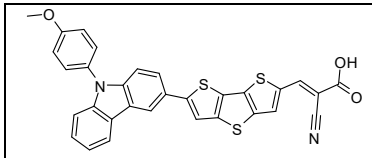
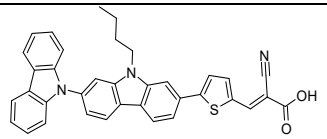
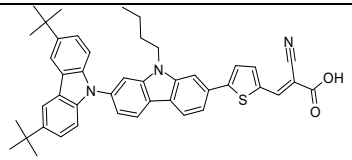
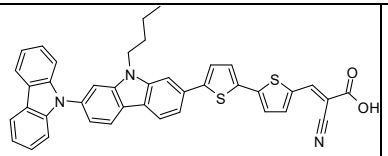
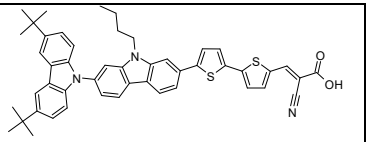
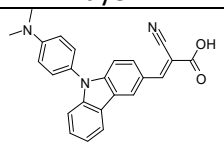
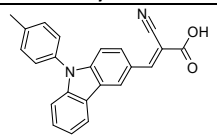
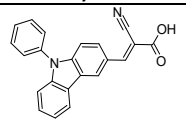
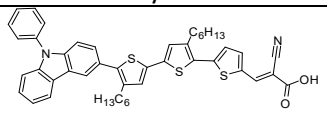
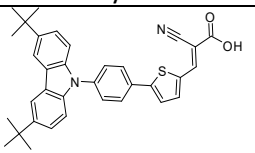
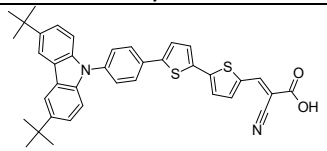
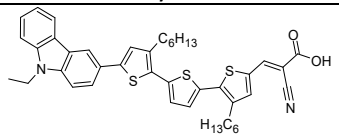
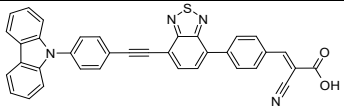
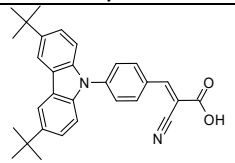
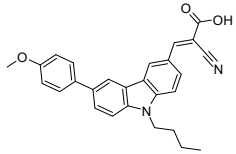
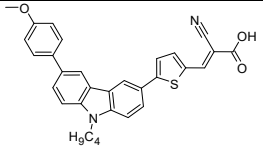
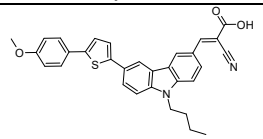
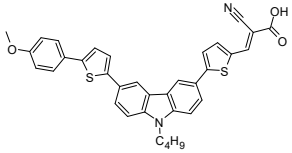
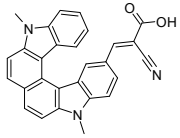
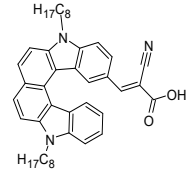
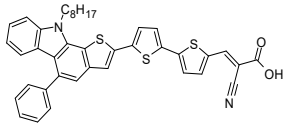
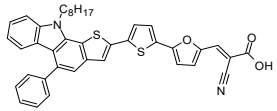
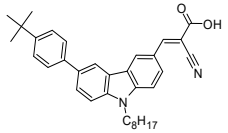
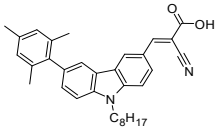
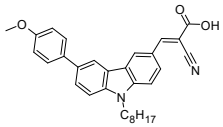
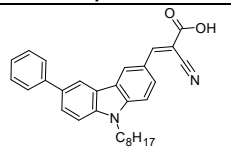
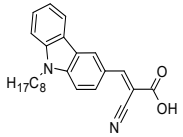
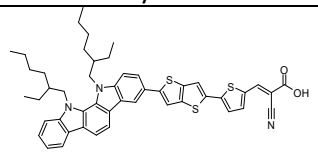
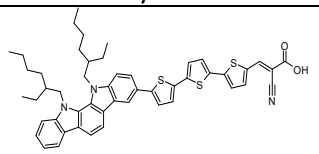
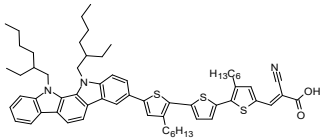
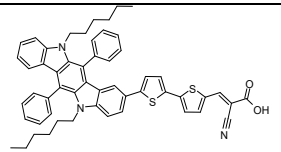
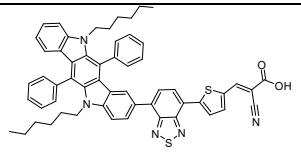
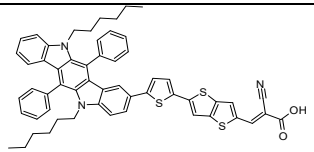
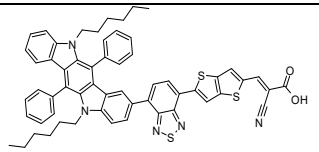
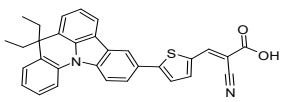
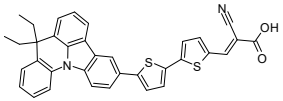
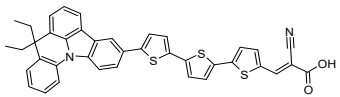
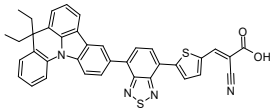
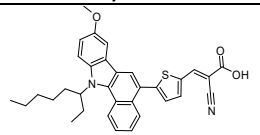
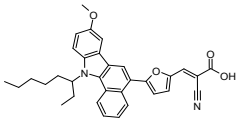
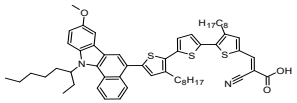
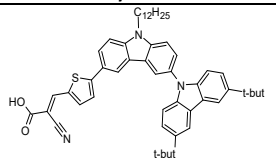
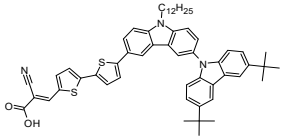
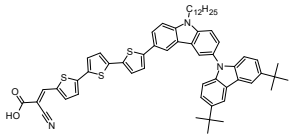
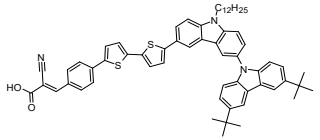
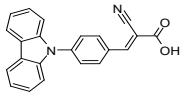
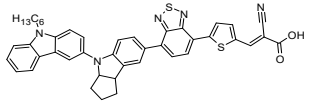
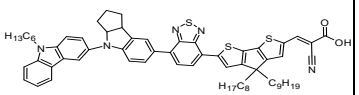
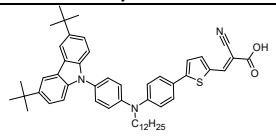
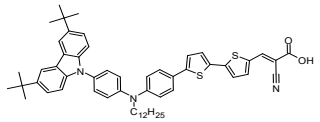
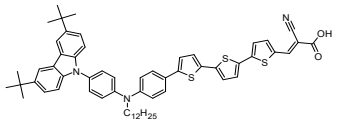
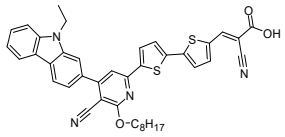
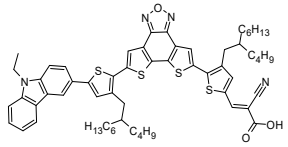
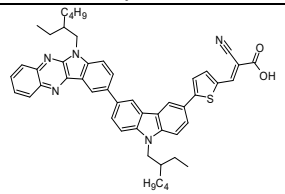
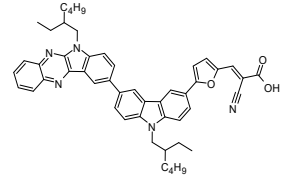
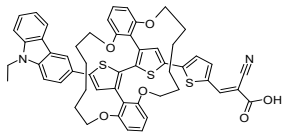
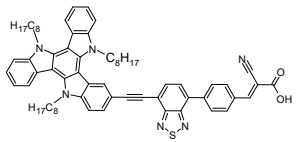
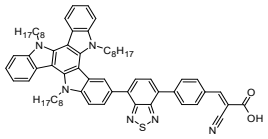
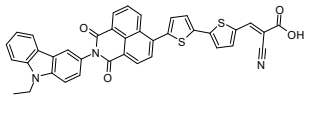
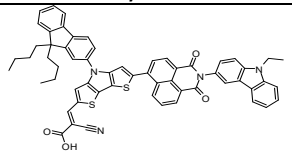
Table S1. Dye Structures and Photovoltaic Performances

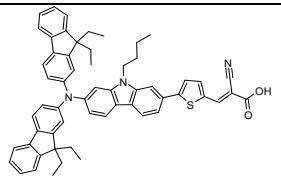
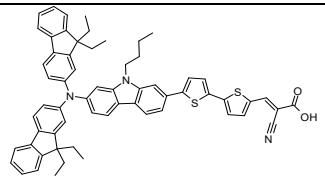
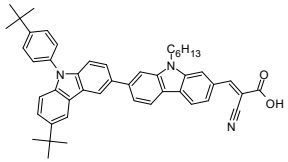
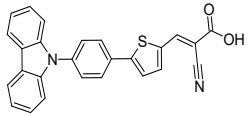
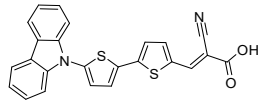
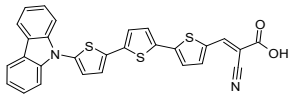
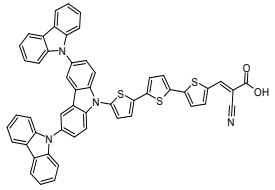
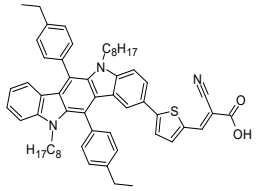
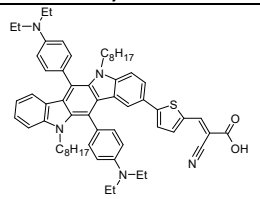
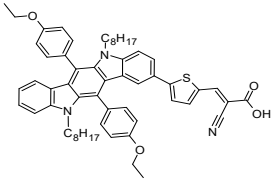
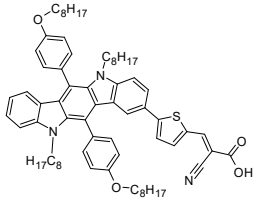
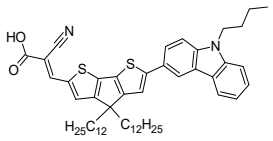
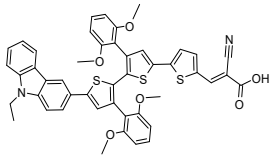
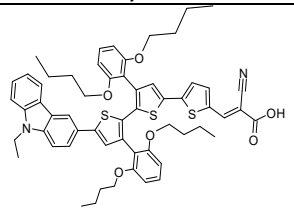
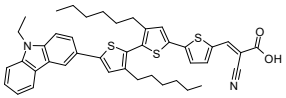
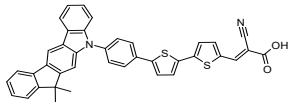
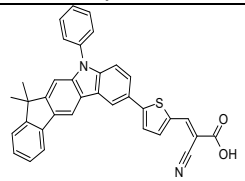
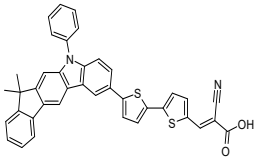
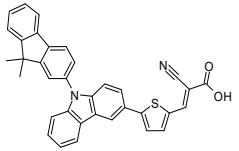
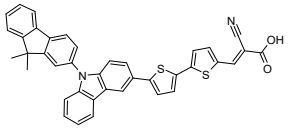
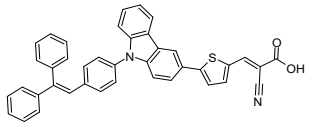
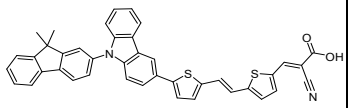
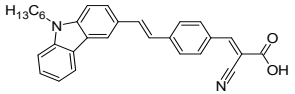
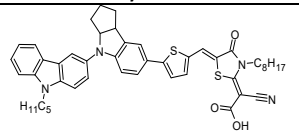
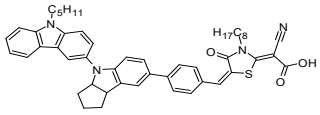
Dye	%PCE	Sol.	doi	Dye	%PCE	Sol.	doi
1.	5.64	Et	10.1016/j.tet.2013.02.058	**33.**	4.11	THF	10.1039/C3TA11748K
2.	4.22	Di	10.1021/am404948w	**34.**	6.40	THF	10.1039/C3TA11748K
3.	4.95	Di	10.1021/am404948w	**35.**	5.43	THF	10.1039/C3TA01657A
4.	6.04	Di	10.1021/am404948w	**36.**	6.50	THF	10.1039/C3TA01657A
5.	5.48	Di	10.1021/am404948w	**37.**	2.96	THF	10.1039/C3TA01657A
6.	1.21	Ac	10.1108/PRT-09-2014-0077	**38.**	4.61	THF	10.1039/C3TA01657A
7.	2.82	Ac	10.1108/PRT-09-2014-0077	**39.**	6.01	Di	10.1021/am508400a
8.	3.69	Ac	10.1108/PRT-09-2014-0077	**40.**	6.93	Di	10.1021/am508400a
9.	5.92	Ac	10.1016/j.jpowsour.2020.227776	**41.**	7.54	Di	10.1021/am508400a
10.	2.39	Tr	doi.org/10.1021/jp1055842	**42.**	3.64	Di	10.1002/ejoc.201300373
11.	2.48	Tr	doi.org/10.1021/jp1055842	**43.**	4.80	Di	10.1002/ejoc.201300373
12.	7.44	Tr	10.1016/j.electacta.2018.08.068	**44.**	5.69	Di	10.1002/ejoc.201300373
13.	3.50	Tr	10.1016/j.dyepig.2016.08.013	**45.**	4.62	Di	10.1002/ejoc.201300373
14.	2.68	Ac	10.1246/cl.2010.864	**46.**	1.77	Di	10.1016/j.dyepig.2012.03.028
15.	1.87	Di	10.1002/ejoc.201600353	**47.**	5.13	Di	10.1021/acsami.5b08888
16.	4.54	Di	10.1002/ejoc.201600353	**48.**	7.69	Di	10.1021/acsami.5b08888
17.	2.52	Di	10.1002/ejoc.201600353	**49.**	3.52	Di	10.1021/jp304489t
18.	4.57	Di	10.1002/ejoc.201600353	**50.**	4.10	Di	10.1021/jp304489t
19.	2.49	Tr	10.1016/j.solmat.2009.11.014	**51.**	5.12	Di	10.1021/jp304489t
20.	3.18	Tr	10.1016/j.solmat.2009.11.014	**52.**	3.34	Di	10.1016/j.solener.2018.09.073
21.	6.60	Tr	10.1016/j.tet.2014.01.001	**53.**	5.98	THF	10.1021/am5067145
22.	6.73	Tr	10.1016/j.tet.2014.01.001	**54.**	6.48	Di	10.1016/j.jpowsour.2015.01.148
23.	2.17	Tr	10.1039/C6RA01185C	**55.**	7.03	Di	10.1016/j.jpowsour.2015.01.148
24.	0.98	Tr	10.1039/C6RA01185C	**56.**	9.20	Di	10.1039/C3TA12368E
25.	2.69	Tr	10.1039/C6RA01185C	**57.**	7.15	Di	10.1039/C7NJ04629D
26.	0.98	Tr	10.1039/C6RA01185C	**58.**	7.26	Di	10.1039/C7NJ04629D
27.	1.11	Tr	10.1039/C6RA01185C	**59.**	0.57	Di	10.1007/s10854-018-9750-4
28.	5.78	Tr	10.1016/j.dyepig.2019.01.033	**60.**	0.92	Di	10.1007/s10854-018-9750-4
29.	5.23	Tr	10.1016/j.dyepig.2019.01.033	**61.**	6.44	Di	10.1016/j.dyepig.2015.07.034
30.	5.97	Tr	10.1016/j.dyepig.2019.01.033	**62.**	4.77	Di	10.1016/j.dyepig.2015.07.034
31.	6.09	THF	10.1039/C3TA11748K	**63.**	4.38	Di	10.1016/j.dyepig.2015.09.004
32.	5.55	THF	10.1039/C3TA11748K	**64.**	2.74	Di	10.1016/j.dyepig.2013.09.025

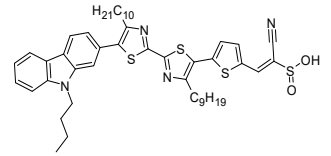
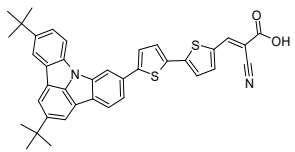
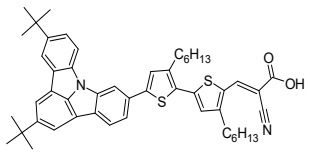
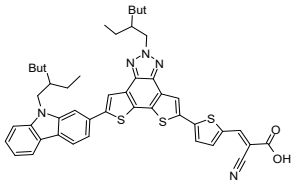
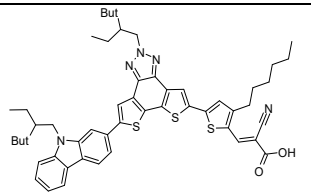
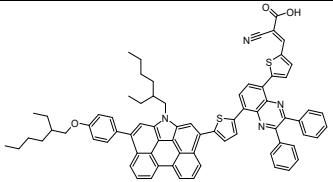
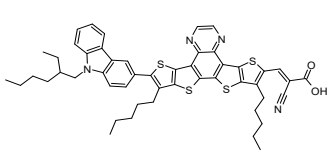
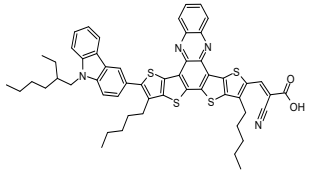
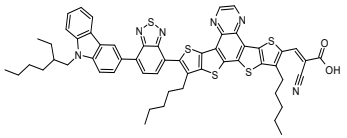
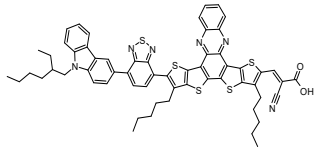
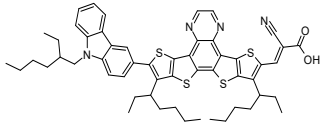
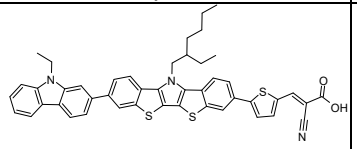
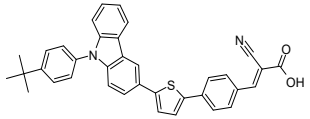
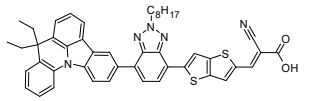
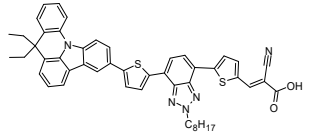
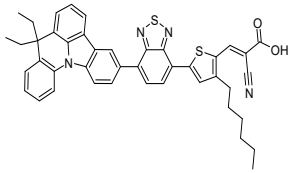
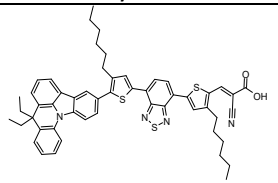
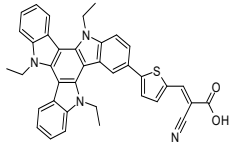
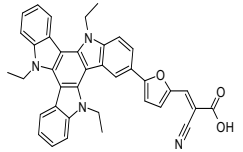
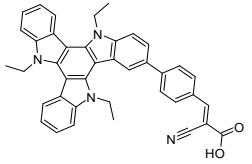
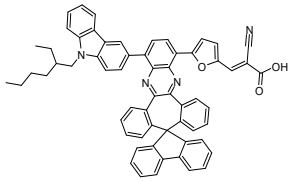
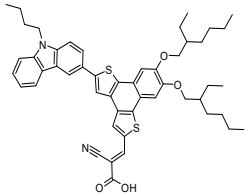
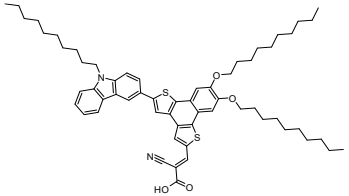
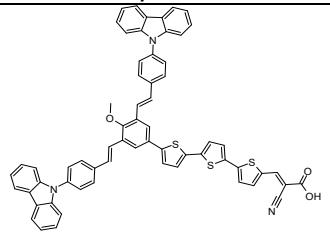
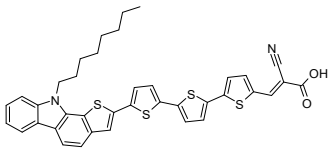
65.	2.94	Di	10.1016/j.dyepig.2013.09.025	**96.**	5.23	THF	10.1016/j.dyepig.2018.06.010
66.	4.30	Di	10.1016/j.dyepig.2013.09.025	**97.**	5.30	THF	10.1016/j.dyepig.2018.10.004
67.	4.86	Di	10.1016/j.dyepig.2013.09.025	**98.**	5.65	THF	10.1039/C3RA43057J
68.	6.25	Di	10.1016/j.jpowsour.2016.04.043	**99.**	6.23	THF	10.1039/C3RA43057J
69.	8.09	Di	10.1016/j.jpowsour.2016.04.043	**100.**	7.15	THF	10.1039/C3RA43057J
70.	6.98	Di	10.1016/j.jpowsour.2016.04.043	**101.**	5.20	THF	10.1039/C3RA43057J
71.	7.58	Di	10.1016/j.jpowsour.2016.04.043	**102.**	5.82	THF	10.1039/C3RA43057J
72.	7.50	Di	10.1039/C3RA22249G	**103.**	6.10	THF	10.1021/ol402931u
73.	7.01	Di	10.1039/C9TC01520E	**104.**	5.50	THF	10.1021/ol402931u
74.	8.01	Di	10.1039/C9TC01520E	**105.**	5.11	THF	10.1021/ol402931u
75.	5.06	Di	10.1039/C9TC01520E	**106.**	4.87	Di	10.1002/gch2.201900034
76.	4.23	DMF	10.1039/C7PP00350A	**107.**	4.49	THF	10.1039/C3TA12901B
77.	5.97	DMF	10.1039/C7PP00350A	**108.**	4.60	THF	10.1039/C3TA12901B
78.	5.34	DMF	10.1039/C7PP00350A	**109.**	3.03	THF	10.1002/asia.201402654
79.	5.02	Et	10.1016/j.tet.2006.12.082	**110.**	5.9	Tr	10.1039/C4QO00285G
80.	5.15	Et	10.1016/j.tet.2006.12.082	**111.**	6.5	Tr	10.1039/C4QO00285G
81.	3.87	Et	10.1016/j.tet.2006.12.082	**112.**	7.0	Tr	10.1039/C4QO00285G
82.	3.76	Et	10.1016/j.tet.2006.12.082	**113.**	4.31	Et	10.1021/jp906334w
83.	7.1	Et	10.1039/C5TA06548H	**114.**	5.96	Tr	10.1016/j.tet.2015.04.018
84.	8.48	Met	10.1016/j.dyepig.2018.03.072	**115.**	5.2	Di	10.1016/j.dyepig.2015.02.020
85.	4.69	Met	10.1016/j.dyepig.2018.03.072	**116.**	6.5	Di	10.1016/j.dyepig.2015.02.020
86.	4.65	THF	10.1016/j.dyepig.2012.10.002	**117.**	6.5	Di	10.1016/j.dyepig.2015.02.020
87.	3.96	THF	10.1039/C5RA02720A	**118.**	6.95	Di	10.1039/C4TA05162A
88.	2.85	THF	10.1039/C5RA02720A	**119.**	6.67	Di	10.1039/C4TA05162A
89.	7.52	THF	10.1039/C6TA02275H	**120.**	2.30	Di	10.1021/jo200501b
90.	8.51	THF	10.1039/C6TA02275H	**121.**	3.19	Di	10.1016/j.tetlet.2014.04.037
91.	7.58	THF	10.1016/j.dyepig.2016.12.013	**122.**	5.10	Di	10.1021/am500947k
92.	6.48	THF	10.1016/j.dyepig.2018.06.010	**123.**	4.90	Di	10.1002/cssc.201200975
93.	6.33	THF	10.1016/j.dyepig.2018.06.010	**124.**	5.80	Di	10.1002/cssc.201200975
94.	7.77	THF	10.1016/j.dyepig.2018.06.010	**125.**	5.80	Di	10.1002/cssc.201200975
95.	5.23	THF	10.1016/j.dyepig.2018.06.010	**126.**	5.60	Di	10.1002/cssc.201200975

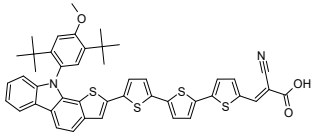
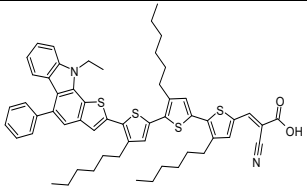
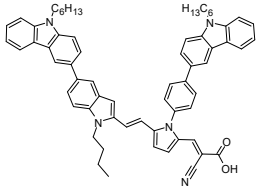
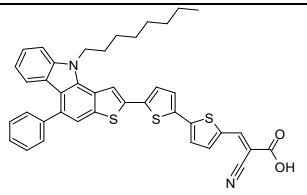
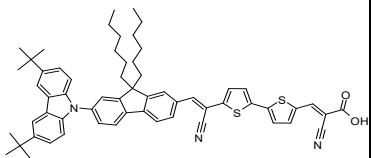
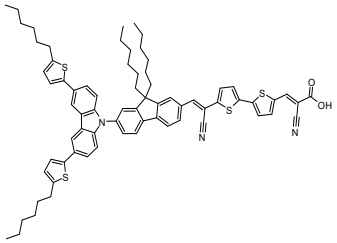
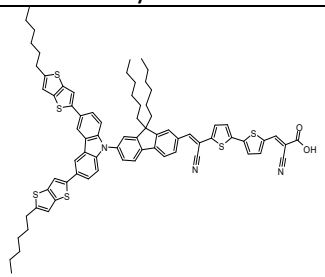
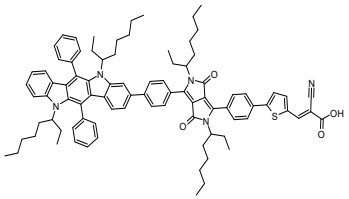
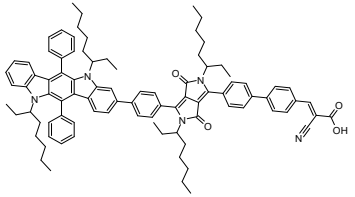
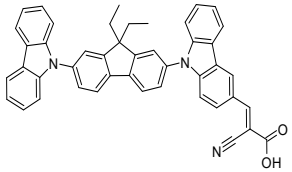
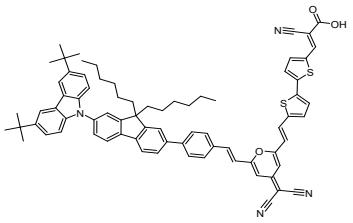
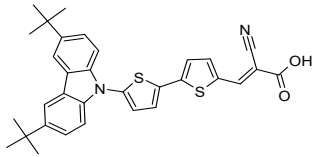
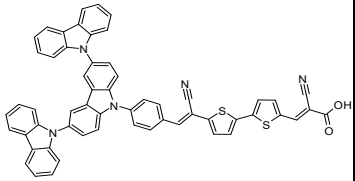
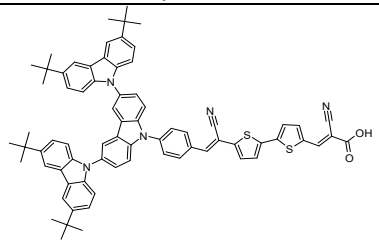
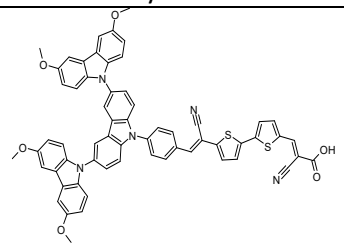
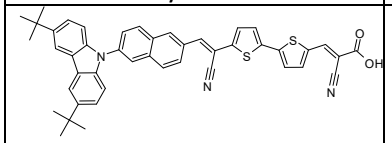
Ac – Acetonitrile; **Et –** Ethanol; **Di –** Dichloromethane; **DMF -** Dimethylformamide**; Met** – Methanol**; Tr –** Trichloromethane; **THF** – Tetrahydrofuran;

 dye1	 dye2	 dye3	 dye4	 dye5
 dye6	 dye7	 dye8	 dye9	 dye10
 dye11	 dye12	 dye13	 dye14	 dye15
 dye16	 dye17	 dye18	 dye19	 dye20
 dye21	 dye22	 dye23	 dye24	 dye25
 dye26	 dye27	 dye28	 dye29	 dye30

 dye31	 dye32	 dye33	 dye34	 dye35
 dye36	 dye37	 dye38	 dye39	 dye40
 dye41	 dye42	 dye43	 dye44	 dye45
 dye46	 dye47	 dye48	 dye49	 dye50
 dye51	 dye52	 dye53	 dye54	 dye55
 dye56	 dye57	 dye58	 dye59	 dye60

 dye61	 dye62	 dye63	 dye64	 dye65
 dye66	 dye67	 dye68	 dye69	 dye70
 dye71	 dye72	 dye73	 dye74	 dye75
 dye76	 dye77	 dye78	 dye79	 dye80
 dye81	 dye82	 dye83	 dye84	 dye85

 dye86	 dye87	 dye88	 dye89	 dye90
 dye91	 dye92	 dye93	 dye94	 dye95
 dye96	 dye97	 dye98	 dye99	 dye100
 dye101	 dye102	 dye103	 dye104	 dye105
 dye106	 dye107	 dye108	 dye109	 dye110

 dye111	 dye112	 dye113	 dye114	 dye115
 dye116	 dye117	 dye118	 dye119	 dye120
 dye121	 dye122	 dye123	 dye124	 dye125
 dye126				