Electronic Supplementary Information (ESI†)

A strategy of synergistic optimization: gold and lithium co-doped vanadium oxide as a hole-injection layer for high-performance OLEDs

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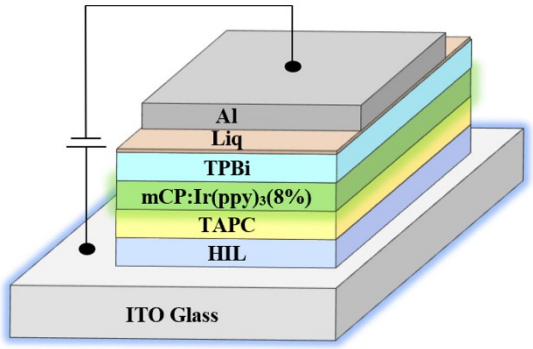

Fig. S1 Schematic structure of OLEDs.

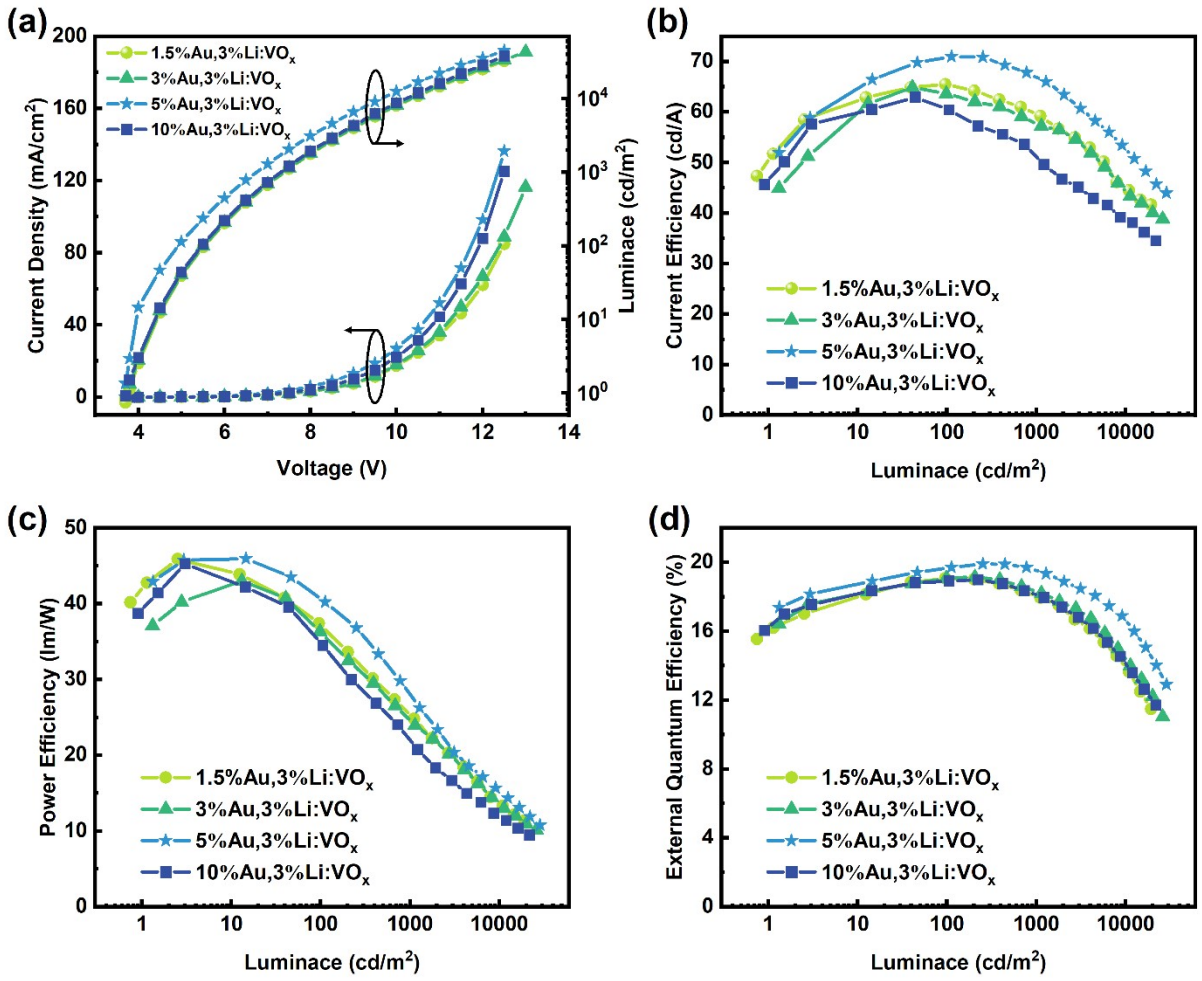

Fig. S2 (a) Current density-voltage-luminance (J-V-L), (b) CE-L, (c) PE-L and (d) EQE-L characteristics of devices based on m%Au,3%Li:VO_x HILs (m=1.5, 3, 5, 10).

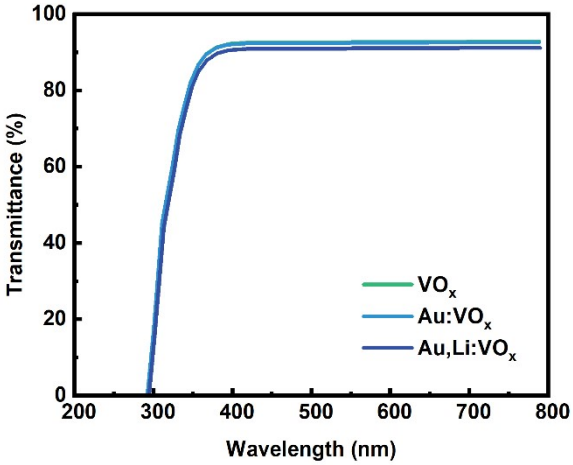

Fig. S3 Optical transmission spectra of VO_x, Au:VO_x and Au,Li:VO_x films on quartz substrates.

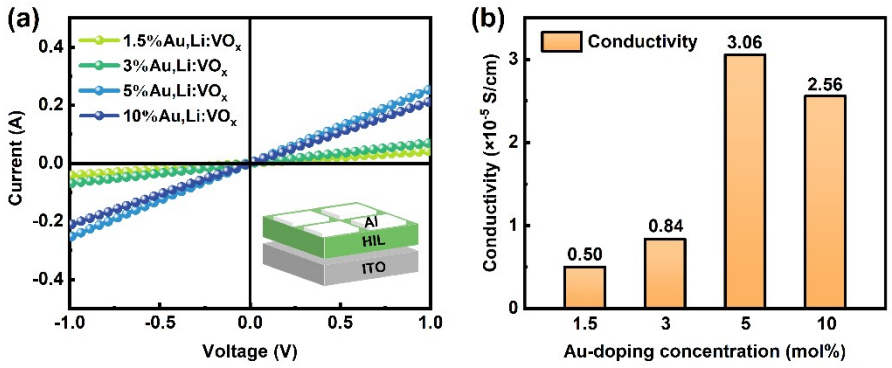

Fig. S4 (a) I–V curves and (b) the electrical conductivity of m%Au,Li:VOx (m=1.5, 3, 5 and 10) films based on the ITO/HILs/Al structure as shown in the inset.

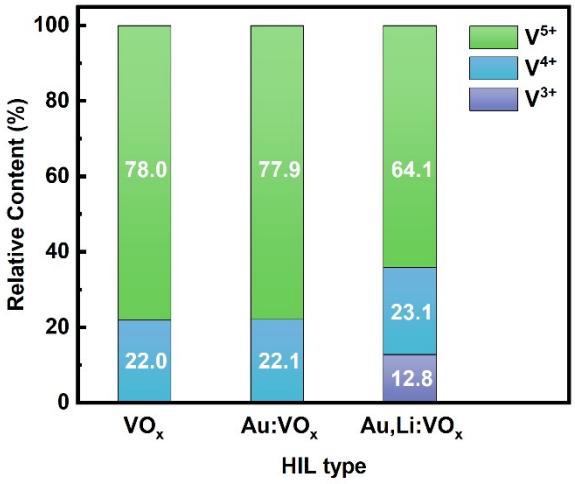

Fig. S5 Quantitative comparisons of V^{5+}, V^{4+} and V^{3+} contents in VO_x, Au:VO_x and Au,Li:VO_x films.

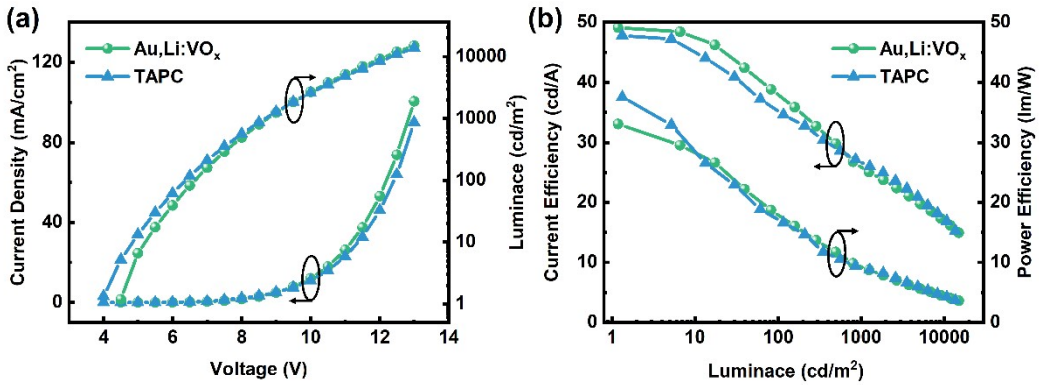

Fig. S6 (a) J-V-L and (b) CE-L-PE characteristics of devices based on different HTLs (Au,Li:VO_x and TAPC)