Supporting Information

Correlated Magnetic Field Effects on Carriers and Excitons in

Single-Carrier Exciplex-Based Organic Photodiodes

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Figure. S1 Current density-voltage curves of the m-MTDATA-based hole-only device (a), the 3TPYMB-based electron-only device (b), the limited hole-only device (c) and the TCTA-based hole-only device (d) under darkness (black) and illumination (red), respectively. The insets of (c) and (d) are the normalized PL spectrum of the limited hole-only device and the TCTA-based hole-only device under the 340 nm photo excitation.



Figure. S2 Absorption spectra of m-MTDTA, 3TPYMB and their blend films.



Figure. S3 MC responses of the hole-only device measured at different reverse (a) and forward (b) biases under 340 nm illumination. c) MC responses of the hole-only device under different intensities of incident light (340 nm) with the applied voltage of -2 V.

Wavelength [nm]	Hole-only Device		Exciplex Film	
	А	B_{0}	А	B_0
	[mT]	[mT]	[mT]	[mT]
280	_	_	1.79	7.66
300	2.19	5.13	2.88	2.07
320	2.56	5.20	2.24	4.35
340	3.70	5.58	3.38	4.03
360	3.70	5.40	2.84	5.01
380	3.68	4.63	1.66	4.72
400	3.72	6.31	0.47	2.01
420	2.49	6.31	_	_
440	1.25	3.16	_	_
460	1.13	5.27	_	_
480	0.31	4.58	_	_

Table S1. Summary of the fitting results of photo-induced MC in the hole-only device and m-MTDTATA: 3TPYMB film under different incident-wavelength light by the non-Lorentzian function (shown in the text).