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**Effects of spin filter on singlet and triplet exciton fractions in organic light-emitting devices** LIANBIN NIU, School of Physical Science and Technology, Lanzhou University, Lanzhou 730000, XIAOHONG ZHANG, Nano-organic Photoelectronic Laboratory, IPC, CAS, Beijing 100101, FUJIA ZHANG, School of Physical Science and Technology, Lanzhou University, Lanzhou 730000, SCHOOL OF PHYSICAL SCIENCE AND TECHNOLOGY, LANZHOU UNIVERSITY TEAM, NANO-ORGANIC PHOTOELECTRONIC LABORATORY, IPC, CAS COLLABORATION — In recent years spin and magnetic field effects are investigated in organic light-emitting devices (OLEDs). We studied the electroluminescence current efficiency at room temperature under parallel and antiparallel magnetic field in OLEDs with spin filter. The magnetic field applied parallel to the electrode allows the magnetization of the electrode to be switched independently. The current efficiency for the antiparallel magnetic field is found to be enhanced as compared to the parallel one. We show that this increase is an evidence of spin injection and a consequence of the magnetic-field dependence of the singlet-to-triplet exciton ratio in OLEDs, suggesting that the spin-polarized electrons were injected into the organic molecules from the spin filter under electrical excitation. Therefore, the use of spin filter demonstrates a pathway to tune the optoelectronic properties that are related to singlet and triplet states in OLEDs.

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