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Highly efficient inverted organic light-emitting diodes with organic p-n junction as electron injection layer

Zhang Chuan, Qiao Xianfeng, Yang Zhenlin, Zhang Hongmei, Ma Dongge



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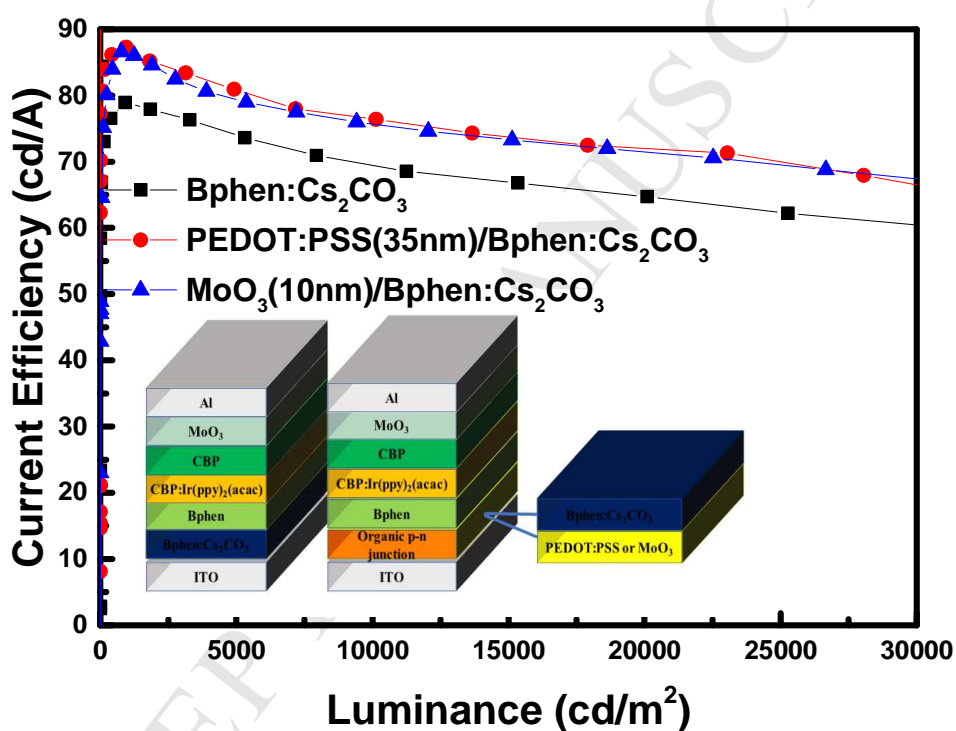
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Graphical Abstract

Organic p-n junctions composed of PEDOT:PSS or MoO₃/Bphen:Cs₂CO₃ are developed as electron injection layer in the bottom-emission inverted organic light-emitting diodes. Compared with the device that using Bphen:Cs₃CO₃ as electron injection layer, the devices with organic p-n junction show nearly 10% enhancement of current efficiency for their balance in charges injection. Moreover, the lifetime of the devices with organic p-n junction show 51% and 55% enhancement compared with the device without p-n junction as electron injection layer.



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