

Supporting Information

Manipulation of Magneto-Electroluminescence from Exciplex-Based Spintronic Organic Light-Emitting Diodes

Chenghao Liu, Zhen Chen, Huitian Du, Yuan Yu, Junfeng Ren, Jihui Fan, Shenghao Han*, and Zhiyong Pang*

Chenghao Liu, Zhen Chen, Huitian Du, Yuan Yu, Jihui Fan, Zhiyong Pang, Shenghao Han

School of Microelectronics, Shandong University, Jinan 250100, P. R. China;

E-mail: pang@sdu.edu.cn; hansh@sdu.edu.cn

Junfeng Ren

School of Physics and Electronics, Shandong Normal University, Jinan 250358, P.R. China;

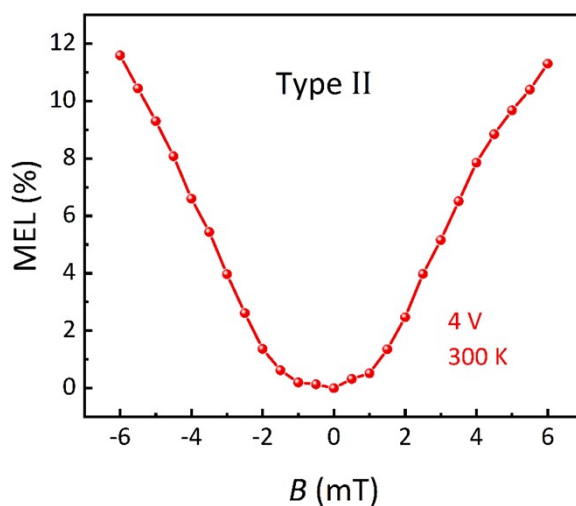


Fig. S1 MEL(B) response for Type II device under small magnetic-field scales.

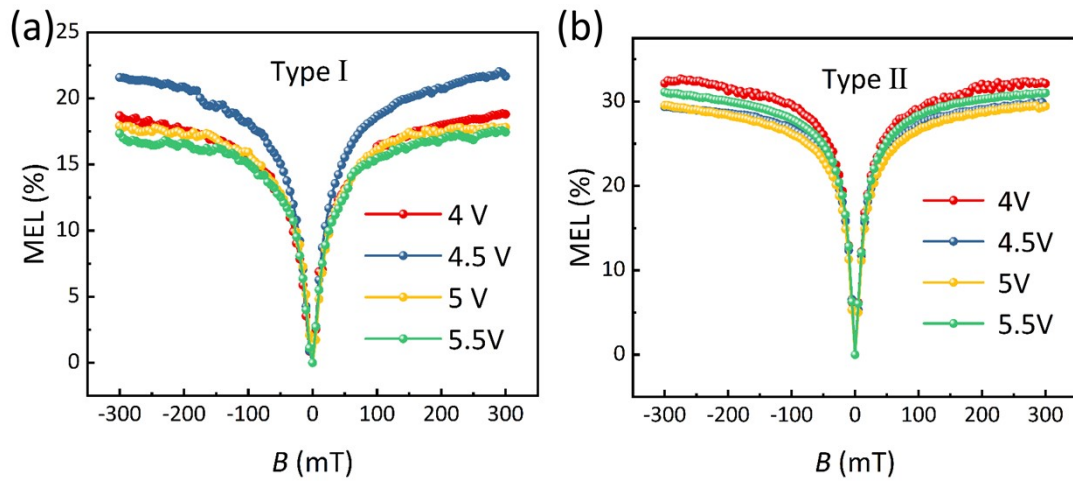


Fig. S2 MEL(B) responses for Type I (a) and Type II (b) devices at various voltages at 300 K, respectively.

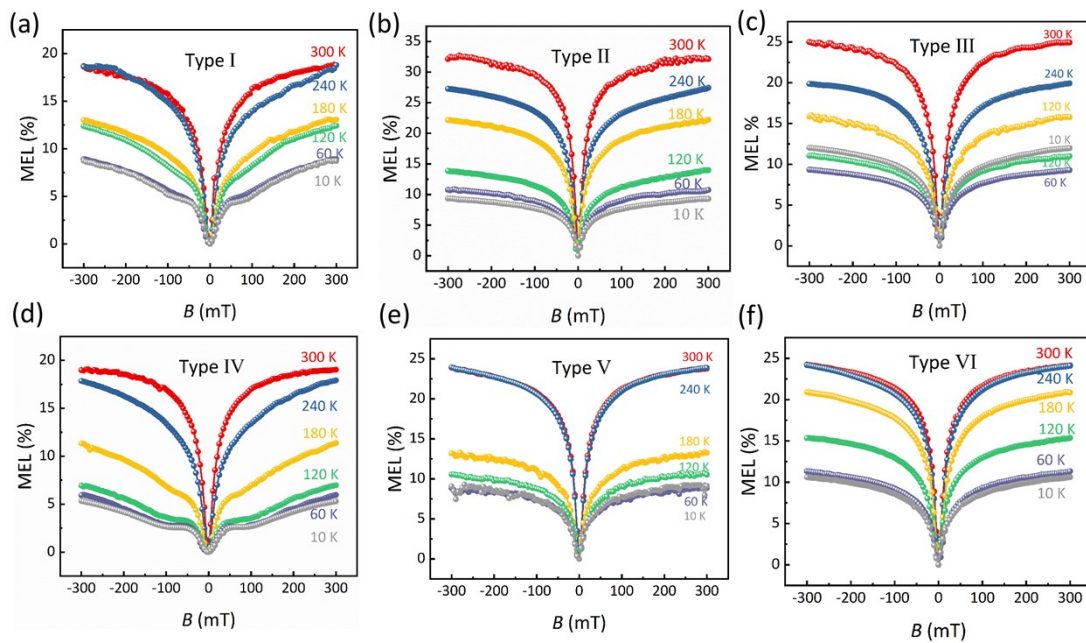


Fig. S3 MEL(B) responses for Type I-VI devices at various temperatures.

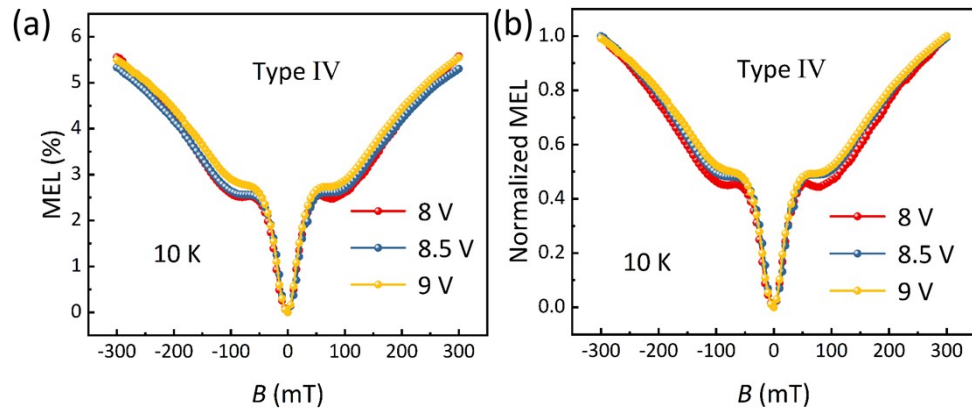


Fig. S4 Voltage-dependent unnormalized (a) and normalized (b) MEL(B) responses for Type IV device at 10 K. The MEL and FWHM values change a little as the voltage increases from 8 to 9 V.

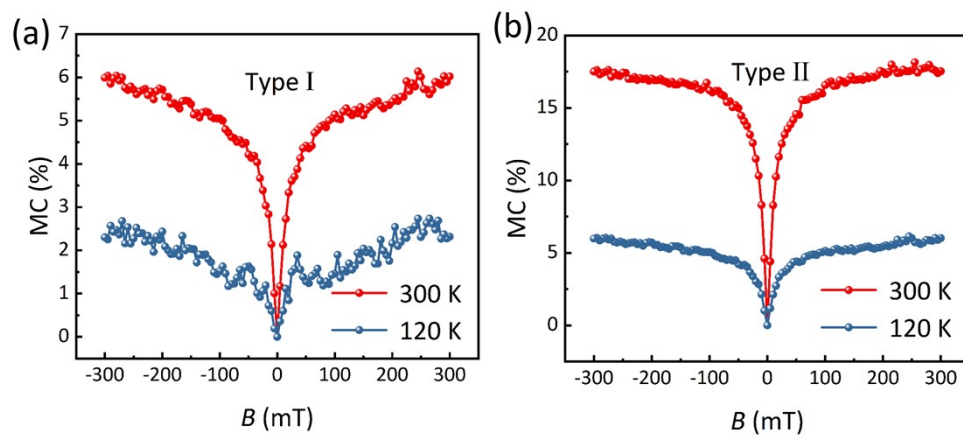


Fig. S5 MC(B) responses for Type I (a) and Type II (b) devices at 300 K and 120 K, respectively.

Table R1. Summary of the MEL(*B*) responses and EL performance for Type I-VI device.

Device #	MEL ^{a)} (%)	MEL ^{b)} (%)	FWHM ^{a)} (mT)	FWHM ^{b)} (mT)	Brightness ^{c)} (cd/cm ²)	Current density ^{c)} (mA/cm ²)
Type I	18.8	8.7	48.9	122.7	137.9	99.66
Type II	32.4	12.1	29.1	42.3	152.7	71.34
Type III	24.9	12.0	36.4	50.7	151.5	111.8
Type IV	19.6	5.3	40.6	236.2	123.4	97.11
Type V	23.9	9.1	37.4	57.2	158	71.93
Type VI	24.2	10.6	34.4	54.5	154	119

^{a)} At 300 K. ^{b)} At 10 K. ^{c)} The maximum brightness and corresponding current density.