS)	10% in mCP + 30% TAPC	-	[0.40, 0.53]	7.8	-	-	[425]
TTPPCuCl	10% in mCP	584	[0.47, 0.49]	9.6	9.0	7.1	[426]
TTPPCuBr	10% in mCP	584	[0.46, 0.49]	12.4	11.5	9.3	[426]
TTPPCuI	10% in mCP	584	[0.47, 0.49]	16.3	16.3	15.3	[426]
[CuCl(dpmt)(PPh_3)]	Neat Film	540	[0.35, 0.50]	2.47	-	-	[428]
[CuBr(dpts)(PPh_3)]	Neat Film	564	[0.43, 0.51]	7.74	-	-	[430]
[Cu(dmpzpp)I]	2% in DPEPO:TCTA (1:1)	521	[0.33, 0.52]	16.4	-	10.2	[431]
[Cu(dmpzpp)SPh]	4% in DPEPO:TCTA (1:1)	535	[0.36, 0.52]	12.8	-	-	[431]
(L_{Me})CuBr	10% in mCP	517	-	21.3	-	-	[436]
(L_{Et})CuBr	10% in mCP	529	[0.32, 0.54]	22.5	-	-	[437]
(L_{iPr})CuBr	10% in mCP	515	[0.26, 0.51]	18.6	-	-	[437]
CuI(mpdp)	Neat Film	-	[0.44, 0.47]	0.26	-	-	[439]
CuI:CzBPDCb	8 wt% in TCTA	520	-	17.5	15.8	-	[447]
CuCl:azaSPF	5 wt% in TCTA	576	-	9.5	-	-	[448]
CuBr:azaSPF	7 wt% in TCTA	524	-	13.6	-	-	[448]
CuI:azaSPF	9 wt% in TCTA	552	-	10.7	-	-	[448]
CuI:α-aza-SBF	8 wt% in **α-aza-SBF**	552	-	6.6	-	3.5	[449]
CuI:β-aza-SBF	8 wt% in **β-aza-SBF**	588	-	7.6	-	5.9	[449]
CuI:γ-aza-SBF	8 wt% in **γ-aza-SBF**	552	-	8.8	-	5.6	[449]
CuI:δ-aza-SBF	8 wt% in **δ-aza-SBF**	540	-	16.8	-	8.1	[449]
[Cu(mI)dppb]$_2$	10 wt% in CBP	565	-	4.8	-	-	[450]
{Cu(PNP-^{t}Bu)}$_2$	0.25 wt% in CBP and 25% TAPC	512	-	16.1	-	-	[451]
1-Cu	30 wt% in PYD2	555	-	23	-	-	[452]
[Cu(m-Cl)dpmb]$_2$	10 wt% in mCP	528	[0.31, 0.54]	10	-	-	[454]
[Cu(m-Br)dpmb]$_2$	10 wt% in mCP	528	[0.31, 0.50]	7.3	-	-	[454]
[Cu(m-I)dpmb]$_2$	10 wt% in mCP	528	[0.38, 0.51]	8.3	-	-	[454]
[Cu_2I_2(MePyrPHOS)(P(mTol)$_3$]	40 wt% in PYD2	552	-	11.4	-	-	[456]
[Cu_2(pytzph)(POP)$_2$](BF_4)$_2$	20 wt% in PYD2	523	[0.30, 0.54]	7.6	7.5	-	[457]
[Cu_2(pytzphcf)(POP)$_2$](BF_4)$_2$	20 wt% in PYD2	526	[0.30, 0.54]	5.9	19.4	-	[457]
[Cu_2(pytzphcz)(POP)$_2$](BF_4)$_2$	20 wt% in PYD2	522	[0.29, 0.53]	8.1	26.2	-	[457]

$[(P^N)Cu(m\text{-}I)]_2$	10 wt% in mCP:TCTA (1:1)	516	[0.35, 0.51]	3	-	-	[459]
$(DBFDP)_2Cu_4I_4$	10 wt% in mCP	550	[0.37, 0.45]	0.73	-	-	[463]
$(DCzDBFDP)_2Cu_4I_4$	10 wt% in TmPyPB	560	[0.22, 0.44]	6	-	-	[464]
$(DtBDCzDBFDP)_2Cu_4I_4$	10 wt% in TmPyPB	560	[0.23, 0.42]	7.9	-	-	[464]
$[Cu_4(PCP)_3]BF_4$	17wt% in TAPC	-	[0.30, 0.64]	11.2	-	-	[467]
Silver							
Ag(PI-PXZ)(POP)	8 wt.% in PYD2	560	[0.45, 0.62]	8.76	-	-	[472]
Gold							
Au-CC-2	10 wt% in TCTA	-	[0.32, 0.54]	20.37	-	9.72	[486]
Au-CC-4	10 wt% in TCTA	-	[0.40, 0.56]	14.90	-	8.50	[486]
(SIPr)AuBN	0.5 wt% DMI-Cz:DMIC-TRz (1:1)	511	[0.20, 0.69]	24.8	-	2	[487]
(BzIPr)AuBN	2 wt% DMI-Cz:DMIC-TRz (1:1)	510	[0.16, 0.68]	30.3	-	7.3	[487]
(PyIPr)AuBN	2 wt% DMI-Cz:DMIC-TRz (1:1)	516	[0.19, 0.70]	27.3	-	12.8	[487]
(PzIPr)AuBN	4 wt% DMI-Cz:DMIC-TRz (1:1)	515	[0.22, 0.67]	24	-	3.8	[487]
IPzIDCz	1 wt% DMIC-TRz	531	[0.37, 0.57]	23.9	-	23.7	[488]
$(C^N^C)Au(PhN(Ph)_2)$	16 wt% PYD2	509	[0.32, 0.55]	14.8	-	14.7	[490]
$(F_2C^NOEt^CF_2)Au(PhN(Ph)_2)$	16 wt% PYD2	500	[0.27, 0.51]	23.8	-	16.5	[490]
$(CF_2^N^{NMe2}^CF_2)Au(PhN(Ph)_2)$	6 wt% PYD2	473	[0.16, 0.25]	15.25	-	9.98	[491]
$(CF_2^N^{NMe2}^CF_2)Au(PhN(p\text{-}FC_6H_4)_2)$	6 wt% PYD2	465	[0.16, 0.23]	6.76	-	2.51	[491]
$(CF_2^N^CF_2)Au(PhN(Ph)_2)$	20 wt% PYD2	534	[0.35, 0.56]	24.32	-	18.40	[491]
$(CF_2^N^CF_2)Au(C{\equiv}CPh)$	4 wt% TCTA:TPBi (1:1)	-	[0.34, 0.56]	23.1	-	19.2	[492]
$(CF_2^N^CF_2)Au(C{\equiv}C\text{-}Ph\text{-}PXZ)$	4 wt% TCTA:TPBi (1:1)	-	[0.41, 0.55]	19.7	-	15.0	[492]
$(CF_2^N^CF_2)Au(C{\equiv}C\text{-}Me_2Ph\text{-}pNPh_2)$	4 wt% TCTA:TPBi (1:1)	-	[0.40, 0.55]	23.4	-	22.1	[492]
$[Au\{4\text{-}^tBuC^C(4\text{-}^tBuC_6H_4)^N(1\text{-}thpy)\}(Cbz)]$	Solution 8% m-CPB	576	[0.49, 0.50]	14.3	-	-	[493]
$[Au\{4\text{-}^tBuC^C(4\text{-}^tBuC_6H_4)^N(1\text{-}thpy)\}(^tBu_2Cbz)]$	Solution 8% m-CPB	612	[0.57, 0.43]	7.1	-	-	[493]
$[Au\{4\text{-}^tBuC^C(4\text{-}^tBuC_6H_4)^N(1\text{-}thq)\}(Cbz)]$	Solution 5% m-CPB	628	[0.60, 0.40]	8.2	-	-	[493]
$[Au\{4\text{-}^tBuC^C(4\text{-}^tBuC_6H_4)^N(2\text{-}thpy)\}(Cbz)]$	Solution 11% m-CPB	568	[0.47, 0.52]	14.5	-	-	[493]
$[Au\{4\text{-}^tBuC^C(4\text{-}^tBuC_6H_4)^N(2\text{-}thpy)\}(^tBu_2Cbz)]$	Solution 11% m-CPB	600	[0.54, 0.45]	8.7	-	-	[493]
$[Au\{4\text{-}^tBuC^C(4\text{-}^tBuC_6H_4)^N\}(Cbz)]$	20 wt% CBP	548	[0.40, 0.57]	11.9	-	-	[494]
$[Au\{4\text{-}^tBuC^C(4\text{-}^tBuC_6H_4)^N\}\{(Cbz)\text{-}(Cbz)_2\}]$	20 wt% CBP	560	[0.43, 0.54]	8.7	-	-	[494]
$[Au\{4\text{-}^tBuC^C(4\text{-}^tBuC_6H_4)^N\}\{(Cbz)\text{-}(Cbz)_2\text{-}(Cbz)_4\}]$	20 wt% CBP	540	[0.38, 0.57]	15.8	-	-	[494]
$[Au\{4\text{-}^tBuC^C(4\text{-}^tBuC_6H_4)^N\}(3\text{-}$	Solution 20 wt% MCP	500, 528	[0.29, 0.56]	8.4	-	2.9	[495]

CN-Cbz)]							
[Au{4-^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N}(3-(P(O)Ph$_2$)-Cbz)]	20 wt% MCP	520	[0.29, 0.58]	11.7	-	-	[495]
[Au{4-^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N}(3-(C$_6$H$_4$-NPh$_2$)-Cbz)]	Solution 20 wt% MCP	584	[0.51, 0.48]	6.1	-	5.9	[495]
[Au{4-^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N}(3-(MeC$_6$H$_3$-NPh$_2$)-Cbz)]	20 wt% MCP	576	[0.49, 0.50]	10.0	-	-	[495]
[Au{4-^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N}(2-(C$_6$H$_4$-NPh$_2$)-Cbz)]	20 wt% MCP	560	[0.44, 0.54]	11.4	-	-	[495]
[Au{4-^{t}BuC^C(4-^{t}BuC$_6$H$_4$)^N}(2-(MeC$_6$H$_3$-NPh$_2$)-Cbz)]	20 wt% MCP	556	[0.42, 0.55]	10.9	-	-	[495]
Au(C^C^{OPh}^NPh^{t}Bu$_2$^CPXZ)	16 wt% TCTA	554	[0.43, 0.54]	25.03	-	22.01	[496]
Au(CDPA^C^{Me}^N^C)	8 wt% TCTA	505	[0.26, 0.54]	23.52	-	15.44	[496]
Au(CPXZ^C^{Me}^N^C)	4 wt% TCTA	529	[0.34, 0.56]	13.88	-	12.01	[496]
Au-1	4 wt% DPEPO:TCTA (1:1)	540	[0.38, 0.57]	24.9	-	20.5	[497]
Au-2	8 wt% DPEPO:TCTA (1:1)	529	[0.31, 0.60]	26.2	-	24.0	[497]
Au-4	12 wt% DPEPO:TCTA (1:1)	541	[0.36, 0.60]	26.8	-	26.2	[497]
CMA							
CMA1	20% in PVK	-	[0.26, 0.48]	26.3	26.1	25.2	[548]
CMA2	20% in PVK	-	-	9.7	8.9	9.2	[548]
CMA3	20% in PVK	-	-	17.9	17.7	15.5	[548]
CMA4	20% in PVK	-	[0.36,0.54]	27.5	26.6	24.5	[548]
Ag-1	solution 20% in PVK	542	[0.35, 0.52]	3.8	3.8	1.2	[498]
Ag-1	evaporated 20% in mCP	502	[0.25, 0.42]	4.3	2.7	-	[498]
Ag-2	solution 20% in PVK	540	[0.36, 0.56]	11.0	10.6	8.2	[498]
Ag-2	evaporated 20% in mCP	509	[0.28, 0.46]	13.7	12.9	10.0	[498]
CAAC-1a	evaporated 20% in UGH3	460	-	9.0	-	-	[499]
MAC*3	evaporated 40% in mCBP	543	-	19.4	-	-	[500]
(^{Ad}L)Cu(G$_1$)	20% in PVK	-	[0.37, 0.60]	5.6	5.5	4.6	[501]
(^{Ad}L)Au(G$_1$)	20% in PVK	-	[0.39, 0.58]	10.6	10.3	10.0	[501]
(^{Ad}L)Au(G$_2$)	20% in PVK	-	[0.37, 0.60]	3.7	3.6	2.8	[501]
Au^{MAC}	40% in mCBP	516	-	18.0	-	15.0	[502]
Au^{BZI}	5% in UGH3	430	[0.16, 0.06]	12.0	-	-	[503]
Au^{CAAC}-1	20% in DPEPO	450	[0.17, 0.17]	20.9	17.8	-	[506]
Au^{CAAC}-3	20% in TCP	500	[0.24, 0.42]	26.9	26.4	-	[506]
Au^{CAAC}-4	20% in DPEPO	518	[0.29, 0.49]	24.7	22.9	-	[506]
Au1	solution 20% in PVK	-	[0.15, 0.24]	5.8	5.5	3.6	[507]
Au1	solution 20% in CBP	-	[0.18, 0.31]	4.6	4.2	2.3	[507]
Au3	evaporated 20% in mCP	590	[0.53, 0.46]	11.0	9.8	9.1	[507]

Cu1	evaporated 6% in TCTA:TPBi	582	[0.51, 0.48]	18.7	-	18.3	[513]
Cu2	evaporated 4% in TCTA:DPEPO	521	[0.27, 0.57]	20.6	-	19.0	[513]
Cu3	evaporated 2% in TCTA:TPBi	619	[0.58, 0.42]	14.4	-	13.8	[513]
Cu5	evaporated 4% in TCTA:DPEPO	474	[0.14, 0.22]	23.6	-	18.7	[513]
MAC*-Cu_DPAC	evaporated 1.5% in CBP:TPBi	628	[0.58, 0.42]	21.1	21.0	20.1	[517]
Palladium							
PdN3N	evaporated 6% in 26mCPy	-	[0.30, 0.61]	20.9	14.3	-	[518]
PdN3O	evaporated 6% in 26mCPy	-	[0.30, 0.62]	20.4	13.9	-	[518]
PdN1N-dm	evaporated 10% in 26mCPy	476	[0.14, 0.25]	25.1	11.1	-	[519]
Platinum							
Pt-2	solution-processed 5% in (60%TPD:40%PBD)	607	[0.62, 0.37]	7.4	-	-	[525]
Pt-Cl	solution-processed 5% in (70%mCP:30%PO-T2T)	637, 730	-	2.64	-	-	[526]
Pt-I	solution-processed 5% in ((70%mCP:30%PO-T2T)	6112	[0.62, 0.36]	3.11	-	-	[527]
Zinc							
Zn(R)-6-MeOsalen	neat	576	[0.43, 0.48]	0.038	-	-	[531]
Zn(R)-6-MeOsalen	neat	576	[0.43, 0.48]	0.042	-	-	[531]
Other Metals							
$W(O)_2$(N-Ar_3-Salen)	30 wt% PVK : OXD-7 (9:1)	-	[0.49, 0.49]	15.56	-	9.70	[539]
Mg(p-PX-BOX)$_2$	1 wt% mCBP	-	-	16.5	-	-	[528]
Li(p-PX-BOX)	1 wt% mCBP	-	-	12.9	-	-	[528]
Al(*t*Bu-acac-PhDMAC)$_3$	10 wt% 26DCzPPy	522	[0.31, 0.54]	10.7	10.6	8.4	[544]
Al(Ph-acac-PhDMAC)$_3$	30 wt% CBP	556	[0.43, 0.55]	17.5	17.5	14.7	[544]
Ir-5	PVK:OXD-7:Ir-5 [100:50:8]	472-491	[0.22, 0.38]	1.46	-	-	[545]
Ir-6	PVK:OXD-7:Ir-5 [100:50:8]	476	[0.19, 0.38]	2.09	-	-	[545]
BG	0.4 mol% mCPCN	551	[0.41, 0.56]	9.8	-	-	[546]
GG	0.4 mol% mCPCN	541	[0.32, 0.63]	15.1	-	-	[546]
BR	0.1 mol% TCTA	420	[0.66, 0.34]	13.5	-	-	[547]
GR	0.1 mol% TCTA	-	[0.66, 0.35]	11.0	-	-	[547]

Table **S13.** Summary of photophysical and device performance of polymer TADF emitters reviewed in Section **10.1**.

Compound	Medium	λ_{PL} / nm	Φ_{PL} / %	τ_D / μs	ΔE_{ST} / eV	λ_{EL} / nm	CIE_{XY}	EQE_{max} / %	Roll-off 100 cd m^{-2} / %	Roll-off 1000 cd m^{-2} / %	Ref
PCzDP-10	Neat	500	74	1.7	N/A	496	0.24, 0.40	16.1	30	N/A	[549]
PCzBN1	Neat	491	58	38.3	0.14	491	0.10, 0.43	17.8	N/A	N/A	[550]
PCzBN3	Neat	496	51	28.8	0.13	496	0.12, 0.54	17.5	N/A	N/A	[550]
PCzBN5	Neat	501	43	8.2	0.13	496	0.11, 0.53	13.3	N/A	N/A	[550]
PCz-mCP-PxzTrz-10	Neat	527	22	~0.5	0.09	539	0.33, 0.51	13.0	42	N/A	[551]
PCz-mCP-PxzTrz-20	Neat	533	21	~0.5	0.06	543	0.34, 0.51	13.9	20	N/A	[551]
PCz-mCP-PxzTrz-30	Neat	540	39	~0.5	0.06	546	0.35, 0.53	15.3	1	N/A	[551]
PCz-mCP-PxzTrz-40	Neat	544	19	~0.5	0.05	548	0.38, 0.54	8.3	7	N/A	[551]
PFDMPE-R05	Neat	592	32	126	N/A	606	0.57, 0.42	5.62	~71	~87	[552]
P-4CzCN	Neat	472	37	1.5	0.23	515	0.23, 0.39	3.6	N/A	N/A	[553]
P-Cz4CzCN	Neat	489	65	1.9	0.12	492	0.24, 0.47	11.5	N/A	N/A	[553]
PDCDC	Neat	496	68	1.29	0.02	498	0.23, 0.39	9.0	28	N/A	[551]
POPT-25	10 wt% in mCP	541	36	3.0	0.11	540	0.36, 0.50	5.2	33	~65	[554]
PCzPT-19	10 wt% in mCP	538	21	10.2	0.06	552	0.40, 0.55	1.2	25	~25	[554]
P1	Neat	547	10	N/A	0.09	N/A	0.46, 0.43	1.1	36	N/A	[555]
P2	Neat	542	24	N/A	0.06	N/A	0.45, 0.40	4.5	71	N/A	[555]
P3	Neat	535	20	N/A	0.04	416/535/580	0.37, 0.38	10.4	75	N/A	[555]
PDT-1	Neat	441	42	5.79	0.04	434	0.15, 0.08	3.9	10	N/A	[556]
PDT-2	Neat	444	54	5.87	0.03	436	0.15, 0.09	5.3	8	N/A	[556]
PDT-3	Neat	445	46	5.11	0.04	438	0.17, 0.14	4.4	7	N/A	[556]
PBD-5	Neat	453	38	47	N/A	474	0.19, 0.25	6.0	53	N/A	[557]
PBD-10	Neat	457	42	48	N/A	478	0.20, 0.29	7.3	45	N/A	[557]
PBD-15	Neat	461	55	50	N/A	474	0.22, 0.29	7.1	49	N/A	[557]
PBD-20	Neat	464	34	51	N/A	480	0.18, 0.30	6.7	45	N/A	[557]
D3P-DEH	Neat	~500	44	4.8	0.03	509	0.24, 0.51	1.57	N/A	N/A	[558]
PAPTC	Neat	507	28	0.68	0.13		0.30, 0.59	12.6	N/A	N/A	[559]
PABPC50	Neat	547	58	0.72	0.17	~563	0.45, 0.52	6.8	~0	0	[560]
PABPC25	Neat	541	66	0.84	0.14	~560	0.44,	16.1	~0	1	[560]

							0.54				
PABPC10	Neat	527	74	1.2	0.09	~549	0.40, 0.56	16.2	~0	1	[560]
PABPC5	Neat	525	77	1.3	0.12	~549	0.40, 0.56	18.1	~0	2	[560]
PABPC1	Neat	518	76	1.3	0.13	~541	0.36, 0.57	15.4	~0	8	[560]
Cop-10	10 wt% Polymer in 65 wt% TCTA : 25 wt% TAPC	540[a]	21	47 [a]	N/A	678	0.46, 0.49	15.7	76	~89	[561]
pBP-PXZ	Neat	554	81.7	1.29	0.028	584	0.52, 0.48	13.71	N/A	N/A	[562]
pBP-PTZ	Neat	542	48.2	1.55	0.020	578	0.50, 0.49	7.92	N/A	N/A	[562]
P1	2 wt% in PS	~480	71	296	0.023	N/A	N/A	N/A	N/A	N/A	[563]
PPxPhO	20 wt% mCP	557 [c]	62.2 [c]	7.9 [c]	0.07 [c]	550	N/A	11.8	N/A	N/A	[564]
PFSOTT0.5	Neat	420/546	89	7.8	N/A	602	0.49, 0.49	2.6	N/A	N/A	[565]
PFSOTT2	Neat	416/567	76	6.2	N/A	616	0.55, 0.43	4.8	N/A	N/A	[565]
P10	5 wt% in CBP	539 [b]	10	1.4	N/A	528	0.36, 0.52	0.87	~3	~41	[566]
R-P	10 wt% in mCP	549	72	1.6	0.045	546	0.41, 0.57	14.9	N/A	15	[567]
S-P	10 wt% in mCP	547	76	2.3	0.061	544	0.40, 0.57	15.8	N/A	22	[567]
ASFCN	Neat	~520	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	[568]
LEP	Neat	N/A	44	N/A	0.22	N/A	0.32, 0.56	10	N/A	N/A	[569]
P(C2-Mac-BP)	Neat	~500	45	N/A	0.01	545	0.39, 0.57	6.7	18	54	[570]
P(C6-Mac-BP)	Neat	~500	21	N/A	0.01	537	0.37, 0.58	7.1	8	30	[570]
P(Ph-Mac-BP)	Neat	~500	35	N/A	0.01	399,548	0.39, 0.56	2.9	14	N/A	[570]
DV-3CzCN	Neat/cross-linked	476/478	36	1.4	0.23	484	0.16, 0.31	0.8	N/A	N/A	[571]
DVCz-3CzCN	Neat/ cross-linked	469/470	54	1.7	0.16	476	0.15, 0.30	6.8	N/A	N/A	[571]
DVCz-2CzCN	Neat/ cross-linked	470/~470	56/68	-/2.5	N/A	~475/~475	0.16, 0.21/0.16, 0.21	4.2/5.6	N/A	N/A	[572]
VBN0	Neat	479	55	4.3	0.11	484	0.22, 0.36	3.1	N/A	N/A	[573]
VBN10	Neat	488	74	1.3	0.22	492	0.20, 0.38	11.4	N/A	N/A	[573]
VBN50	Neat	497	70	2.2	0.21	500	0.21, 0.41	9.1	N/A	N/A	[573]
VBN100	Neat	512	64	3.5	0.22	516	0.27, 0.54	4.9	N/A	N/A	[573]
P-Ac95-TRZ05	Neat	~474	51	1.3	0.02	472	0.18, 0.27	12.1	1	5	[574]
P-TBAc95-TRZ05	Neat	N/A	N/A	N/A	N/A	545/635	0.21, 0.20	0.33	58	N/A	[574]
P1-05	Neat	485	54	3.6	0.05	483	0.20, 0.37	11.3	N/A	N/A	[575]
P1-10	Neat	489	47	3.3	0.04	491	0.21, 0.42	6.5	N/A	N/A	[575]
P1-20	Neat	492	45	3.0	0.04	502	0.24,	4.1	N/A	N/A	[575]

							0.47				
P4CzCN–PA	As host doped with 40 wt% 5tCzCN	458	N/A	0.12	0.14	498	0.25, 0.49	20.9	N/A	N/A	[576]
P4CzCN–BCz (1:4)	As host doped with 40 wt% 5TCzCN	450	N/A	0.11	0.17	507	0.25, 0.43	3.8	N/A	N/A	[576]

[a] neat, [b] THF, [c] Toluene.

Table **S14.** Summary of photophysical and device performance of TADF dendrimers reviewed in Section **10.2**.

Compound	**Medium**	**λ_{PL} / nm**	**Φ_{PL} / %**	**τ_D / μs**	**ΔE_{ST} / eV**	**λ_{EL} / nm**	**CIE_{XY}**	**EQE_{max} / %**	**Roll-off 100 cd m^{-2} / %**	**Roll-off 1000 cd m^{-2} / %**	**Ref**
G2TAZ	Neat	N/A	52	8.4	0.03		0.25, 0.49	2.4	N/A	N/A	[577]
G3TAZ	Neat	~510	31	4.7	0.06	~513	0.27, 0.49	3.4	~19	~56	[577]
G4TAZ	Neat	N/A	8.5	6.3	0.06		0.23, 0.34	1.5	N/A	N/A	[577]
tBuG2TAZ	Neat	~500	44	5.3	0.12	~500	N/A	9.5	1	23	[578]
MeG2TAZ	Neat	~502	40	3.3	0.10	~505	N/A	9.4	0	24	[578]
PhG2TAZ	Neat	~494	49	1.9	0.09	~505	N/A	8.2	2	27	[578]
CzG2TAZ	Neat	~601	52	4.0	0.12	~503	N/A	6.0	0	52	[578]
tBuG2B	Neat	501	74	2.2	0.08	502	0.27, 0.52	17.0	1	19	[579]
MeG2B	Neat	501	34	0.5	0.08	~502	0.28, 0.48	9.0	11	N/A	[579]
MeOG2B	Neat	539	17	0.6	0.12	~546	0.44, 0.51	6.4	9	69	[579]
PhG2B	Neat	507	41	1.2	0.14	~502	0.30, 0.48	8.8	7	N/A	[579]
t-BuTCz2BP	Neat	505	41	0.57	0.08	506	0.26, 0.46	4.3	N/A	N/A	[580]
G2B	Neat	493	33	0.7	0.12	500	0.26, 0.48	5.7	~17	~39	[581]
G3B	Neat	500	21	0.8	0.10	516	0.31, 0.50	2.9	~14	N/A	[581]
tBuCz2pTRZ	Neat	481	61	1.2	0.09	500	0.23, 0.46	18.5	13	N/A	[582]
tBuCz2mTRZ	Neat	483	59	1.1	0.09	516	0.27, 0.53	19.9	40	N/A	[582]
tBuCz2m2pTRZ	Neat	520	86	1.1	0.04	540	0.37, 0.37	28.7	26	N/A	[582]
tBuCz3mTRZ	Neat	517[a]	62	2.2	0.08[a]	516	0.27, 0.53	19.9	40	N/A	[583]
tBuCz4mTRZ	Neat	532[a]	67	1.7	0.05[a]	536	0.36, 0.58	23.8	0	N/A	[583]
tBuTCz-DPyM	Doped 8 wt% mCBP	495	63.5	9.5	0.01	503	0.25, 0.48	20.4	N/A	N/A	[584]
MeOTCz-DPyM	Doped 8 wt% mCBP	514	55	7.9	0.02	530	0.37, 0.54	9.2	N/A	N/A	[584]

tBuDPACz-DPyM	Neat	596	11	9.4	0.04	600	0.56, 0.43	1.82	14	N/A	[585]
MeODPACz-DPyM	Neat	645	3.1	9.4	0.03	649	0.62, 0.37	0.17	18	N/A	[585]
CDE2	Neat	499	75	0.6	0.15	522	0.32, 0.51	5.2		21	[586]
CzDMAC-DPS	Neat	492	68	1.5	0.09	~504	0.22, 0.44	12.2	46	63	[587]
DCzDMAC-DPS	Neat	464	48	1.9	0.20	~479	0.18, 0.27	2.2	32	N/A	[587]
DDA-DP	Neat	549	12.4[b]	0.45	0.04	550	0.36, 0.56	8.1	N/A	1%	[146]
DCz-DPS-Cz	Neat	494	88	1.51	0.03	498	0.23, 0.42	23.3	2	20	[588]
1CzAcDBTO	Neat	559	41	N/A	0.02	558	0.43, 0.54	3.9	~92	2	[589]
2CzAcDBTO	Neat	540	54	N/A	0.04	538	0.36, 0.54	4.5	~82	15	[589]
2CzSO	Neat	499	43	14.2	0.16	~525	0.27, 0.52	10.7	N/A	N/A	[590]
3CzSO	Neat	522	21	8.3	0.08	~525	0.31, 0.53	7.3	N/A	N/A	[590]
TPPOCz	Neat	400	33	1.29	0.22	~515	0.26, 0.31	2.0	N/A	N/A	[591]
Da	Neat	463	27.2	3.10	N/A	~460	0.17, 0.22	1.2	N/A	N/A	[592]
Db	Neat	526	21.3	1.77	N/A	~540	0.36, 0.57	4.1	N/A	N/A	[592]
BD–Cy	Neat	494	74[a]	0.41	0.05[b]	477	0.18, 0.28	18.2	22	55	[593]
YD–TF	Neat	555	86[a]	0.76	0.04[b]	552	0.41, 0.54	21.9	7	15	[593]
RD–2TF	Neat	618	49[a]	1.16	0.04[b]	626	0.60, 0.37	10.3	1	24	[593]
Cz-CzCN	Neat	509	52	2.8	0.17	510	0.26, 0.52	17.1	~7	~11	[594]
Cz-OCzBN	Neat	478	58	1.5	0.17	~478	0.18, 0.29	6.6	~17	~26	[595]
TA-3Cz	Neat	541	71	0.8	0.20[b]	546	0.39, 0.56	11.8	N/A	~58	[596]
TA-Cz	Neat	545	56	0.5	0.17[b]	550	0.41, 0.54	5.5	~5	~24	[596]
TB14CZ-ACTRZ	Neat	494	56	25	0.13	492	0.21, 0.42	8.1	~63	~72	[597]
TB2CZ-ACTRZ	Neat	520	69	2.9	0.08	520	0.31, 0.57	9.9	0	25	[597]
POCz-DPS	Neat	460	61	N/A	0.23	480	0.18, 0.30	7.3	~19	~16	[598]
tbCz-SO	Neat	440	N/A	0.1	0.21	464	0.16, 0.19	2.6	46	N/A	[599]
poCz-SO	Neat	458	N/A	0.2	0.11	480	0.18, 0.27	6.2	11	N/A	[599]
DCz-DPS-TCz	Neat	500	96	1.43	0.03	500	0.24, 0.45	24.0	2	11	[588]
MPPA-MCBP	Neat	690	10	0.7	0.17[b]	698	0.67, 0.31	0.62	~13	N/A	[600]
MPPA-3Cz	Neat	708	8	N/A	0.16[b]	715	0.69, 0.30	0.25	~24	N/A	[601]
MPPA-Cz	Neat	715	6	N/A	0.17[b]	728	0.70, 0.29	0.06	N/A	N/A	[601]

[a]10 wt% in PS, [b] Toluene, [c] 5 wt% in PMMA.

Table **S15.** Photoluminescence and electroluminescence properties of all reported MR-TADF emitters reviewed in Section **11**.

Compound	Medium[a]	λ_{PL} / nm	Φ_{PL} / %	τ_d / μs	ΔE_{ST} / eV	λ_{EL} / nm	CIE_{XY}	EQE$_{max}$ / %	EQE$_{100}$ / %	EQE$_{1000}$ / %	Ref
DOBNA (BOO)	1 wt% PMMA	398	58	66	0.18	N/A	N/A	N/A	N/A	N/A	602-604
DABNA-1	1 wt% mCBP	460	88	94	0.18	459	0.13, 0.09	13.5	6.3 [b]	N/A	605
DABNA-2	1 wt% mCBP	469	90	65	0.14	467	0.12, 0.13	20.2	13.3 [b]	N/A	605
TABNA	1 wt% PMMA	399	54	N/A	0.21	N/A	N/A	N/A	N/A	N/A	606
***t*-DABNA**	5 wt% DPEPO	467	85	83.3	0.17	471[b]	N/A	25.1	6.0 [b]	N/A	607
M-tDABNA	3 wt% mCBP	461 [b]	84	195	0.11[c]	N/A	N/A	N/A	N/A	N/A	608
DABNA-NP-M	1 wt% PMMA	460	88	89	0.17	N/A	N/A	N/A	N/A	N/A	609
DABNA-NP-TB (3tPAB, tDAB-DPA)	1 wt% DOBNA-Tol	453 [c]	83 [c]	90 [c]	0.17 [c]	457	0.14, 0.11	19.5	17.5	12.0	609-611
PAB (MR)	3 wt% mCP	453	61	56	0.06	456	0.15, 0.08	14.7	8.0 [b]	N/A	611
2tPAB	3 wt% mCP	457	67	77	0.08	456	0.15, 0.08	16.8	8.9 [b]	3.1 [b]	611,612
t-DABNA-dtB	3 wt% mCBP	473	97	110	0.19	473	0.11, 0.16	25.4	5.7 [b]	2.4 [b]	613
Cl-MR	10 wt% DPEPO	474	85	17	0.13	472	0.12, 0.19	17.0	9.6 [b]	N/A	612
Br-MR	10 wt% DPEPO	474	76	9.9	0.13	476	0.14, 0.25	4.2	N/A	N/A	612
tDPAC-BN	10 wt% DPEPO	454 [d]	94 [c]	114 [c]	0.17 [d]	460	0.14, 0.08	12.4	1.6	N/A	614
pBP-DABNA-Me	5 wt% mCBP:DPEPO	462	98	53	0.18	464	0.13, 0.09	23.4	17.9 [b]	5.8 [b]	615
mBP-DABNA-Me	mCP:DPEPO	467	97	64.5	0.13	468	0.12, 0.14	24.4	19.8	9.1 [b]	616
TBE01	0.4 wt% SiCzCz:SiTrzCz2	459 [d]	91 [d]	240	0.16 [d]	N/A	N/A	N/A	N/A	N/A	617
TBE02	0.4 wt% SiCzCz:SiTrzCz2	459 [d]	89 [d]	125	0.14 [d]	N/A	N/A	N/A	N/A	N/A	617
BOS	1 wt% Polystyrene	434 [d]	63	90.6	0.17 [d]	N/A	N/A	N/A	N/A	N/A	604
BSS	Polystyrene	457 [d]	58	85.5	0.15 [d]	N/A	N/A	N/A	N/A	N/A	604
PS-BOO	Neat	398	73	133.8	N/A	N/A	N/A	N/A	N/A	N/A	604
PS-BOS	Neat	435	65	104.9	N/A	N/A	N/A	N/A	N/A	N/A	604
PS-BSS	Neat	456	59	67.0	N/A	N/A	N/A	N/A	N/A	N/A	604
PAc-BSS	Neat	455	60	71.9	N/A	458	0.16, 0.12	13.1	10.2 [b]	1.5 [b]	604
PhCz-TSOBA	10 wt% 2,6-DczPPy	444 [d]	61	47.2	0.23 [d]	456	0.14, 0.12	16.7	6.7 [d]	1.3 [d]	79
B2	1 wt% mCBP	455 [c]	53 [b]	30.4 [c]	0.19 [c]	460	0.13, 0.11	18.3	12.4	N/A	618
B3	1 wt%	441	33	N/A	0.15	N/A	N/A	N/A	N/A	N/A	618

	PMMA										
B4	1 wt% PMMA	450	57	N/A	0.15	N/A	N/A	N/A	N/A	N/A	[618]
***v*-DABNA**	1 wt% in DOBNA-Oar	467	90	4.1	0.02	469	0.12, 0.11	34.4	32.7	26.1	[619]
***t*-Bu-*v*-DABNA**	5 wt% DBPFO	467 [d]	92	2.9	0.04 [d]	474	0.11, 0.15	36.3	34.3 [b]	16.5	[68]
m-*v*-DABNA	3 wt% DBPFO	464 [d]	91	3.1	0.07 [d]	471	0.12, 0.12	36.2	30.0 [b]	10.7 [b]	[620]
4F-*v*-DABNA	3 wt% DBPFO	457 [d]	90	3.1	0.05 [d]	464	0.13, 0.08	35.8	28.8 [b]	N/A	[620]
4F-m-*v*-DABNA	3 wt% DBPFO	446 [d]	89	3.2	0.07 [d]	461	0.13, 0.06	33.7	27.0 [b]	N/A	[620]
***v*-DABNA-CN-Me**	1 wt% DOBNA-Ph	496 [d]	86 [d]	10 [d]	0.01 [d]	504	0.13, 0.65	31.6	31.5	28.5	[621]
V-DABNA-Mes	1 wt% Polymer C	484 [c]	80 [c]	2.4 [c]	0.01 [c]	480	0.09, 0.21	22.9	20.3	10.9	[622]
***v*-DABNA-O-Me**	1 wt% DOBNA-Tol	464 [c]	90 [c]	7.7 [c]	0.03 [c]	465	0.13, 0.10	29.5	28.8	26.9	[623]
BOBO-Z	3 wt% mCBP	445	64	7.7	0.15 [d]	445	0.15, 0.04	13.6	9.8	3.3	[624]
BOBS-Z	3 wt% mCBP	457	93	7.6	0.16 [d]	456	0.14, 0.06	26.9	24.0	15.0	[624]
BSBS-Z	3 wt% mCBP	464	88	6.7	0.14 [d]	463	0.13, 0.08	26.8	24.0	15.9	[624]
α-3BNOH	MeTHF	390	50	0.45	0.31	N/A	N/A	N/A	N/A	N/A	[625]
α-3BNMes	20 wt% mCBP	441 [e]	63 [f]	9.1, 7,100 [c]	0.28 [c]	444 [b]	0.15, 0.08	1.6 [b]	1.6 [b]	1.4 [b]	[626]
DtBuCzB (BBCz-SB)	1 wt% mCBP	493	88	69	0.13 [d]	488	0.10, 0.42	21.6	15.0	5.3	[627,628]
Cz-B (CzBN)	1 wt% mCBP	484	97	44	0.14 [d]	482	0.11, 0.31	22.6	16.6	6.9	[629,630]
γ-Cb-B	1 wt% o-CBP	461	89	32	0.12 [d]	461	0.13, 0.13	19.0	16.2	7.7	[630]
AZA-BN	4 wt% mCBP	526	94	13.4	0.18 [d]	527	0.28, 0.69	25.7	20.9	9.0	[631]
BN-TP	3 wt% PhCzBCz	529	96	44.0	0.14 [d]	528	0.26, 0.70	35.1	32.4	20.8	[632]
2F-BN	6 wt% mCBPC	502	89	25.6	0.16 [d]	N/A	N/A	N/A	N/A	N/A	[633]
3F-BN	6 wt% mCBPC	503	83	16.7	0.08 [d]	N/A	N/A	N/A	N/A	N/A	[633]
4F-BN	6 wt% mCBPC	501	91	19.0	0.11 [d]	N/A	N/A	N/A	N/A	N/A	[633]
CN-BCz-BN	Toluene	496	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	[634]
D*t*CzB-DPTRZ	3 wt% PhCzBCz	536	87	788	0.17 [d]	532	0.33, 0.63	24.6	7.5	5.1 [b]	[635]
D*t*CzB-TPTRZ	3 wt% PhCzBCz	520	95	84	0.11 [d]	516	0.18, 0.67	29.8	26.4	12.1 [b]	[635]
D*t*CzB-PPm	3 wt% PhCzBCz	510	94	87	0.08 [d]	508	0.16, 0.66	28.6	24.3	9.9 [b]	[635]
D*t*CzB-CNPm	3 wt% PhCzBCz	543	87	524	0.12 [d]	540	0.35, 0.63	25.0	14.4	5.9 [b]	[635]
OBN-2CN-BN	3 wt% PhCzBCz	498 [g]	95 [g]	95[g]	0.12 [d,g]	496 [g](496) [h]	0.11, 0.52 [g] (0.11, 0.52 [h])	29.4 [g] (28.8 [h])	19.8 [g] (19.2 [h])	8.1 [g] (8.0 [h])	[317]
OBN-4CN-BN	3 wt% PhCzBCz	510 [g]	90 [g]	97 [g]	0.13 [d,g]	508 [g] (496) [h]	0.14, 0.64 [g] (0.14, 0.64 [h])	24.5 [g] (24.3 [h])	8.0 [g] (7.9 [h])	2.1 [g] (1.9 [h])	[317]

***m*-Cz-BNCz**	10 wt% PhCzBCz	528	96	0.86	0.08 [d]	528	0.26, 0.68	31.4	29.0	17.5	[636]
TCz-BN (*p*-Cz-CzBN	Toluene	477	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	[633,636]
BBCz-Y	2 wt% mCBP	549	90	11	0.14 [d]	549	0.37, 0.61 [b]	29.3	25.8 [b]	19.6 [b]	[628]
BBCz-G	2 wt% mCBP	519	99	13	0.14 [d]	515	0.26, 0.68	31.8	29.5 [b]	22.3 [b]	[628]
Cz2DABNA-NP-M/TB	1 wt% PMMA	478 [c]	85 [c]	19 [c]	0.15 [c]	477	0.11, 0.23	21.8	20.4	14.9	[609]
***t*DPA-DtCzB**	1 wt% PhCzBCz	484	85	29.5	0.11 [d]	480	0.11, 0.23	25.0	16.4	8.3	[637]
CzBNCz	1 wt% mCBP	470	95	92	0.18	N/A	N/A	N/A	N/A	N/A	[629]
D*t*BuPhCzB	3 wt% TCTA:PIM-TRZ (1:1)	513	93	33	0.10 [f]	512	0.25, 0.65	26.5	14.3	7.3	[627]
BN1	1 wt% mCBP	499	93	68.6	0.11	500	0.15, 0.61	17.0	16.6	8.5	[638]
BN2	1 wt% mCBP	538	89	108	0.13	546	0.38, 0.60	20.7	5.3	3.3	[638]
BN3	1 wt% mCBP	563	86	128	0.09	566	0.47, 0.51	21.4	5.3	N/A	[638]
BN-1	Toluene	566	95	N/A	0.11	N/A	N/A	N/A	N/A	N/A	[639]
BN-8	Toluene	567	95	N/A	0.03	N/A	N/A	N/A	N/A	N/A	[639]
TCz-B	1 wt% mCBP	517	89	71	0.09 [d]	515	0.16, 0.71	29.2	24.7	9.4	[630]
DACz-B	1 wt% mCBP	576	87	118	0.14 [d]	571	0.47, 0.51	19.6	12.0	4.8	[630]
BN-2	Toluene	586	96	N/A	0.08	N/A	N/A	N/A	N/A	N/A	[639]
BN-3	Toluene	598	96	N/A	0.08	N/A	N/A	N/A	N/A	N/A	[639]
BN-4	Toluene	612	96	N/A	0.06	N/A	N/A	N/A	N/A	N/A	[639]
BN-5	Toluene	627	95	N/A	0.05	N/A	N/A	N/A	N/A	N/A	[639]
BN-6	Toluene	618	94	N/A	0.06	N/A	N/A	N/A	N/A	N/A	[639]
BN-7	Toluene	629	94	N/A	0.09	N/A	N/A	N/A	N/A	N/A	[639]
BN-9	Toluene	585	96	N/A	0.03	N/A	N/A	N/A	N/A	N/A	[639]
BN-10	Toluene	595	96	N/A	0.12	N/A	N/A	N/A	N/A	N/A	[639]
BN-11	Toluene	608	95	N/A	0.09	N/A	N/A	N/A	N/A	N/A	[639]
BN-12	Toluene	624	94	N/A	0.07	N/A	N/A	N/A	N/A	N/A	[639]
TRZCzPh-BNCz	3 wt% CBP	516	98	5.7	0.13 [d]	513	0.17, 0.68	32.5	30.5	22.9	[640]
TRZTPh-BNCz	3 wt% CBP	516	99	6.4	0.11 [d]	513	0.16, 0.70	31.4	29.5	23.1	[640]
CNCz-BNCz	3 wt% CBP	582	96	60.4	0.18 [d]	584	0.55, 0.45	23.0	10.8	5.4	[634]
BN-CP-1	5 wt% DMIC-TRZ	490 [d]	98	65	0.12 [d]	496	0.09, 0.50	40.0	28.4	18.5	[641]
BN-CP-2	5 wt% DMIC-TRZ	490 [d]	95	58	0.13 [d]	497	0.10, 0.53	36.4	32.6	19.2	[641]
S-Cz-BN	5 wt% mCBP	490 [d]	94	42	0.16	490	0.10, 0.42	22.1	22.1	12.4	[642]
D-Cz-BN	5 wt% mCBP	490 [d]	96	44	0.14	489	0.10, 0.41	28.7	22.6	11.4	[642]
TW-BN (TCzBN-TMPh)	3 wt% mCBP	485	92	112	0.12	488	0.14, 0.36	27.8	25.4	10.7	[643,644]
TPh-BN	3 wt% mCBP	495	94	62	0.09	492	0.10, 0.46	28.9	25.1	15.6	[644]
pCz-BN	3 wt% mCBP	496	95	89	0.15	496	0.13, 0.54	27.2	25.6	12.2	[644]

mCz-BN	3 wt% mCBP	494	88	95	0.14	496	0.15, 0.55	25.9	24.1	14.0	[644]
Tip-DtCzB	1 wt% PhCzBCz	486	95	100	0.13	484	0.10, 0.29	28.9	18.2	6.8	[637]
***m*-PCz-BNCz**	10 wt% PhCzBCz	500	98	74.6	0.15 [d]	504	0.11, 0.61	36.8	33.4	19.0	[645]
***m*-DPAcP-BNCz**	10 wt% PhCzBCz	498	97	80.9	0.14 [d]	496	0.09, 0.54	42.0	37.6	17.5	[645]
***m*-BN-BNCz**	10 wt% PhCzBCz	496	95	97.0	0.16 [d]	492	0.09, 0.48	35.0	24.4	10.9	[645]
***m*-SF-BNCz**	10 wt% PhCzBCz	498	98	83.1	0.16 [d]	496	0.09, 0.53	41.1	37.0	17.9	[645]
PCzBN1	60 wt% mCP	430, 492	65	40.4	0.14	409, 428, 491	0.10, 0.43	17.8	8.6 [b]	2.6 [b]	[646]
PCzBN3	70 wt% mCP	430, 497	71	27.0	0.13	496	0.12, 0.54	17.5	11.4 [b]	3.1 [b]	[646]
PCzBN5	40 wt% mCP	430, 497	77	33.3	0.13	496	0.11, 0.53	13.3	8.4 [b]	3.1 [b]	[646]
TCzBN-DPF	5 wt% SF3TRZ	491 [d]	96	56	0.10	498	0.10, 0.56	26.4	22.8	12.0	[643]
TCzBN-oPh	1 wt% SF3TRZ	486 [d]	96	112	0.10	492	0.09, 0.46	26.0	22.9	10.4	[643]
CzBNNa	1 wt% mCBP	487	98	48	0.15 [d]	489	N/A	5.6 [d]	3.7 [d]	2.6 [d]	[647]
BN-PhOH	1 wt% mCBP	491	80 [d]	40.9	0.14 [d]	491	0.11, 0.43	19.0	15.5 [b]	6.2 [b]	[648]
BN-PhOCH3	3 wt% mCBP	493	78 [d]	40.8	0.15 [d]	493	0.10, 0.47	25.6	20.4 [b]	9.9 [b]	[648]
BN-PhN(CH3)2	3 wt% mCBP	492	71 [d]	21.2	0.14 [d]	492	0.10, 0.46	24.1	20.4 [b]	11.7 [b]	[648]
(SIPr)AuBN	0.5 wt% DMIC-Cz:DMIC-TRz	515	92	5.5	0.08	511	0.20, 0.69	24.8	24.8 [b]	24.3	[487]
(IPr)AuBN	0.5 wt% DMIC-Cz:DMIC-TRz	514 [i]	90 [i]	5.8 [i]	0.08 [i]	509	0.16, 0.66	24.0	24.0 [b]	20.2	[487]
(BzIPr)AuBN	2 wt% DMIC-Cz:DMIC-TRz	513 [i]	91 [i]	5.5 [i]	0.09 [i]	510	0.16. 0.68	30.3	30.3 [b]	28.1	[487]
(PzIPr)AuBN	1 wt% DMIC-Cz:DMIC-TRz	514 [i]	87 [i]	5.6 [i]	0.08 [i]	512	0.22, 0.67	24.0	24.0 [b]	23.1	[487]
(PyIPr)AuBN	4 wt% DMIC-Cz:DMIC-TRz	513 [i]	88 [i]	5.9 [i]	0.08 [i]	515	0.18, 0.69	27.6	27.6 [b]	20.5	[487]
BN-DICz	3 wt% mCBP	534	92	156	0.26 [d]	N/A	N/A	N/A	N/A	N/A	[649]
BN-ICz-1 (BN-ICz)	3 wt% mCBP	520	95	239	0.09 [d]	522	0.24, 0.73	24.1	18.2	10.6	[650]
BN-ICz-2	3 wt% mCBP	520	93	160	0.09 [d]	523	0.23, 0.72	22.2	18.3	14.4	[650]
VTCzBN	2,6-DCzppy	496 [d]	98	9.9	0.06 [d]	499	0.14, 0.56	31.7	24.8	19.8	[651]
TCz-VTCzBN	4 wt% 2,6-Dczppy	521 [b]	98	8.7	0.01 [d]	524	0.22, 0.71	32.2	18.0	16.0	[651]
TCz-F-DABNA	8 wt% PhCzBCz	558 [d]	99	20.2	0.12 [d]	588	0.54, 0.44	39.2	24.4	7.8	[652]

BN1	1 wt% DBFPO	454 [d]	91	126.6	0.20	457 [b]	0.14, 0.06	30.0	8.0	3.1	653
BN2	1 wt% DBFPO	464 [d]	93	74.6	0.16	467 [b]	0.12, 0.10	32.9	14.7	5.2	653
CzB2-M/TB	1 wt% PMMA	491	88	50	0.12	N/A	N/A	N/A	N/A	N/A	609
Cz2B2-M/TB	1 wt% PMMA	483	88	16	0.11	N/A	N/A	N/A	N/A	N/A	609
CzB2-N/P	1 wt% DOBNA-Tol	504 [c]	87 [c]	24 [c]	0.04 [c]	497	0.15, 0.57	26.7	24.4	18.0	609
BBCz-DB	2 wt% mCBP	471	91	35	0.15 [d]	469	0.12, 0.18	29.3	16.1 [b]	5.5 [b]	628
BBCz-R	2 wt% mCBP	619	79	53	0.19 [d]	616	0.67, 0.33	22.0	5.0 [b]	N/A	628
R-BN	4 wt% CBP	672 [j]	100 [j]	310 [j]	0.18 [d]	663	0.72, 0.28	25.6	N/A	N/A	306
R-TBN	4 wt% CBP	698 [j]	100 [j]	710 [j]	0.16 [d]	686	0.72, 0.28	24.7	N/A	N/A	306
BNO1	1 wt% DMIC-TRZ	610	96 [d]	N/A	0.25 [d]	609	0.63, 0.35	14.9	4.2	3.3	654
BNO2	1 wt% DMIC-TRZ	618	95 [d]	N/A	0.27 [d]	623	0.63, 0.32	12.0	5.1	4.4	654
BNO3	1 wt% DMIC-TRZ	624	96 [d]	N/A	0.26 [d]	616	0.62, 0.34	15.1	5.3	4.5	654
DBNS	CH_2Cl_2	631	80	11.2	0.20	N/A	N/A	N/A	N/A	N/A	655
DBNS-*t*Bu	CH_2Cl_2	641	85	10.2	0.19	N/A	N/A	N/A	N/A	N/A	655
m-DiNBO	3 wt% mCBP	466	94	31.4	0.06	466	0.13, 0.10	24.2	17.3	N/A	656
p-DiNBO (DBON)	4 wt% mCBP	503 [d]	98	24.6	0.13 [d]	510	0.17, 0.68	26.7	20.2	12.0	656,657
DBSN	4 wt% mCBP	553 [d]	98	25.7	0.13 [d]	556	0.42, 0.57	21.8	20.6	16.9	657
DBN-ICz	3 wt% mCBP	545	96	48	0.20 [d]	N/A	N/A	N/A	N/A	N/A	650
mDBIC	2 wt% mCP	431	68	202	0.31[d]	433	0.16, 0.04	5.7	N/A	N/A	658
BN-DMAC (DMAc-BN)	1 wt% mCBP	461 [d]	63	13.9	0.14 [d]	502	0.14, 0.54	21.1	19.7	12.5	659,660
BN-DPAC	1 wt% mCBP	465 [d]	86	11.6	0.11 [d]	504	0.14, 0.56	28.1	27.7	19.2	659
2PXZBN (PXZ-BN)	1 wt% mCBP:PO-T2T (1:1)	515	84	25.3	0.19 [d]	522	0.28, 0.64	17.7	15.3	7.4	660-662
2PTZBN	1 wt% mCBP:PO-T2T (1:1)	519	80	16.2	0.15 [d]	528	0.28, 0.65	25.5	21.7	17.2	661 662
BNSSe	1 wt% DMIC-TRZ	520	99	12.7	0.12	515	0.22, 0.66	35.7	35.3 [b]	32.0	662
BNSeSe	1 wt% DMIC-TRZ	514	100	9.9	0.14	512	0.19, 0.66	36.8	36.6 [b]	34.0	662
(P/M)-helicene-BN	1 wt% DMIC-TRZ	520 [d]	98	71.8	0.15	523	0.26, 0.66	31.5	29.6	18.7	305
BN4	3 wt% mCPCN	522	96	25	0.20 [d]	510 [k] (512) [l]	0.16, 0.63 [k] (0.21, 0.64) [l]	20.6 [k] (19.0) [l]	20.5 [k] (16.6) [k]	10.7 [k] (10.1) [l]	304
BN5	1 wt% mCPCN	512	92	25	0.14 [c]	506 [k]	0.17, 0.59 [k] (0.17,	22.0 [k]	15.3 [k]	10.9 [k] (11.1) [l]	304

						(506) [l]	0.60) [l]	(26.5) [l]	(17.6) [l]		
TPXZBN	5 wt% mCBP	502 [d]	99	27	0.16 [d]	506	0.16, 0.65	21.3	19.6	17.4	[663]
DPXZCZBN	5 wt% mCBP	500 [d]	94	15	0.13 [d]	505	0.15, 0.64	19.2	18.8	17.2	[663]
tCzphB-Ph	2 wt% TPSS	527	80	372	0.04	527	0.21, 0.75	29.3	22.3 [b]	9.2[b]	[664]
tCzphB-Fl	2 wt% TPSS	535	81	412	0.04	535	0.26, 0.72	26.2	21.6 [b]	8.7[b]	[664]
DPACzBN1	3 wt% 26DczPPy	479	98	116	0.11	475	0.14, 0.30	23.6	19.3	9.6	[665]
DPACzBN2	3 wt% 26DczPPy	470	92	54	0.12 [d]	469	0.13, 0.16	24.0	23.5	14.3	[665]
DPACzBN3	3 wt% 26DczPPy	475	94	69	0.13 [d]	472	0.12, 0.18	27.7	19.3	6.7	[665]
CzDABNA-NP-M/TB	1 wt% PMMA	468	86	106	0.18	N/A	N/A	N/A	N/A	N/A	[609]
CzDABNA-NP-TB/H	1 wt% PMMA	465	82	93	0.18	N/A	N/A	N/A	N/A	N/A	[609]
CzDABNA-NP	1 wt% PMMA	461	80	77	0.18	N/A	N/A	N/A	N/A	N/A	[609]
TBN-TPA (CzDABNA-NP-TB)	4 wt% in 2,6-Dczppy	470 [d]	98 [d]	51.0	0.03 [d]	474	0.12, 0.19	32.1	27.4	13.9	[609,666]
tCBNDA	7 wt% DBFDPO	472	72	22.8	0.05	472	0.12, 0.17	20.2	12.4	7.1	[667]
tCBNDASPO	20% DBFDPO	472	92	9.1	0.04	472	0.12, 0.17	28.0	20.6	15.3	[667]
tCBNDADPO	30 wt% DBFDPO	472	99	N/A	0.04	472	0.14, 0.22	30.8	23.3	16.2	[668]
PTZBN1	2 wt% 2,6 Dczppy	497	98	33.5	0.16 [d]	496	0.16, 0.51	26.9	25.3	17.9	[669]
PTZBN2	2 wt% 2,6 Dczppy	487	95	22.4	0.15 [d]	483	0.13, 0.31	30.5	29.7	23.0	[669]
PTZBN3	2 wt% 2,6 Dczppy	473	98	26.5	0.17 [d]	476	0.13, 0.22	19.9	15.8	12.1	[669]
B-dpa-Cz	3 wt% mCBP	469	94	78	0.15 [e]	475	0.11, 0.19	20.1	15.3	4.7	[670]
B-dpa-dmAc	3 wt% mCBP	476	98	60	0.16 [e]	481	0.10, 0.28	24.2	22.3	12.7	[670]
B-dpa-SpiroAc	3 wt% mCBP	476	92	52	0.14 [e]	481	0.10, 0.27	25.1	24.2	15.3	[670]
tDMAC-BN	5 wt% DPEPO	468 [d]	90 [c]	64 [c]	0.15	476	0.12, 0.22	19.8	13.1	N/A	[614]
BN-MeIAc	1 wt% DMIC-TRZ	497	96	28.1	0.11[e]	504 [k] 503 [l]	0.12, 0.63 [k] (0.12, 0.63[l])	37.2 [k] (36.1[l])	36.1 [k] (35.2 [l])	26.1 [k] (25.1 [l])	[281]
B-O-dpa	10 wt% DPEPO	433 [d]	86	224	0.18 [e]	443	0.15, 0.05	16.3	2.2	N/A	[671]
B-O-Cz	10 wt% DPEPO	441 [d]	94	51	0.15 [e]	481	0.13, 0.22	13.4	9.5	5.9	[671]
B-O-dmAc	10 wt% DPEPO	461 [d]	91	123	0.11 [e]	475	0.12, 0.21	16.2	13.5	8.4	[671]
B-O-dpAc	10 wt% DPEPO	463 [d]	94	83	0.06 [e]	473	0.12, 0.20	17.0	14.3	9.6	[671]
CzBNO	3 wt% 26DczPPy	450	96	48	0.21 [d]	454	0.14, 0.08	13.6	11.0	5.0	[672]
DMAcBNO	3 wt% 26DczPPy	470	99	129	0.23 [d]	472	0.13, 0.19	20.4	18.1	8.6	[672]
DPAcBNO	3 wt% 26DczPPy	468	98	100	0.19 [d]	468	0.13, 0.14	23.0	22.3	9.1	[672]
BON-D0 (NBO)	5 wt% mCP	464	85	157	0.18 [d]	460	0.14, 0.12	9.7	4.2 [b]	1.4 [b]	[656,673]

BON-D1	5 wt% mCP	485	94	139	0.14 [d]	488	0.13, 0.44	13.4	7.7 [b]	1.4 [b]	[673]
BON-D2	5 wt% mCP	478	98	107	0.10 [d]	487/ 509	0.15, 0.44	14.9	11.1 [b]	3.0 [b]	[673]
SBON	4 wt% mCBP	463 [d]	74	11.5	0.16 [d]	466	0.13, 0.13	13.7	12.6	6.7	[657]
SBSN	4 wt% mCBP	489 [d]	76	32.2	0.10 [d]	492	0.10, 0.44	17.6	17.6	12.0	[657]
SOBN	5 wt% 2,6-DczPPy	452	82	47	0.19 [d]	460	0.14, 0.14	14.6	10.2	7.2	[289]
***R*-DOBN**	5 wt% 2,6-DczPPy	455	91	52	0.14 [d]	459	0.14, 0.10	23.9	12.5	8.6	[289]
***R*-DOBNT**	5 wt% 2,6-DczPPy	458	96	122	0.12 [d]	464	0.13, 0.12	25.6	13.9	8.6	[289]
CzBO	1 wt% mCBP	448	99	120	0.16	448	0.15, 0.05	13.4	8.4	3.5	[674]
CzBS	1 wt% mCBP	472	98	30	0.14	473	0.11, 0.16	23.1	21.3	15.0	[674]
CzBSe	1 wt% mCBP	479	98	14	0.15	481	0.10, 0.24	23.9	23.4	20.0	[674]
Cz-BseN	5 wt% mCBP	479 [d]	87 [c]	29.8 [c]	0.15 [d]	490	0.13, 0.45	20.3	16.9	14.0 [b]	[675]
DCz-BseN	5 wt% mCBP	472 [d]	93 [c]	28.4 [c]	0.14 [d]	481	0.11, 0.25	22.3	19.6	12.6 [b]	[675]
BNO	1 wt% PMMA	457	97	600	0.17	N/A	N/A	N/A	N/A	N/A	[487]
(BzIPr)AuBNO	2 wt% PMMA	473	84	22.8	0.11	N/A	N/A	N/A	N/A	N/A	[487]
BN1	2 wt% mCBP	492	75	4.5	0.20 [m]	505	0.27, 0.49	5.5	N/A	4.1 [b]	[676]
TCz-BN1	2 wt% mCBP	491	71	3.0	0.16 [m]	505	0.25, 0.47	5.7	N/A	5.1 [b]	[676]
BN2	5 wt% mCBP	559	53	20.4	0.19 [m]	545	0.40, 0.57	6.7	N/A	6.5 [b]	[676]
TCz-BN2	5 wt% mCBP	560	62	15.1	0.17 [m]	556	0.41, 0.56	7.8	N/A	7.5 [b]	[676]
ADBNA-Me-Mes (3)	1 wt% in DOBNA-OAr	482	89	165	0.18	480	0.10, 0.27	16.2	11.2	N/A	[677]
ADBNA-Me-Tip	1 wt% in DOBNA-OAr	479	88	147	0.18	481	0.11, 0.29	21.4	15.4	N/A	[677]
4a	1 wt% PMMA	488	91	N/A	0.19	N/A	N/A	N/A	N/A	N/A	[678]
4b	1 wt% PMMA	491	93	N/A	0.19	N/A	N/A	N/A	N/A	N/A	[678]
5a	1 wt% PMMA	485	91	N/A	0.18	N/A	N/A	N/A	N/A	N/A	[678]
5b	1 wt% PMMA	487	86	N/A	0.17	N/A	N/A	N/A	N/A	N/A	[678]
OAB-ABP	2 wt% in Polymer B	506 [c]	90 [c]	32 [c]	0.12 [c]	505	0.12, 0.63	21.8	19.6	17.4	[602]
BSBS-N1	2 wt% mCBP	478	89	5.6	0.14	478	0.11, 0.12	21.0	16.3 [b]	8.7 [b]	[679]
2B-DTACrs	5 wt% mCBP	448	74	13.1	0.16	447	0.15, 0.04	14.8	8.9 [b]	N/A	[680]
BN3	1 wt% DBFPO	456 [d]	98	17.8	0.15	458 [b]	0.14, 0.08	34.8 [b]	16.7 [b]	5.7 [b]	[653]
m[B-N]N1	5 wt% mCBPC	483	91	128.1	0.15	490	0.13, 0.39	18.1	13.1 [b]	6.1 [b]	[681]
m[B-N]N2	5 wt% mCBP	491	90	136.2	0.13	494	0.14, 0.46	17.3	13.2 [b]	5.5 [b]	[681]
BN2	1 wt% DPEPO	415 [d]	76	16,240	0.28	N/A	N/A	N/A	N/A	N/A	[682]
BN3	1 wt%	420	77	13,3	0.29	N/A	N/A	N/A	N/A	N/A	[682]

	DPEPO	[d]		40							
BN4	1 wt% DPEPO	417 [d]	80	4,190	0.24	423	0.17, 0.04	9.1	N/A	N/A	[682]
BIC-mCz	2 wt% mCP	432	82	250	0.29 [d]	431	0.16, 0.04	7.0	0.2 [d]	N/A	[658]
BIC-pCz	2 wt% mCP	471	96	328	0.15 [d]	470	0.13, 0.16	13.3	3.1 [d]	1.2 [d]	[658]
QAO/QAD/DiKTa	5 wt% mCP	466	72	93.3	0.19	468	0.13, 0.18	19.4	9.4	1.4	[683-685]
3Ph-QAD	2 wt% mCP	478	73	250	0.18	480	0.13, 0.32	19.4	10.4	3.1	[683]
7Ph-QAD	2 wt% mCP	472	68	474	0.19	472	0.12, 0.24	19.1	5.4	2.1	[683]
Mes_3DiKTa	3.5 wt% mCP	477	80	20	0.21	480	0.12, 0.32	21.1	14.5	4.5	[684]
QA-PF	3 wt% mCP	478	89	346.9	0.24	474	0.12, 0.17	16.8	5.8	2.1 [b]	[686]
QA-PCN	3 wt% mCP	477	68	223.9	0.18	473	0.12, 0.18	16.9	9.4	2.7 [b]	[686]
QA-PMO	3 wt% mCP	485	66	484.1	0.25	484	0.11, 0.30	15.0	3.5	2.1 [b]	[686]
QA-PCZ	3 wt% mCP	480	71	339.1	0.21	482	0.11, 0.28	17.5	7.5	2.4 [b]	[686]
QAO-PhCz	5 wt% mCBP	460 [d]	47	40	0.11 [d]	470	0.13, 0.18	12.4	8.6 [b]	1.9 [b]	[300]
QAD-Cz (Cz-DiKTa)	1 wt% mCP	500	100	205	0.17	494	0.16, 0.47	20.3	5.4	0.7	[687,688]
QAD-2Cz	12 wt% mCP	526	100	130	0.17	530	0.30, 0.65	27.3	23.9	12.4	[687]
QAD-mTDPA	1.5 wt% CBP	587	97	269	0.33	589	0.55, 0.44	26.3	12.9	4.7	[687]
Cz-Ph-DiKTa	2 wt% mCP	486	77	153	0.10	492	0.18, 0.50	23.0	19.3	10.2	[688]
3Cz-DiKTa	2 wt% mCP	539	78	286	0.16	547	0.39, 0.60	24.4	17.3	6.0	[688]
3TPA-DiKTa	2 wt% mCP	551	93	131	0.13	551	0.41, 0.58	30.8	18.1	7.3	[689]
3DPA-DiKTa	2 wt% mCP	617	60	323	0.20	613	0.63, 0.37	16.7	3.4	1.9	[689]
QAOCz1	5 wt% CBP	501	86	116.7	0.26 [d]	516	0.23, 0.66	16.9	4.4 [b]	2.9 [b]	[690]
QAOCz2	5 wt% CBP	500	87	16.3	0.18 [d]	504	0.18, 0.62	19.4	7.5 [b]	2.6 [b]	[690]
QAOCz3	5 wt% CBP	495	99	26.5	0.16 [d]	500	0.16, 0.57	21.1	9.9 [b]	2.7 [b]	[690]
DiKTa-OBuIm	1 wt% mCP	500	71	316.6	0.20	N/A	N/A	N/A	N/A	N/A	[691]
DiKTa-DPA-OBuIm	1 wt% mCP	578	61	241.7	0.19	N/A	N/A	N/A	N/A	N/A	[691]
DDiKTa	9 wt% DPEPO	490	72	1.2	0.16	500	0.18, 0.53	19.0	10.3 [b]	N/A	[692]
DQAO	8 wt% mCP	472	59	111	0.19 [d]	472	0.12, 0.18	15.2	8.5	2.3 [b]	[693]
OQAO	5 wt% CBP	534	90	205	0.16 [d]	532	0.32, 0.65	20.3	15.1	3.4 [b]	[693]
SQAO	1 wt% mCPCN	560	65	78	0.16 [d]	564	0.47, 0.52	17.8	13.6	6.3 [b]	[693]
QA-1	3 wt% PPCz	457	94	655	0.29	455	0.14, 0.12	17.1	1.2	N/A	[694]
QA-2	3 wt% PPCz	465	97	48	0.19	463	0.13, 0.14	19.0	11.0	2.6 [b]	[694]
QA-3	3 wt% PPCz	523	99	307	0.19	515	0.26, 0.62	18.6	11.1	1.8 [b]	[694]
Hel-DiDiKTa	1 wt% mCP	480	4.1	5.4	0.15	N/A	N/A	N/A	N/A	N/A	[695]

BTPT	1 wt% PMMA	401	9	109	0.14	N/A	N/A	N/A	N/A	N/A	[303]
2,3-CZ	3.5 wt% mCBP	449 [d]	40	436	0.26 [d]	458	0.15, 0.14	6.3	3.7 [b]	1.6 [b]	[212]
2,5-CZ	3.5 wt% mCBP	459 [d]	81	619	0.29 [d]	463	0.13, 0.13	22.3	5.0 [b]	3.9 [b]	[212]
2,3-DPA	10 wt% 26DCzPPY	496 [d]	51 [n]	373	0.19 [d]	503	0.17, 0.54	11.7	7.2 [b]	3.2 [b]	[212]
CzAO	3 wt% mCPCN	431 [d]	49	1340	0.40 [d]	444	0.15, 0.07	8.6	N/A	N/A	[696]
MQAO	3 wt% mCPCN	447 [d]	61	1024	0.31 [d]	460	0.14, 0.14	10.3	N/A	N/A	[696]
QPXO	3 wt% mCPCN	485 [d]	35	2394	0.29 [d]	486	0.17, 0.41	7.1	N/A	N/A	[696]
QPO	3 wt% mCPCN	501 [d]	71	1436	0.26[d]	510	0.24, 0.53	15.3	N/A	N/A	[696]
TOAT	Toluene	417 [b]	N/A	N/A	0.34	N/A	N/A	N/A	N/A	N/A	[697]
3DPA-TOAT	3 wt% mCBP	590 [b]	46	2142	0.34 [d]	588 [b]	0.57, 0.43	1.2 [b]	0.4 [b]	0.2 [b]	[697]
3*t*BuTOAT	15 wt% SiCz	484	N/A	N/A	0.29	484	0.11, 0.26	13.0	N/A	N/A	[698]
3PhTOAT	15 wt% mCP	516	97	N/A	0.12	500	0.16, 0.54	29.2	N/A	N/A	[698]
3PTPTOAT	15 wt% mCP	520	93	N/A	0.16	516	0.24, 0.61	27.6	N/A	N/A	[698]
3MTPTOAT	15 wt% mCP	502	92	N/A	0.14	516	0.21, 0.62	31.2	N/A	N/A	[698]
3MPATOAT	15 wt% CBP	654	N/A	N/A	0.28	652	0.69, 0.31	11.3	N/A	N/A	[698]
tBisICz	1 wt% mCP:TSPO1	442	95	12500	0.29 [o]	445	0.16, 0.05	15.1	3.0 [b]	N/A	[699]
tPBisICz	1 wt% mCP:TSPO1	450	91	1740	0.27 [o]	452	0.15, 0.05	23.1	4.8 [b]	N/A	[699]
DiICzMes$_4$	10 wt% DPEPO	451 [p]	82 [p]	433 [p]	0.26 [p]	446	0.15, 0.11	3.0	1.9	N/A	[700]
t3IDCz	1 wt% mCP:mCBP-CN	470	92	376.6	0.21[e]	472	0.12, 0.16	30.0	12.4	5.0	[701]
P3IDCz	1 wt% mCP:mCBP-CN	470	100	332.6	0.19 [e]	472	0.12, 0.16	30.9	12.6	4.7	[701]

[a] Medium is that of photoluminescence and electroluminescent emissive layer unless otherwise stated, [b] fitted using graphical fitting software, [c] 1 wt% doped PMMA film, [d] dilute toluene solution, [e] dilute THF solution, [f] 1 wt% doped mCP film, [g] *R* isomer, [h] *S* isomer, [i] 2 wt% doped PMMA film, [j] 3 wt% doped CBP film, [k] +ve enantiomer, [l] -ve enantiomer, [m] 5 wt% doped PMMA film, [n] 3.5 wt% doped mCBP film, [o] dilute DCM solution, [p] 3.5 wt% doped mCP film.

Table **S16.** Photoluminescence and electroluminescence properties of all reported TSCT-TADF emitters reviewed in Section **12**.

Compound	**Medium**	**λ_{PL} / nm**	**Φ_{PL} / %**	**τ_D / μs**	**ΔE_{ST} / eV**	**λ_{EL} / nm**	**CIE_{XY}**	**EQE$_{MAX}$ / %**	**Roll-off 100 cd m^{-2} /**	**Roll-off 1000 cd m^{-2} / %**	**Ref**

									%		
XPT	10 wt% DPEPO	566	66	3.3	N/A	585	N/A	10	~14	~44	[702]
XtBuCT	10 wt% DPEPO	453	53	4.1	N/A	488	N/A	4	N/A	N/A	[702]
TpAT-tFFO	N/A	485	84%	4.42	N/A	498	0.20,0.44	19.2	1%	6%	[703]
TpIBT-tFFO	9% CzSi	477	71.4	6.7	0.076*	472	0.16,0.26	12.2	N/A	N/A	[704]
DM-B	20wt% DPEPO	493	96	5	0.17*	488	N/A	27.4	N/A	10.9	[705]
DM-Bm	20wt% DPEPO	495	92	4.5	–0.08	500	N/A	21.7	N/A	9.2	[705]
DM-G	20wt% DPEPO	504	88	3.3	-0.11	500	N/A	18.5	N/A	16.8	[705]
8MeDM-B	30 wt% PPF	480 [a]	97	4.6	0.15 [a]	492	0.20, 0.41	28.8	6	18	[706]
8FDM-B	30 wt% PPF	483 [a]	98	4.0	0.15 [a]	496	0.22, 0.43	31.7	5	18	[706]
tBu-DMB	30 wt% mCP	446	89	5.99	0.17	492	0.21, 0.38	21.0	23	0.6	[707]
C6-DMB	30 wt% mCP	447	98	5.58	0.17	492	0.21, 0.38	21.7	24	63	[707]
STF-DPS	30 wt% CBP	441	16	6.78	0.052	468	N/A	3.0	N/A	N/A	[708]
STF-TBDS	30 wt% CBP	460	53	7.98	0.053	488	N/A	21.5	N/A	N/A	[708]
N2-6	20 wt% CzAcS	461	76	1.01	0.27	NA	NA	14.2	NA	NA	[709]
N2-8	20 wt% CzAcS	470	82	1.18	0.16	NA	NA	17.6	NA	NA	[709]
N3-6	20 wt% CzAcS	485	83	1.29	0.28	NA	NA	14.7	NA	NA	[709]
N3-8	20 wt% CzAcS	495	91	1.50	0.14	NA	NA	18.9	NA	NA	[709]
DM-BD1	20wt% DPEPO	495	94.2	3.1	0	N/A	0.21,0.47	28.0	N/A	N/A	[708]
DM-BD2	20wt% DPEPO	495	92.8	2.8	-0.07	N/A	0.20,0.46	26.6	N/A	N/A	[708]
SFST	30 wt% mCBP	512	53.1	6.78	0.052	508	N/A	12.5	N/A	N/A	[710]
SFOT	30 wt% mCBP	512	89.7	7.98	0.053	508	N/A	23.1	N/A	N/A	[710]
SDMAC	30 wt% PPF	NA	90	4.17	0.034	492	0.18, 0.41	28.4	14	40	[711]
2tDMG	40wt% DPEPO	502	87	3.43	0.03	504	0.24,0.53	30.8	N/A	7.5	[712]
3tDMG	40wt% DPEPO	505	86	2.28	0.01*	518	0.29,0.57	26.3	N/A	11.8	[712]
AC-BO	10 wt% PMMA	446	77	11.7	0.13	456	0.15, 0.12	19.3	60	NA	[713]
QAC-BO	10 wt% PMMA	428	83	0.11	0.20	448	0.15, 0.08	15.8	70	NA	[713]
Cz-BO	10 wt% PMMA	411	89	NA	0.29	412	0.16, 0.03	5.5	NA	NA	[713]
mCz-Xo-TRZ	30 wt% PPF	469	90	7.2	0.16	477	0.16,0.29	27.8	1	14	[714]
dCz-Xo-TRZ	30 wt% PPF	482	92	7.5	0.24	464	0.15,0.20	21.0	4	19	[714]
2PXZ-2TRZ	30 wt% PPF	512	94	5.3	0.01	508	0.26,0.54	27.1	NA	NA	[715]
H1	30 wt% DPEPO	493	92	6.8	0.02	494	0.20, 0.42	20.9	13	34	[716]
H2	30 wt% DPEPO	520	80	10.9	0.07	527	0.31, 0.56	16.1	1	16	[716]
H3	30 wt%	497	82	5.9	0.01	503	0.22, 0.48	17.7	2	25	[716]

	DPEPO										
H4	30 wt% DPEPO	504	89	5.3	0.03	507	0.24, 0.50	20.0	5	22	[716]
H5	30 wt% DPEPO	220	52	3.3	0.03	550	0.42, 0.55	13.2	1	11	[716]
PXZ-CTZ	20wt% DPEPO	525	55	3.41	0.07	N/A	0.33,0.56	16.57	N/A	40.1	[717]
DPXZ-CTZ	20wt% DPEPO	524	78	3.38	-0.03	N/A	0.39,0.57	19.7	N/A	53.0	[717]
DPXZ-BO	20wt% DPEPO	522	99	11.3	0.03	N/A	0.26,0.58	23.96	N/A	15.6	[717]
BNB-m	10 wt% mCP	502	100	11.2	0.03	502	0.21, 0.50	31.4	NA	30	[718]
BNB-p	10 wt% mCP	518	86	25.4	0.11	508	0.23, 0.54	34.9	NA	21	[718]
TPA-QX	5 wt% mCP	535	44	NA	0.38	NA	NA	NA	NA	NA	[719]
PXZ-QX	5 wt% mCP	573	32	NA	0.24	NA	NA	NA	NA	NA	[719]
DPXZ-QX	5 wt% mCP	582	74	26.9	0.09	597	0.52, 0.44	20.6	NA	74	[719]
DPXZ-DFQX	5 wt% mCP	595	71	6.8	0.01	NA	NA	NA	NA	NA	[719]
DPXZ-2QX	5 wt% mCP	594	87	8.7	0.02	609	0.59, 0.41	23.2	NA	0.38	[719]
DPXZ-2DFQX	5 wt% mCP	599	91	4.9	–0.05	NA	NA	NA	NA	NA	[719]
DPTZ-QX	5 wt% mCP	565	49	255	0.14	NA	NA	NA	NA	NA	[720]
DPTZ-DFQX	5 wt% mCP	561	61	114	0.15	NA	NA	NA	NA	NA	[720]
AcPTC	20 wt% SimCP2	485	73	10.5	0.05	484	0.18, 0.26	10.0	NA	NA	[721]
PxPTC	20 wt% SimCP2	522	61	2.9	0.03	533	NA	11.0	NA	NA	[721]
PtPTC	20 wt% SimCP2	532	51	11.4	0.03	564	NA	5.6	NA	NA	[721]
BPAPTC	20 wt% SimCP2	519	90	4.6	0.02	520	NA	23.3	12	36	[722]
mBPAPTC	20 wt% SimCP2	510	90	3.1	0.03	520	NA	17.8	26	47	[722]
BPAMTC	20 wt% SimCP2	492	63	6.0	0.06	486, 516	NA	14.7	40	74	[722]
mBPAMTC	20 wt% SimCP2	491	69	3.2	0.13	484, 520	NA	9.5	44	69	[722]
MPAPTC	20 wt% SimCP2	546	44	1.8	0.002	564	NA	9.1	32	56	[722]
B-oCz	Neat	465	61	15	0.06	463	0.15,0.17	8.0	14	68	[723]
B-oTC	Neat	476	94	14	0.05	474	0.15,0.26	19.1	11	49	[723]
DMACoBA	10wt% PMMA	488	100	10.1	0.014	N/A	N/A	N/A	N/A	N/A	[724]
DMACoOB	10wt% PMMA	481	100	10.8	0.004	N/A	N/A	N/A	N/A	N/A	[724]
DMACoB	10wt% PMMA	518	100	8.5	0.001	N/A	N/A	N/A	N/A	N/A	[724]
CTPCF3	Toluene	494	96	3.21	0.04	495	NA	33.1	6	18	[725]
CNCTPCF3	Toluene	475	67	6.04	0.28	497	NA	25.6	12	46	[725]
TCTPCF3	Toluene	468	65	2.52	0.06	495	NA	23.2	12	19	[725]
1CTF	Toluene	500	99	2.4	0.03	490	0.23, 0.45	17.5	NA	4	[726]
2CTF	Toluene	507	98	1.8	0.03	503	0.26, 0.54	19.8	NA	1	[726]
3CTF	Toluene	514	99	1.2	0.04	508	0.29, 0.57	22.6	NA	0	[726]
SF12oTz	20 wt% DPEPO	491	92	4.6	0.29	496	0.23, 0.47	22.4	1	11	[727]
SF23oTz	20 wt%	473	86	4.3	0.08	484	0.19, 0.35	19.6	4	19	[727]

	DPEPO										
SF34oTz	20 wt% DPEPO	479	65	8.2	0.05	482	0.18, 0.37	14.6	42	79	[727]
TP-BP-DMAC	20 wt% DPEPO	508	80	8.3	0.01	488	0.21, 0.38	20.5	20	53	[728]
TP-BP-PXZ	20 wt% DPEPO	531	40	3.9	0.01	531	0.35, 0.53	13.8	11	33	[728]
Ac3TRZ3	10 wt% Ac6	486*	54	3.5	0.08	520	0.22,0.42	11.0	5	40	[729]
TAc3TRZ3	10 wt% Ac6	508*	63	3.2	0.04	538	0.25,0.47	14.2	5	27	[729]
S-CNDF-S-*t*Cz	Neat	445	42	1.83	0.24	484	0.16,0.18	2.6	N/A	N/A	[89]
S-CNDF-D-*t*Cz	Neat	441	19	2.20	0.21	466	0.16,0.17	3.7	N/A	N/A	[89]
T-CNDF-T-*t*Cz	Neat	447	76	1.65	0.03	466	0.19,0.35	21.0	N/A	N/A	[89]
TRZ-*o*-SDMAC	Neat film	496	13	1.3	0.01	518	0.30, 0.47	1.1	83.6	NA	[730]
TRZ-*m*-SDMAC	Neat film	499	52	5.2	0.01	510	0.24,0.49	20.3	24.9	79	[730]
TPA-QNX(CN)2	cyclohexane	487	44	2.4	N/A	573	0.45,0.54	9.4	N/A	N/A	[731]
***t*BuDMAC-TPE-TRZ**	Neat film	510	44	4.64	0.08	524	0.29, 0.52	5.0	14	NA	[732]
***t*BuDMAC-TPE-TTR**	Neat film	550	11	9.28	0.01	560	0.43, 0.53	7.9	41	NA	[732]
Cis-Bz-PCP-TPA	15 wt% mCP	480	12	1.8	0.13	N/A	N/A	N/A	N/A	N/A	[733]
Trans-Bz-PCP-TPA	15 wt% mCP	465	15	3.6	0.17	N/A	N/A	N/A	N/A	N/A	[733]
Cp-ecl	Toluene	520	61	1.9	0.03***	N/A	N/A	N/A	N/A	N/A	[734]
Cp-sta	Toluene	520	2		0.05***	N/A	N/A	N/A	N/A	N/A	[734]

[a] Dilute toluene solution.

Table **S17.** Photoluminescence and electroluminescence properties of AIE TADF emitters reviewed in Section **13**.

Compound	**Medium**	**λ_{PL} / nm**	**Φ_{PL} / %**	**τ_d / μs**	**ΔE_{ST} / eV**	**λ_{EL} / nm**	**CIE_{XY}**	**EQE$_{max}$ / %**	**Roll-off at 100 cd m^{-2} / %**	**Roll-off at 1000 cd m^{-2} %**	**Ref**
TXO-TPA	5 wt% in mCP	580	83	78	0.04 [a]	552	0.45, 0.53	18.5	~35	68	[735]
TXO-PhCz	5 wt% in mCP	520	90	86	0.09 [a]	~517	0.31, 0.56	21.5	~44	72	[735]
***m*-ACSO2**	Neat	473	76	3.2	0.07 [b]	486	0.21, 0.34	17.2	6	~65	[736]
***o*-ACSO2**	Neat	484	66	1.8	0.04 [b]	492	0.23, 0.40	5.9	2	N/A	[736]
4,4-CzSPz	Neat	530	97	62	0.25 [b]	526		20.7	~0	50	[737]
2Cz-DPS	Neat	520	91.9	19.1	0.32 [b]	518	NA	28.7	NA	NA	[738]
3CP-DPS-PXZ	Neat	518	52	0.96	0.03 [b]	508	0.28, 0.52	17.9	NA	19	[739]
3CP-DPS-DMAC	neat	472	65	2.36	0.07 [b]	484	0.16, 0.28	9.1	NA	69	[740]
DCB-DPS-PXZ	Neat	537	40	0.62	0.08 [b]	520	0.32, 0.56	13.9	NA	20.8	[740]
mCP-DPS-PXZ	Neat	537	47	0.67	0.05 [b]	520	0.32, 0.56	14.7	NA	17.7	[740]
***m*PhDCzDPSPXZ**	Neat	548	56	0.76	0.03 [b]	521	0.34, 0.56	18.1	NA	7.7	[740]
pPhDCzDPSPX	Neat	548	55	0.75	0.03 [b]	523	0.34, 0.56	17.1	NA	9.9	[740]

Z											
PXZ2PTO	Neat	512	61	2.49	0.02 [a]	504	0.27, 0.50	16.4	7.9	NA	[741]
DBT-BZ-DMAC	Neat	505	80	3.0	0.08 [b]	508	0.26, 0.55	14.2	N/A	0.46	[742]
CDBP-BP-PXZ	Neat	523	77.4	2.5	0.039 [b]	536	0.355, 0.579	15.5	N/A	0.6	[743]
CDBP-BP-DMAC	Neat	488	59.2	6.1	0.043 [b]	496	0.229, 0.445	9.5	N/A	2.1	[743]
CP-BP-PXZ	Neat	530	58	2.1	0.024 [b]	548	0.40, 0.57	18.4	N/A	1.2	[744]
CP-BP-PTZ	Neat	538	45.3	5.7	0.033 [b]	554	0.42, 0.55	15.3	N/A	16.7	[744]
CP-BP-DMAC	Neat	490	67.4	5.5	0.016 [b]	502	0.23, 0.49	15.0	N/A	0.2	[744]
DMF-BP-PXZ	Neat	595	45	1.4	0.22 [c]	NA	0.44, 0.54	13.3	NA	6%	[745]
DPF-BP-PXZ	Neat	596	49	1.1	NA	560	0.46, 0.53	14.3	NA	1.4%	[745]
SBF-BP-PXZ	Neat	596	45	1.1	NA	NA	0.45, 0.53	12.3	NA	0.8%	[745]
DCDMF-BP-PXZ-BP-PXZ	Neat	540	88.5	0.33	0.05 [b]	540	0.39, 0.57	19.0	N/A	2.6	[746]
DCDPF-BP-PXZ	Neat	530	89.0	0.30	0.03 [b]	544	0.38, 0.57	18.5	N/A	1.6	[746]
DCSBF-BP-PXZ	Neat	527	39.6	0.1	0.09 [b]	548	0.40, 0.56	3.3	N/A	3.0	[746]
35DCPP-BP-PXZ	Neat	530	66.5	1.58	0.02 [b]	538	0.39, 0.57	17.3	NA	0.6	[747]
26DCPP-BP-PXZ	Neat	533	67.9	1.68	0.01 [b]	542	0.38, 0.57	16.1	NA	1.2	[747]
3-CCP-BP-PXZ	Neat	541	73	0.76	0.016 [b]	540	0.38, 0.58	21.7	NA	19.8	[748]
9-CCP-BP-PXZ	Neat	543	70.4	0.68	0.018 [b]	537	0.37, 0.59	20.4	NA	19.4	[748]
3,9-CCP-BP-PXZ	Neat	536	72.6	0.42	0.019 [b]	541	0.38, 0.59	20.6	NA	19.7	[748]
3-BCP-BP-PXZ	Neat	521	61	1.63	0.028 [b]	544	0.374, 0.575	19.5	NA	6.1	[749]
9-BCP-BP-PXZ	Neat	531	53.4	1.54	0.034 [b]	540	0.365, 0.577	14.3	NA	3.5	[749]
3,9-BCP-BP-PXZ	Neat	540	50.7	1.47	0.033 [b]	544	0.382, 0.573	16.4	NA	6.1	[749]
DCB-BP-PXZ	Neat	530	69	2.6	0.02 [b]	N/A	0.39, 0.57	22.6	N/A	3	[750]
CBP-BP-PXZ	Neat	532	72	2.4	0.02 [b]	N/A	0.39, 0.57	21.4	N/A	3	[750]
mCP-BP-PXZ	Neat	529	66	2.3	0.02 [b]	N/A	0.39, 0.57	22.1	N/A	3	[750]
mCBP-BP-PXZ	Neat	530	71	2.4	0.02 [b]	N/A	0.38, 0.57	21.8	N/A	1	[750]
SFAC-BP-SFAC	Neat	508	52	3.6	0.036 [b]	508	0.24, 0.53	18.6	N/A	13.4	[750]
SXAC-BP-SXAC	Neat	500	57	4.7	0.061 [b]	504	0.21, 0.46	17.1	N/A	15.8	[750]
STAC-BP-STAC	Neat	511	58	4.0	0.052 [b]	504	0.22, 0.49	18.1	N/A	12.2	[750]
TATC-BP	Neat	524	22	0.94	0.125 [b]	549	0.41, 0.54	5.9	NA	18.6	[751]
TATP-BP	Neat	520	24	0.91	0.129 [b]	541	0.38, 0.55	6	NA	3.3	[751]
BDMAC-XT	Neat	518	96	1.4	0.025 [b]	526	0.31, 0.61	21	N/A	0	[752]
BDPAC-XT	Neat	495	94	1.9	0.024 [b]	496	0.22, 0.49	21	N/A	14.3	[752]
XT-DPDBA	Neat	472	77	2.823	0.063 [b]	472	0.151,0.272	8.9	NA	10	[753]
XT-BDPDBA	Neat	480	86	2.403	0.025 [b]	488	0.185, 0.390	13.1	NA	16	[753]
SPBP-DPAC	Neat	495	93	2.5	0.03 [b]	504	0.23, 0.50	22.8	NA	1.8	[754]
SPBP-SPAC	Neat	504	98	1.3	0.02 [b]	506	0.27, 0.56	21.3	NA	2.3	[754]
3CPyM-DMAC	Neat	514	67	1.42	0.04 [b]	532	0.34, 0.51	11.4	NA	NA	[755]
2CPyM-DMAC	Neat	536	53.3	1.10	0.03 [b]	544	0.39, 0.56	9.1	NA	NA	[755]
CBM-DMAC	Neat	501	47	0.99	0.1 [b]	499	0.28, 0.47	6.7	NA	NA	[755]
DMAC-BPI	Neat	510	95.8	3.1	0.02 [b]	511	0.25, 0.51	19.4	NA	1.0	[756]
DPAC-BPI-CN	Neat	525	90.1	3	0.07 [b]	531	0.34, 0.56	26.2	N/A	44.3	[756]
DTPA-DTM	Neat	498	39	1.6	0.18 [b]	494	0.21, 0.42	4.4	NA	NA	[757]
DTPA-DDTM	Neat	539	60	2.4	0.17 [b]	555	0.41, 0.55	8.2	NA	NA	[757]
CzTAZPO	Neat	512	71	1.1	0.08 [b]	537	0.37, 0.56	12.8	NA	12.6	[758]
sCzTAZPO	Neat	502	57	0.81	0.10 [b]	531	0.36, 0.56	9.6	NA	9.1	[758]
IAcTr-out	25 wt% mCP	~505	77	7.0	0.05 [b]	NA	0.29, 0.54	17.5	4	20	[759]

IAcTr-in	35 wt% mCP	~516	80	2.8	0.07 [b]	NA	0.33, 0.58	18.4	1	12	[759]
34AcCz-PM	Neat	538	67	0.73	0.15 [d]	548	0.42, 0.55	14.1	N/A	9.2	[760]
34AcCz-Trz	Neat	556	42	0.88	0.12 [e]	576	0.50, 0.49	7.3	N/A	19.2	[760]
PCZ-CB-TRZ	Neat	557	97	27	0.003 [f]	586	N/A	11.0	N/A	N/A	[761]
TPA-CB-TRZ	Neat	624	55	–	0.146 [f]	631	N/A	10.1	N/A	N/A	[761]
2PCZ-CB	Neat	571	94	28	0.018 [f]	590	N/A	9.2	N/A	N/A	[761]
SFDBQPXZ	10 wt% CBP	546	100	1.5	0.04 [b]	548	N/A	23.5	28	45	[762]
DFDBQPXZ	10 wt% CBP	551	88	2.0	0.04 [b]	548	N/A	16.8	2	26	[762]
DMAC-QL	Neat	489	33	2.15	0.06 [b]	522	0.31, 0.51	7.7	23	58	[763]
PXZ-QL	Neat	531	65	1.86	0.10 [b]	536	0.36, 0.55	17.3	6.9	12	[763]
PTZ-QL	Neat	537	52	15.76	0.04 [b]	546	0.39, 0.56	14.8	14	64	[763]
Fene	Neat	584	58.24	2.75	0.04 [b]	570	N/A	14.9	N/A	N/A	[764]
Fens	Neat	591	36.11	3.27	0.03 [b]	568	N/A	13.1	N/A	N/A	[764]
Yad	Neat	544	79.63	16.05	0.04 [b]	534	N/A	17.4	N/A	N/A	[764]
TB-tCz	Neat	433	41.4	1.49	0.227 [g]	416	0.17, 0.06	8.21	N/A	N/A	[765]
TB-tPCz	Neat	445	51.9	1.06	0.169 [g]	428	0.16, 0.05	15.8	N/A	N/A	[765]

[a] 2-MeTHF, [b] Neat, [c] $\Delta E_{S2\text{-}T3}$ calculated computationally on solid, [d] 10 wt% in CBP, [e] 5 wt% in CBP, [f] calculated at the TD-DFT-PBEO/6-31G(d) level, [g] toluene.

Table **S18.** Properties of ESIPT TADF emitters and their corresponding non-ESIPT TADF emitters reviewed in Section **14**.

Compound	**Medium**	**λ_{PL} / nm** [a]	**Φ_{PL} / %** [b]	**τ_D / μs** [b]	**ΔE_{ST} / eV** [b]	**λ_{EL} / nm**	**CIE_{XY}**	**EQE_{max} / %**	**Roll-off 100 cd m^{-2} / %** [e]	**Roll-off 1000 cd m^{-2} / %** [e]	**Ref**
HPI-Ac	$CHCl_3$	465	22	25	0.08	N/A	N/A	N/A	N/A	N/A	[766]
TQB	10 wt% in CzSi	516	55	106	N/A	518 [c]	N/A	14.2	N/A	N/A	[767]
PXZPDO	1 wt% CBP	594	68	1.3	0.04	560 [c]	0.44,0.53	18.8	6	23	[768]
PXZDMePDO	1 wt% CBP	562	54	1.5	0.07	544 [c]	0.38,0.56	12.2	7	20	[768]
DMACPDO	6 wt% CBP	533	86	1.9	0.11	536 [c]	0.36,0.57	23.9	12	35	[768]
DMACDMePDO	6 wt% CBP	506	64	1.8	0.16	518 [c]	0.28,0.53	14.6	18	43	[768]
PXZPDO	1 wt% CBP	604	58	1.3	0.04	570 [d]	0.47, 0.50	20.1	N/A	8	[769]
TPXZBM	1 wt% CBP	650	30	1.4	0.02	582 [d]	0.48, 0.49	12.7	N/A	22	[769]
BPXZBM	1 wt% CBP	626	17	1.01	0.005	598 [d]	0.50, 0.46	7.05	N/A	43	[769]
BrA-HBI	1 wt% PMMA	450	31	1900	0.31	–	-	-	-	-	[770]

[a] measured in solution (DCM and toluene) at room temperature. [b] in doped thin films except HPI-Ac compound. [c] OLEDs fabricated by thermally evaporation process. [d] OLEDs fabricated by solutionprocessing. [e] EQE dropped values calculated by using equation $EQE_{dropped\ values} = (EQE_{max} - EQE_{100\ or\ 1000\ cd\ /m^2})/(EQE_{max}) \times 100$.

Table **S19.** Photophysical properties of TADF MCL emitters in their different macromolecular forms, reviewed in Section **15**.

Emitter	Packing Name[a]	λ_{PL} / nm	Φ_{PL} / %	ΔE_{ST} / eV	τ_d / µs	Mechanism[b]	Ref.
OPC	Crystal	456, 554	23	0.56, 0.01 [c]	N/A	Fl, TADF	771
	Amorphous	554	N/A	0.01[c]	N/A	TADF	771
OPNa	Amorphous	574 [e]	N/A	N/A	N/A	N/A	772
	Crystalline	429 [e], 570 [e]	N/A	N/A	N/A	N/A	772
OPAn	Amorphous	449, 570 [e]	N/A	N/A	N/A	N/A	772
	Crystalline	443, 587 [e]	N/A	N/A	N/A	N/A	772
OPPy	Amorphous	459, 573 [e]	N/A	N/A	N/A	N/A	772
	Crystalline	458[e], 570 [e]	N/A	N/A	N/A	N/A	772
PTZ-AQ	Y-Solid	545	72	0.11	14.7 (275) [d]	TADF	773
	Y-Crystal	554	54	0.20	13.7 (235) [d]	TADF	773
	O-Crystal	568	53	0.03	12.5 (189) [d]	TADF	773
	R-Crystal	606	85	0.01	13.8 (276) [d]	TADF	773
	R-Solid	649	3	0.42	1.4 (25.8) [d]	N/A	773
CpzPO	Crystalline	459[e], 564 [e]	N/A	N/A	N/A, 62	Fl, TADF	774
	Amorphous	564 [e]	N/A	N/A	62	TADF	774
SpzPO	Crystalline	433 [e], 546 [e]	N/A	N/A	N/A, 29	Fl, TADF	774
	Amorphous	546 [e]	N/A	N/A	29	TADF	774
SCP	Pristine	415, 545	41	0.99, 0.41	N/A, 51	Fl, TADF	775
	Ground	545	N/A	0.41	51	TADF	775
1	1_Y	568	16	N/A	N/A	N/A	776
	1_O	640	8	N/A	N/A	N/A	776
	1_R	673	12	N/A	N/A	N/A	776
	1_O2	646	11	N/A	N/A	N/A	776
	1_YO	596	5	N/A	N/A	N/A	776
2	2_YG	547	13	N/A	N/A	N/A	776
	2_R	663	15	N/A	N/A	N/A	776
	2_R2	675	12	N/A	N/A	N/A	776
	2_Y	564	15	N/A	N/A	N/A	776
XPT	Solvent Evap	536	N/A	N/A	N/A	N/A	702
	Grinding	569	N/A	N/A	N/A	N/A	702
	Sublimation	566	N/A	N/A	N/A	N/A	702
DPPZS-DBPHZ	1-BG	497	6	N/A	N/A	N/A	777
	1-G1	518	9	N/A	N/A	N/A	777
	1-G2	520	9	N/A	N/A	N/A	777
	1-Y	534	16	N/A	N/A	N/A	777
	1-DR	740	3	N/A	N/A	N/A	777
OIDBQx	Initial	494	N/A	N/A	N/A	N/A	778
	Ground	522	N/A	N/A	N/A	N/A	778
DPP-DMAC	Pristine	554	N/A	N/A	8.3	TADF	779
	Ground	608	N/A	N/A	7.1	TADF	779
	Fumed	563	N/A	N/A	6.4	TADF	779
	Heated	575	N/A	N/A	4.7	TADF	779
DPQ-DMAC	Pristine	548	N/A	N/A	4.3	TADF	779
	Ground	571	N/A	N/A	8.9	TADF	779
	Fumed	547	N/A	N/A	4.1	TADF	779
	Heated	553	N/A	N/A	5.9	TADF	779
DPQ-PXZ	Pristine	589	N/A	N/A	1.4	TADF	779

	Ground	616	N/A	N/A	1.8	TADF	779
	Fumed	592	N/A	N/A	1.3	TADF	779
	Heated	598	N/A	N/A	1.4	TADF	779
DPP-PXZ	Pristine	628	N/A	N/A	2.7	TADF	779
	Ground	682	N/A	N/A	2.4	TADF	779
	Fumed	639	N/A	N/A	3.2	TADF	779
	Heated	649	N/A	N/A	2.6	TADF	779
2	Pristine	455, 530	N/A	N/A	N/A	N/A	780
	Grinding	540	N/A	N/A	N/A	N/A	780
TPA-DQP	Crystal-Y	576	15	N/A	1.1	TADF	781
	Crystal-R	694	22	N/A	2.4	TADF	781
Cz-AQ	R-Crystal	604	28	N/A	1.9	TADF	782
	Y-Crystal	541	59	N/A	1.8	TADF	782
TXDM	Crystalline	470	1.8	0.49	N/A	Fl	783
	Amorphous	486	27	0.30	17.4	TADF	783
R-DOBP	Crystalline	580	N/A	N/A	N/A	N/A	312
	Amorphous	647	N/A	N/A	N/A	N/A	312
XT-OT	Crystalline	466	42.5	N/A	N/A	N/A	784
	Amorphous	567	53.4	N/A	N/A	N/A	784
XT-T	Crystalline	478	38.1	N/A	N/A	N/A	784
	Amorphous	510	40.7	N/A	N/A	N/A	784
Py-BZTCN	Crystalline	581	52.75	0.330	N/A	N/A	785
	Amorphous	676 [e]	5.27	0.087	2.30	TADF	785

[a] Reported name for the solid-state phenomenon, [b] Excited-state decay mechanism, where Fl is fluorescence, TADF is thermally activated delayed fluorescence, [c] Calculated at the B3LYP/6-31G* level for each conformer, [d] Two delayed lifetimes reported, [e] Approximation using graphical fitting software.

Table **S20.** Photophysical and device properties of MCL emitters in solution or doped films, reviewed in Section **15**.

Compound	**Medium[a]**	**λ_{PL} / nm**	**Φ_{PL} / %**	**τ_d / µs**	**ΔE_{ST} / eV**	**λ_{EL} / nm**	**CIE_{XY}**	**EQE_{max} / %**	**EQE_{100} m^{-2} / %**	**EQE_{1000} / %**	**Ref**
CPzPO	1 wt% PMMA	470, 545	18	0.3, 12.6, 112.8	N/A	N/A	N/A	N/A	N/A	N/A	774
SPzPO	1 wt% PMMA	425, 525	29	0.3, 10.7, 95.7	N/A	N/A	N/A	N/A	N/A	N/A	774
1	10 wt% CBP	N/A	N/A	N/A	0.14	613	N/A	16.8	15.5 [b]	11.1 [b]	776
	Powder	518	93	1200	0.20 [g]	N/A	N/A	N/A	N/A	N/A	786
2	10 wt% CBP	N/A	N/A	N/A	0.18	646 [b]	N/A	11.2 [b]	11.2 [b]	9.9 [b]	776
	Solid	530	42	27.2	0.06	N/A	N/A	N/A	N/A	N/A	780
XPT	10 wt% DPEPO	566	66	3.3	N/A	584	N/A	10	8.6 [b]	4.4 [b]	702
DPPZS-DBPHZ	10 wt% Zeonex	484 [c]	34 [c]	N/A	0.30	N/A	N/A	N/A	N/A	N/A	777
OIDBQx	CH_2Cl_2 dilute	534	31	128, 000 [d]	0.49 [d]	N/A	N/A	N/A	N/A	N/A	778
DPQ-DMAC	10 wt% DPEPO	554	N/A	N/A	N/A	556	N/A	11.3	10.5	5.3	779
DPP-DMAC	PhMe	599	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	779
DPQ-PXZ	PhMe	618	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	779

DPP-PXZ	PhMe	647	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	[779]
TPA-DQP	10 wt% Bepp2	676	65	107	0.11 [c]	676	0.67,0.32	18.3	N/A	1.9 [b]	[781]
Cz-AQ (Dev1)[e]	Neat	N/A	N/A	N/A	N/A	680	0.68,0.30	0.75	N/A	N/A	[782]
Cz-AQ (Dev2)[f]	Neat	N/A	N/A	N/A	N/A	600	0.50,0.42	1.15	N/A	N/A	[782]
R/S-DOBP	Neat	670	11	6	0.14	716	N/A	1.9	N/A	N/A	[312]
R/S-HDOBP	Neat	662	9	3	0.08	700	N/A	0.7	N/A	N/A	[312]
XT-OT	20 wt% CBP	517	50.8	77	0.20	532	0.315, 0.569	9.39	N/A	9.38	[784]
XT-T	20 wt% CBP	480	44.2	154	0.34	488	0.208, 0.433	3.30	N/A	2.90	[784]

[a] Stated medium is that used for the PL study and in the EML of the OLED unless otherwise stated, [b] Approximation using graphical fitting software, [c] Dilute toluene, [d] 1 wt% Zeonex film, [e] Solution-processed device spin-coated from dichloroethane, [f] Solution-processed device spin-coated from dichloroethane:ethanol mix (1:1), [g] TD-DFT-B3LYP/6-31G*.

Table **S21.** Photophysical and device properties of TADF LECs reviewed in Section **16**.

Compound	Medium	λ_{PL}/ nm	Φ_{PL} / %	τ_d/ µs	ΔE_{ST}/ eV	λ_{EL} / nm	CIE_{XY}	EQE_{max} / %	Lum_{max} / cd m^{-2}	$t_{1/2}$ [a]	Ref
2CzPN-LEC	Neat	536	21	2.7	N/A	538	0.35, 0.57	0.4	13	N/A	[787]
imCzDPS	Neat	414 [b]	44 [b]	48 [b]	N/A	470, 550	0.21, 0.25	1.14	2.5	N/A	[788]
CzTz1	Neat	501	55	3.2	0.02	510	0.29, 0.52	4	565	6.2 h	[789]
CzTz2	Neat	523	52	2.3	0.02	532	0.34, 0.57	6.8	890	11.4 h	[789]
CzTz3	Neat	524	48	1.8	0.01	542	0.39, 0.55	6.2	860	47.8 h	[789]
Pym-CZ	Neat	500 [b]	43 [a]	2.3	0.06	609	0.54, 0.46	1.19	8.69	N/A	[790]
Pym-*t*BuCZ	Neat	553 [b]	8 [a]	N/A	0.03	620	0.58, 0.42	0.14	1.96	N/A	[790]
4CzIPN	CBP:Emitter: PEO:KCF3SO3:polystyrene	512	40	N/A	N/A	~522	0.32, 0.52	0.17	760	N/A	[791]
P1	PYD-2Cz:Emitter: $THABF_4$:PS	505	71	N/A	N/A	500	0.31, 0.44	N/A	600	N/A	[792]
4CzIPN	PVK:OXD-7:Emitter:$THABF_4$	N/A	N/A	11	0.025	505	0.31, 0.47	~2	430	N/A	[793]
TXO-TPA	PVK:OXD-7:Emitter:$THABF_4$	N/A	N/A	33	0.105	585	0.46. 0.50	7	740	N/A	[793]
TPA-DCPP	PVK:OXD-7:Emitter:$THABF_4$	N/A	N/A	21	0.140	618	0.54, 0.44	~4	380	N/A	[793]
BPAPTC	PVK:OXD-7:Emitter:$THABF_4$	519	90	N/A	0.06	533	0.36, 0.54	7.67	3696	N/A	[794]
[*t*BuCAZ-ImMe][PF_6]:[TRZ-ImEt][PF_6]	Emitter:[TRZ-ImEt][PF_6]	472	65	N/A	N/A	499	0.23, 0.43	2.6	231	90 min	[795]
TCTA:26DCzPPy	Emitter:CZ-TRZ:$THABF_4$	410	11.6	N/A	N/A	475	0.19, 0.27	5	740	N/A	[796]
DiKTa-ObuIm	Neat	500 [c]	57	316.6	0.2	534	0.19, 0.79	<0.01	15	N/A	[797]
DiKTa-DPA-ObuIm	Neat	578 [c]	53	241.7	0.19	656	0.73, 0.27	<0.01	2	N/A	[797]
[Cu(4,5,6-Me_3bpy)(xantphos)][P	Emitter:[EMIM][PF6]=4:1	529 [b]	19	N/A	0.23	570	0.44, 0.55	1.7	462	<5 h	[798]

F_6]											
Cu(6,6-Me_2bpy) (xantphos)][P F_6]	Emitter:[EMI M][PF6]=4:1	529	38.4	10.9	N/A	557	0.35, 0.64	N/A	53	1.47 h	[798,799]
[Cu(2-Etphen) (xantphos)][P F_6]	Emitter:[EMI M][PF6]=4:1	558 [b]	26	N/A	0.08	582	0.53, 0.47	1.8	451	34 h	[798]
[Cu(Me_2bpy) (BnN-xantphos)][P F_6]	Emitter:[EMI M][PF6]=4:1	520 [b]	55 [a]	N/A	N/A	567	0.43, 0.53	1.2	355	155 min	[800]
[Cu(Me_2bpy) (xantphos)][P F_6]	Emitter:[EMI M][PF6]=4:1	563	44	14.7 [b]	N/A	N/A	N/A	N/A	173	N/A	[801]
[Cu(Me_2bpy) (xantphos)][BF_4]	Emitter:[EMI M][PF6]=4:1	563	45	8.7 [b]	N/A	N/A	N/A	N/A	137	N/A	[801]
[Cu(Me_2bpy) (xantphos)][BPh_4]	Emitter:[EMI M][PF6]=4:1	548	32	12.9 [b]	N/A	N/A	N/A	N/A	N/A	N/A	[801]
[Cu(Me2bpy) (xantphos)][Bar^F_4]	Emitter:[EMI M][PF6]=4:1	552	35	8.5 [b]	N/A	N/A	N/A	N/A	N/A	N/A	[801]
[Cu(L3)(Ipr)] [PF_6]	Neat	~550	N/A	N/A	0.7	N/A	N/A	N/A	N/A	N/A	[802]
[Cu(L4)(Ipr)] [PF_6]	Neat	~420	N/A	N/A	0.65	N/A	N/A	N/A	N/A	N/A	[802]
[Cu(L5)(Ipr)] [PF_6]	Neat	521	N/A	N/A	0.67	N/A	0.23, 0.28	0.6	10	1.2 min	[802]
[Cu(L7)(Ipr)] [PF_6]	Neat	458	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	[802]

[a] Longest lifetime; [b] Powder; [c] 1% in mCP.

Table **S22.** Properties of HF-TADF devices reviewed in Section **17**.

TADF Dopant	Emitter	Emissive Layer	Turn-on/ V	EQEmax/EQE_{100}/EQE_{1000} / %	CIE (x, y)	Ref
ACRSA	**TBPe**	1 wt% TBPe:15 wt% ACRSA in DPEPO	4.7	13.4/-/8.7	0.17, 0.30	[803]
ACRXTN	**TTPA**	1 wt% TTPA:50 wt% ACRXTN in mCP	3.0	15.8/-/11.7	0.29, 0.59	[803]
PXZ-TRZ	**TBRb**	1 wt% emitter:25 wt% PXZ-TRZ in mCBP	3.2	18.0/-/17.2	0.45, 0.53	[803]
Tri-PXZ-TRZ	**DBP**	1 wt% DBP:15 wt% Tri-PXZ-TRZ in CBP	3.0	17.5/-/17.2	0.61, 0.39	[803]
CzAcSF	**TBPe**	x wt% TBPe:y% CzAcSF in DPEPO, where x, y=1, 25; 1, 50; 0.1 50	-	17.2/-/-; 17.7/-/-; 18.1/-/-	0.14, 0.19; 0.15, 0.21; 0.15, 0.22	[804]
DMAC-DMT	**BPPyA**	0.7 wt% BPPyA:40 wt%DMAC-DMT in DBFPO	-	19.0/-/-	0.14, 0.15	[805]
DMAC-DPS	**BPPyA**	0.7 wt% BPPyA:40 wt%DMAC-DPS in DPEPO	-	13.0/-/-	0.15, 0.16	[805]
SPAC-DMT	**BPPyA**	0.7 wt% BPPyA:40 wt% SPAC-DMT in DBFPO	-	7.0/-/-	0.14, 0.11	[805]

4CzFCN	**KCTBC**	3 wt% KCTBC:12.5 wt% 4CzFCN in CBP	3.6	13.9/12.0/6.2	0.18, 0.13	806
FTrzTCz	**C545T**	1% C545T:20wt%FTrzTCz in DPEPO	7.06	11.5/-/7.1	0.24, 0.64	807
FTrzTCz	**6tBPA**	1 wt% 6tBPA:20 wt%FTrzTCz in DPEPO	7.11	17.9/-/14	0.24, 0.58	807
TbCzTrz	**6tBPA**	x wt% 6tBPA:20 wt% TbCzTrz in DPEPO, where x= 0.5; 1	-	14.6/-/9.2; 13.5/-/8.1	0.25, 0.57; 0.26, 0.60	808
TbCzTrz	**C545T**	0.5 wt% C545T: 20 wt% TbCzTrz in DPEPO		16.1/-/9.5	0.25, 0.63	808
TmCzTrz	**6tBPA**	x wt% 6tBPA:20 wt% TmCzTrz in DPEPO, where x= 0.5; 1	-	18.5/-/ 15.3; 14.0/-/10.7	0.25, 0.57; 0.26, 0.60	808
TmCzTrz	**C545T**	0.5 wt% C545T:20 wt% TmCzTrz in DPEPO	-	15.9/-/11.8	0.25, 0.63	808
PXZ-DBPZ	**DBP**	0.6 wt% DBP:9 wt% PXZ-DBPZ in CBP	3.2	15.2/-/-	0.57, 0.42	809
FPXZ-DBPZ	**DBP**	0.6 wt% DBP:9 wt% FPXZ-DBPZ in CBP	3.3	18.1/-/6.5	0.61, 0.38	809
4CzIPN-tBu	**cibalackrot**	x mol% cibalackrot:y mol% 4CzIPN-tBu in CBP, where x, y = 0.5, 29.5; 1, 29; 1.5, 28.5	5.0; 4.8; 4.4	15.3/14.9/8.4	-	810
4CzIPN	**cibalackrot**	1.5 mol% cibalackrot:28.5 mol% 4CzIPN-tBu:CBP	4.4	5.6/5.6/4.4	-	810
4CzIPN-Me	**TBRb**	0.65 wt% TBRb:6.3 wt% 4CzIPN-Me in CBP	-	19.1/-/16.7	0.43, 0.54	811
34AcCzTrz	**TBRb**	1 wt% TBRb: 4 wt% 34A cCzTrz in 3CzPhpPM	-	19.1/-/-	0.49, 0.50	52
PXZ-DPS	**PAD**	0.5 mol% PAD:30 wt% PXZ-DPS in PhCzTRZ	2.56 at 10 cd m^{-2}	18.6/-/ 18.5	0.36, 0.57	812
PXZ-DPS	**MePAD**	0.5mol% MePAD:30 wt% PXZ-DPS in PhCzTRZ	2.54 at 10 cd m^{-2}	20.8/-/-20.7	0.37, 0.58	812
PXZ-DPS	**tBuPAD**	1 mol% tBuPAD:30 wt% PXZ-DPS in PhCzTRZ	2.57 at 10 cd m^{-2}	22.7/-/22.5	0.36, 0.58	812
PXZ-DPS	**PhtBuPAD**	2 mol% PhtBuPAD:30 wt% PXZ-DPS in PhCzTRZ	2.55 at 10 cd m^{-2}	24.0/-/23.8	0.36, 0.58	812
DACT-II	**PhtBuPAD**	3 wt% PhtBuPAD:20 wt%DACT-II in m32aICT	-	23.2/-/-	0.36, 0.60	813
DACT-II	**PhtBuPAD**	3 wt% PhtBuPAD:40 wt%DACT-II in m23bICT	-	16.1/-/-	0.37, 0.59	813
DACT-II	**PhtBuPAD**	3 wt% PhtBuPAD:40 wt%DACT-II in CPyBP	-	18.5/-/-	0.36, 0.60	813
DACT-II	**PhtBuPAD**	3 wt% PhtBuPAD:40 wt%DACT-II in CBP	-	19.4/-/-	0.35, 0.60	813
DBP	**tBIQAC**	0.7 wt% DBP:20 wt% tBIQAC in PBICT	5.8	16.8/-/11.7	0.63, 0.37	814
DBP	**DtBIQAC**	0.7 wt% DBP:20 wt%	6.4	14.7/-/10.3	0.64,	814

		DtBIQAC in PBICT			0.36	
DBP	**tBIQAP**	0.7 wt% DBP:20 wt% tBIQAP in PBICT	6.6	17.5/-/7.0	0.63, 0.37	814
DBP	**DtBIQAP**	0.7 wt% DBP: 20 wt% DtBIQAP in PBICT	6.5	18.2/-/8.2	0.62, 0.38	814
DMAC-DPS	**TBPe**	1 wt TBPe in DPEPO: 50 wt% DMAC-DPS in DPEPO	6.0	18.8/-/13.5	0.14, 0.25	815
DMAC-DPS	**TBPe**	1 wt% TBPe:x wt% DMAC-DPS in DPEPO, where x= 10; 20; 30; 40	3.2;3.0;3.0;2.8	10.0/ 7.4/1.9; 14.1/11.3/7.3; 11.0/8.2/4.1; 9.7/8.0/4.9	0.14, 0.17; 0.14, 0.17; 0.14, 0.17; 0.14, 0.17	816
Pr-1	**DCJTB**	1 wt% DCJTB:10 wt% Pr-1 in mCBP:PO-T2T	2.4	13/10.5/8.7	-	817
4CzIPN	**DCJTB**	0.5 wt% DCJTB:2 wt% 4CzIPN in TCTA:B4PyMPM	3.0	12.9/12.4/10.1	0.58, 0.41	818
4CzIPN	**DCJTB**	0.5 wt% DCJTB:2 wt% 4CzIPN in TCTA	3.1	6.6/6.1/3.3	0.52, 0.46	818
B4PyMPM	**DCJTB**	0.5 wt% DCJTB:2 wt% B4PyMPM in TCTA	2.9	7.3/7.1/6.0	0.59, 0.41	818
4CzIPN	**PtOEP**	4 wt% PtOEP:6 wt% 4CzIPN in CBP:B4PyMPM	-	21.5/-/-	-	819
BPAc	**6tBPA**	x wt% 6tBPA:20 wt%BPAc in DPEPO, where x= 0.5, 1	-	16.6/-/ 15.2; 15.8/-/14.4	0.23,0.51 ; 0.23,0.54	820
BPAcCz	**6tBPA**	x wt%6tBPA:20 wt% BPAcCz in DPEPO, where x= 0.5, 1	-	15.0/-/13.3; 14.4/-/12.6	0.25,0.53 ; 0.25,0.56	820
DC-TC	**DBP**	2 wt% DBP:15 wt% DC-TC in CBP	5.2	8.0/6.65/-	0.61, 0.38	821
DC-ACR	**DBP**	2 wt% DBP:15 wt% DC-TC in CBP	5.4	4.25/3.62/-	0.63, 0.37	821
OSTFB	**OTPA-BT-CN**	x wt% OTPA-BT-CN:25 wt% OSTFB in mCP, where x= 0.5; 1; 2	3.0; 3.0; 3.4 at 100 cd m^{-2}	12.4/-/-; 10.1/-/-; 4.4/-/-	-	822
PXZ-TRZ	**TBRb**	1 wt% TBRb:x wt% PXZ-TRZ in SF4-TPE, where x= 10; 20; 30; 40	4.1;3.9;3.8;3.7	23.5/-/21.5; 24.7/-/23.6; 24.2/-/23.5; 23.0/-/22.9	0.48, 0.51; 0.49, 0.50; 0.49, 0.50; 0.49, 0.50	823
PXZ-TRZ	**TBRb and 4P-NPD**	1 wt% TBRb:30 wt% PXZ-TRZ:SF4-TPE|40 wt% 4P-NPD:SF4-TPE	3.7	17.6/15.5/14.2	0.39, 0.39	823
4CzPN	**TBRb and Bepp2**	0.4 wt% TBRb:6 wt% 4CzPN|0.8 wt% TBRb:10 wt% 4CzPN:mCP|40 wt% Bepp2:mCP|Bepp2	3.0	15.1/-/4.6	0.35, 0.49	824
BPS	**Ir(bt)2acac**	0.5 wt% Ir(bt)2acac:10wt% BPS in CBP:OXD-	3.6	4.55/2.37/4.55	0.37, 0.37	825

		7(100:40)				
BPS	**Ir(bt)2acac**	0.5 wt% Ir(bt)2acac:10wt% BPS in DCzPPy:OXD-7(100:4)	4.6	6.59/1.09/4.41	0.41, 0.41	[825]
4CzIPN	**Hex-Ir(phq)2(acac)**	1.5 wt% Hex-Ir(phq)2(acac):x wt% 4CzIPN in CBP, where x= 7.5; 15; 20; 50	4.3; 3.8; 3.8; 3.3	9.8/-/9.6; 6.6/-/6.3; 5.6/-/5.4; 2.4/-/2.1	-	[826]
PXZ-TRZ	**CuPc**	1 wt% CuPc:45 wt% PXZ-TRZ in mCBP	-	0.037	-	[827]
TPAM-BF2	**BPPC-Ph**	0.5% BPPC-Ph:20% TPAM-BF2 in CBP	-	3.5/-/-	-	[828]
TPA-DCPP	**BPPC**	0.8 wt% BPPC:20 wt%TPA-DCPP in B3PYMPM	-	5.4/-/-	-	[829]
tBuCz-p-NI	**tBuCz-p-NI**	0.6% wt% tBuCz-s-NI:10 wt% tBuCz-p-NI in mCP	2.7	27/-/-	-	[830]
4CzIPN	**TTM-3PCz**	3 wt% TMM-3PCz:25 wt% 4CzIPN in CBP	2.3	16.4/-/-	-	[831]
(MAC*)Cu(Cz)	**TBRb**	20 wt% (MAC*)Cu(Cz): 1 wt% TBRb in mCBP	3.0	16.6/-/16.4	-	[832]
(MAC*)Cu(Cz)	**BN3**	20 wt% (MAC*)Cu(Cz): 1 wt% BN3 in mCBP	2.8	26.5/-/-	-	[832]
Au-1	***v*-DABNA**	10 wt% Au-1:0.5 wt% n-DABNA in PYD2		16.6/-/14.4	0.14, 0.18	[833]

Table **S23.** Properties of TADF emitters used as hosts in devices eviewed in Section **18**.

TADF Host	**Emitter**	**Medium**	**λ_{EL} / nm**	**CIE_{XY}**	**EQE_{max} / EQE_{100} / EQE_{1000} / %**	**Ref**
PBICT	**$Ir(ppy)_3$**	3 wt%	-	-	23.9/-/-	[834]
DIC-TRZ	**$Ir(ppy)_3$**	2 wt%	-	-	20.9/-/-	[834]
POBICT	**PO-01**	10 wt%	566	0.51, 0.49	22.0/-/21.7	[835]
BICT	**PO-01**	10 wt%	566	0.51,0.49	16.8/-/16.6	[835]
PBICT	**PO-01**	10 wt%	566	0.51, 0.49	24.5/-/24.2	[835]
BBICT	**PO-01**	10 wt%	566	0.51, 0.49	13.7/-/13.6	[835]
BCPICT	**$Ir(mphmq)_2$(tmd)**	2 wt%	620–624	-	10.5/-/9.9	[836]
DMAC-DPS	**PO-01**	0.8 wt%	460,560	0.39, 0.46	20.8/-/19.6	[837]
DMAC-DPS	**$Ir(ppy)_2acac$**	2.0 wt%	-	-	19.5/-/19.1	[838]
DMAC-DPS	**$Ir(mphmq)_2tmd$**	0.5 wt%	-	-	22.4/-/21.6	[838]
DMAC-DPS	**$Ir(ppy)_2acac$, $Ir(mphmq)_2$ (tmd)**	0.2wt% green, 0.2wt% red	-	0.36, 0.39	20.2/-/19.4	[838]

mSOAD	**Ir(pq)$_2$acac**	4 wt%	-	0.62, 0.38	20.3/-/10.8	[839]
mSOAD	**FIrpic**	6 wt%	471	-	16.7/-/8.0	[840]
mSOAD	**Ir(ppy)$_3$**	4 wt%	515	-	19.0/-/18.4	[840]
mSOAD	**Ir(pq)$_2$acac**	4 wt%	606	-	20.3/-/10.6	[840]
tBu-mSOCz	**FIrpic**	6 wt%	471	-	14.7/-/13.3	[840]
tBu-mSOCz	**Ir(ppy)$_3$**	4 wt%	515	-	11.2/-/10.1	[840]
tBu-mSOCz	**Ir(pq)$_2$acac**	4 wt%	606	-	13.9/-/12.2	[840]
BCz-2SO	**FIrpic**	1.0 wt%	476	-	7.8/-/-	[841]
BT-01	**FIrpic**	10 wt%	-	0.16,0.36	31.8/31.6/31.2	[842]
BT-01	**2CzPN**	10 wt%	-	0.16,0.31	25.5/19.5/10.0	[842]
BT-02	**FIrpic**	10 wt%	-	0.17,0.40	30.7/30.5/29.9	[842]
BT-02	**2CzPN**	10 wt%	-	0.17,0.31	22.3/13.9/6.2	[842]
DMAC-BPP	**PO-01**	5 wt%	564	-	19.8/-/19.7	[843]
DCb-BPP	**PO-01**	5 wt%	561	-	21.5/-/20.6	[843]
2a	**Ir(mppy)$_3$**	3 wt%	-	-	-/-/19.5	[1]
2b	**Ir(mppy)$_3$**	3 wt%	-	-	-/-/20.0	[1]
2c	**Ir(mppy)$_3$**	3 wt%	-	-	-/-/21.5	[1]
2c-Ph	**Ir(mppy)$_3$**	3 wt%	-	-	-/-/19.4	[1]
Cz-Ph-TRZ	**Ir(mppy)$_3$**	3 wt%	-	-	-/-/19.8	[1]
PIC-TRZ2	**Ir(mppy)$_3$**	3 wt%	-	-	-/-/22.0	[1]
DIC-TRZ	**Ir(mppy)$_3$**	3 wt%	-	-	-/-/21.8	[1]
DIC-TRZ-Ph	**Ir(mppy)$_3$**	3 wt%	-	-	-/-/16.0	[1]
Trz–PhCz	**Ir(ppy)$_2$(acac)**	8 wt%	-	0.35, 0.61	24.3/22.9/22.3	[844]
Trz–PhCz	**PO-01**	5 wt%	-	0.51, 0.48	27.3/26.5/25.9	[844]
Trz–PhCz	**Ir(dmppm)$_2$(acac)**	8 wt%	-	0.61, 0.39	31.4/30.9/29.1	[844]
Trz–PhCz	**Ir-F-DHBA**	3 wt%	-	0.62, 0.38	30.4/26.9/25.9	[844]
DMAC-TA	**Ir(mppy)$_3$**	3 wt%	–	-	-	[845]
2Cz-TA	**Ir(mppy)$_3$**	3 wt%	-	-	-	[845]
DMAC-TRZ	**Ir(mppy)$_3$**	3 wt%	-	-	-	[845]
2CZ-TRZ	**Ir(mppy)$_3$**	3 wt%	-	-	-	[845]
DCzTrz	**FIrpic**	-	-	0.16, 0.34	15.7/-/15.0	[846]
TrzmPCz	**FIrpic**	-	-	0.15, 0.32	16.3/-/14.1	[846]
DCzCNTrz	**FIrpic**	-	-	0.23, 0.49	2.8/-/1.3	[846]

PXZ-ICO	**Ir(mphmq)$_2$(tmd)**	3.5 wt%	605	0.62 0.37	18.6/-/-	[847]
TPPOCz	**FIrpic**	4 wt%	475	0.17,0.36	20.4/-/-	[848]
TPPOCz	**Ir(CF_3BT-CF_3P)$_2$(acac)**	3 wt%	570	0.49, 0.50	14.9/-/-	[848]
TPPOCz	**Ir(2-phq)$_2$ (acac)**	3 wt%	612	0.62, 0.37	12.4/-/-	[848]
OSTFPB	**Ir(MDQ)$_2$(acac)**	2.0 wt%	-	-	29.1/-/-	[849]
OSTFPCN	**Ir(MDQ)$_2$(acac)**	2.0 wt%	-	0.61,0.39	31.2/-/-	[849]
DIC-TRZ	**DDAF**	1 wt%	-	-	12.2/-/5.5	[850]
PIC-TRZ	**DDAF**	1 wt%	-	-	4.7/-/3.9	[850]
DMAC-PN	**TPANSeD**	4 wt%	730	-	2.65/-/-	[851]
DMAC-PN	**NSeD**	4 wt%	664	-	3.81-/-	[851]
4CzIPN	**C4-DFQA**	0.5 wt%	-	0.44,0.55	13.5/-/11.0	[852]
4CzIPN	**C4-TCF3QA**	0.5 wt%	-	0.45,0.54	14.6/-/12.3	[852]
DMAC-DPS	**C545T**	1.5 wt%	-	-	9.0/-/-	[853]
PXZ-DPS	**C545T**	1.0 wt%	-	-	6.9/-/-	[853]
2PXZ-OXD	**C545T**	1.0 wt%	-	-	2.1/-/-	[853]
2PXZ-TAZ	**C545T**	1.0 wt%	-	-	5.6/-/-	[853]
TAPC:DPTPCz	**C545T**	1 wt%	-	0.24,0.58	7.5/-/5.3	[854]
TAPC:2d	**DPPFuC4**	1 wt%	-	-	12.1/11.2/-	[855]
TAPC:2d	**DPPThC4**	1 wt%	-	-	-/11.1/-	[855]
TCTA:Tm3PyBPZ	**C545T**	1 wt%	-	0.24,0.64	10.4/9.1/7.9	[856]
TCTA:Tm3PyBPZ	**rubrene**	1 wt%	-	0.44,0.54	10.0/10.0/8.4	[856]
SFBCz: SFTRZ	**5TCzBN: TBRb: RD**	20 wt% : 0.2 wt% : 0.05 wt%	-	0.44,0.45	16.7/-/16.5	[857]
XAc-XT	**G0**	1.0 mol%	-	-	3.2/-/-	[858]
XAc-XT	**G1**	1.0 mol%	-	-	5.2/-/-	[858]
DMIC-TRZ	**4TCzTPN**	2 wt%	-	-	23.2/-/-	[859]
DMIC-TRZ	**DMAC-BP**	12 wt%	513	-	21.0/-/-	[859]
DMIC-TRZ	**5TCzBN**	30 wt%	486	-	19.2/-/-	[859]
DMAC-DPS	**4CzIPN**	6 wt%	-	0.23, 0.50	10.9/-/9.1	[860]
DMAC-DPS	**4CzTPN-Ph**	9 wt%	-	0.39, 0.53	11.0/-/10.1	[860]
Sy	**4CzIPN**	10 wt%	-	0.28,0.55	24.0/-/22.1	[861]
Sy	**2CzTPN**	10 wt%	-	0.19,0.41	20.4/-/16.9	[861]
Asy	**4CzIPN**	10 wt%	-	0.25,0.56	22.5/-/20.4	[861]

Asy	**2CzTPN**	10 wt%	-	0.21,0.44	15.0/-/12.7	[861]
m-CzPym	**4CzIPN**	6 wt%	-	0.256, 0.578	31.5/-/29.0	[862]
p-CzPym	**4CzIPN**	6 wt%	-	0.286, 0.587	29.2/-/28.5	[862]
m-CzTrz	**4CzIPN**	10 wt%	-	0.312, 0.595	29.5/-/28.4	[862]
p-CzTrz	**4CzIPN**	10 wt%	-	0.271, 0.584	24.1/-/24.1	[862]
CzAcSF	**OHOXD**	10 wt%	480	0.17,0.28	12.1/-/4.3	[863]
CzAcSF	**BFOXD**	10 wt%	492	0.21,0.38	20.1/-/12.7	[863]
m-DTPACO	**4CzCNPy**	10 wt%	520	0.32,0.60	13.0/13.0/10.3	[864]
p-DTPACO	**4CzCNPy**	10 wt%	520	0.33,0.58	9.0/8.0/5.6	[864]
Cz-3CzCN	**Cz-4CzCN**	4 wt%	-	0.25,0.52	23.5/15.5/7.8	[865]

Table **S24.** Photophysical properties and ASE parameters of the reported TADF molecules, reviewed in Section **22**.

Compound	λ_{PL} / **nm**	τ_{PL} / **ns**	Φ_{PL} / **%**	k_{RISC} / s^{-1}	**ASE**				
					λ_{ASE} / **nm**	**FWHM / nm**	**Gain / cm^{-1}**	E_{th} / **μJ cm^{-2}**	**excitation source**
TADF molecules as the gain medium									
DABNA-2 (6 wt%, mCBP)[866]	467, 490	4.5	83	3.1×10^3	494	~ 6.6	--	1.6	N_2 gas laser
PXZN-B (10wt%, mCP)[867]	468	5.4	79	4.5×10^4	470	8.1	--	3.3	N_2 gas laser
DMACN-B (5wt%, mCP)[867]	444	4.0	83	2.5×10^4	444	11.3	--	12.0	N_2 gas laser
TPABC (6 wt%, CBP)[265]	721	4.5	70	--	747	17	--	6.7	N_2 gas laser
TPATBC (2wt% F8BT)[265]	724	1.3	45	--	807	21.7	--	13.3	N_2 gas laser
TADF molecules as the triplet harvester (laser dye: TADF molecules: host)									
C545T:**ACRXTN**:mCBP[868]	506	--	86	4.6×10^5	535	~10	25.0	0.8	N_2 gas laser
BUBD-1:**DMAC-DPS**[869]	470, 500	10.8	82.3	--	500	6	18.0	1.19	OPO laser
DT-DPP:**Cz-DBA**:CBP[870]	577, 618	9.9	77	3.1×10^5	620	~10	--	4	N_2 gas laser

Table **S25.** Photophysical properties and lasing parameters of the reported TADF molecules, reviewed in Section **22**.

Compound	λ_{PL} / nm	τ_{PL} / ns	Φ_{PL} / %	k_{RISC} / s^{-1}	Lasing					
					λ_{lasing} / nm	FWHM / nm	Gain / cm^{-1}	E_{th}^{laser} / $\mu J\ cm^{-2}$	Resonator	Q value
TPATBC (2 wt% F8BT)[265]	724	1.3	45	--	807	0.2	--	6.2	DFB	N.A.
CAZ-A (4 wt%, CBP)[871]	650	1.27	~17	6.5×10^3	683	0.52	640	3.96	WGM microring	$\sim10^3$
4CzTPN (3 wt%, PS)[872]	520	10.7	71.4	2.2×10^6	563	0.21	---	88	WGM microsphere	$\sim10^3$
MOON microcrystals[873]	588	0.4	5	--	650	--	--	3.04	Microcrystals	$\sim10^3$
ON microcrystals[873]	561	0.6	4		561			4.96		
MOCN microcrystals[873]	539	0.4	3		525			3.49		
$DCzBF_2$ microwires[874]	465	2.08	48	--	465	0.5	870	3.74	Microwires	$\sim10^3$

Table **S26.** Selected photophysical and electrochemical properties of common visible light PCs and popular TADF PCs,[a] reviewed in Section **23**.

Compound	λ_{abs} / nm	λ_{PL} / nm	$E_{0,0}$ / eV	E_{ox} / V	E_{red} / V	E^*_{ox} / V	E^*_{red} / V	τ / ns	Ref
$[Ru(bpy)_3](PF_6)_2$	452	615	2.10 [b]	1.29	-1.33	-0.81	0.77	1100	875,876
***fac*-Ir(ppy)$_3$**	375	518	2.75 [b]	0.77	-2.19	-1.73	0.31	1322	877-879
$[Ir(dF(CF_3)ppy)_2(dtbbpy)]PF_6$	380	470	2.77 [b]	1.69	-1.37	-0.89	1.21	2300	879-882
Eosin Y	520 [c]	537 [d]	2.31 [c]	0.78	-1.06	-1.11	0.83	2.10 [c] τ_S 160000 [d] τ_T	883-888
4CzIPN	435	535	2.56	1.52	-1.21	-1.04	1.35	18.7 τ_{pf} 1390 τ_{df}	889-892

4DPAIPN	425	523	2.62	1.34	-1.52	-1.28	1.1		[889]

[a] λ_{abs} refers to the absorption maximum of the lowest energy absorption band. λ_{PL} refers to the photoluminescence maximum. $E_{0,0}$ values given correspond to the optical gap to the S_1 state unless otherwise noted. All potentials are given in V versus SCE. $E^*_{ox} = E_{ox} - E_{0,0}$ and $E^*_{red} = E_{red} + E_{0,0}$. τ_{pf}, τ_{df}, τ_S and τ_T are the prompt fluorescence lifetime, the delayed fluorescence lifetime, the singlet excited state lifetime and the triplet excited state lifetime, respectively. Data reported in MeCN unless otherwise noted. [b] Corresponds to the optical gap to T_1 state. [c] Determined in methanol. [d] Determined in H_2O.

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