

Table S1. Calculation of the synthetic cost of **TFAP**.

Chemical	Weight reagent or solvent (g/g)	Weight workup (g/g)	Price of Chemical (US\$ /kg)	Chemical cost (US\$ /g product)	Cost per step (US\$/g)
p-anisidine	0.52		58	0.03	
2-bromo-9,9-dimethyl-9H-fluorene	1.10		436	0.48	
Pd ₂ (dba) ₃	0.18		12790	2.30	
dppf	0.11		523	0.05	
NaO ^t Bu	0.38		43	0.01	
Toluene	35		3.7	0.13	
Petroleum ether		1280	3.7	4.73	
CH ₂ Cl ₂		331	2.6	0.86	
Silica gel		100	5.4	0.54	
<i>N</i>-(<i>p</i>-methoxyphenyl)-<i>N'</i>-(9,9-dimethylfluoren-2-yl)amine					9.13
<i>N</i>-(<i>p</i>-methoxyphenyl)-<i>N'</i>-(9,9-dimethylfluoren-2-yl)amine	0.787			7.1	
1,3,6,8-tetrabromopyrene	0.31		1162	0.36	
Pd ₂ (dba) ₃	0.11		12790	1.41	
dppf	0.067		523	0.03	
NaO ^t Bu	0.24		43	0.01	
Toluene	26		3.7	0.09	
Petroleum ether		1280	3.7	4.73	
CH ₂ Cl ₂		662	2.6	1.72	
Silica gel		100	5.4	0.54	
TFAP					46.08

