Electronic Supplementary Information

Highly efficient exciplex organic light-emitting devices employing a sputtered indium-tin oxide with nano-pinhole morphology

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Supporting figures and brief caption

**Table S1.** Summarized parameters of DC sputtering fabrication

<table>
<thead>
<tr>
<th>parameters</th>
<th>Base pressure</th>
<th>Working pressure</th>
<th>Ar flow rate</th>
<th>Power</th>
<th>Target distance</th>
<th>Deposition rate</th>
<th>Substrate temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2×10^{-6} (Torr)</td>
<td>2×10^{-3} (Torr)</td>
<td>15 (sccm)</td>
<td>30 (W)</td>
<td>15 (cm)</td>
<td>0.4 (Å/s)</td>
<td>Room temperature</td>
</tr>
</tbody>
</table>

**Figure S1.** The work function of our proposed ITO measured by photoelectron spectroscopy.

**Figure S2.** X-ray diffraction patterns of our proposed ITO thin films.
Figure S3. The 2D/3D topography and cross sectional profile (blue line) of sputtered ITO with the thickness of (a) 40 nm (b) 80 nm, and (c) 150 nm.
Figure S4. Normalized PL spectra of the TCTA, B3PYMPM, and TCTA:B3PYMPM co-deposited films at 300K and 77K, respectively.

Figure S5. The device performances (EQE and current efficiency) with the various thicknesses of ITO (Sputtered or commercial ITO).

Figure S6. The work function of sputtered ITO/HAT-CN measured by photoelectron spectroscopy.