

## 8. OLED, Green Chemistry (rough)

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### OLED

#### Organic Light Emitting Diode

##### Features

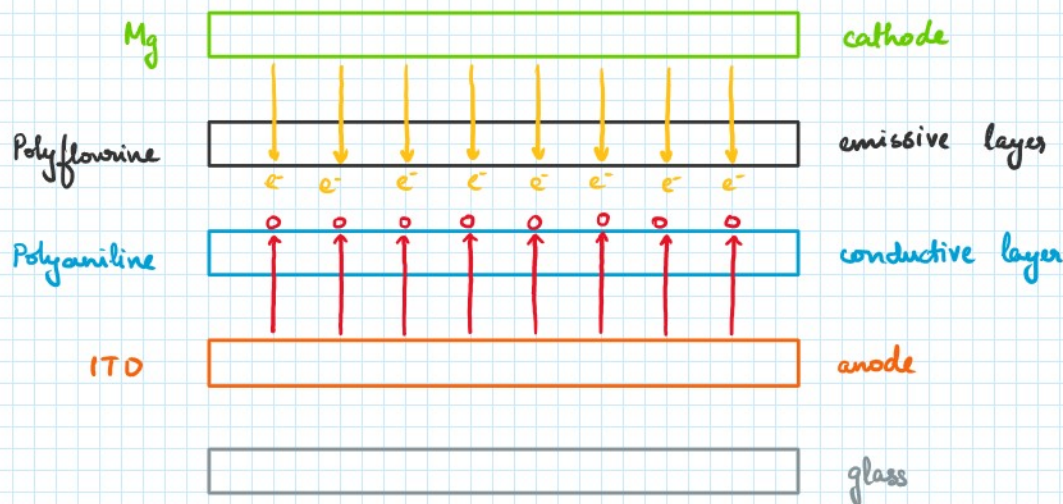
- High contrast
- Low power consumption
- Flexibility
- Widen viewing angles

**Anode:** Indium tin oxide (ITO)  $\longrightarrow$  produces holes

**Conducting layer:** Polyaniline  $\longrightarrow$  transports holes from the anode  $\longrightarrow$  brown colour

**Emissive layer:** Polyfluorine  $\longrightarrow$  transports  $e^-$  from cathode  $\longrightarrow$  blue colour

**Cathode:** Mg  $\longrightarrow$  produces  $e^-$



##### Applications

TVs, mobile phones, monitors etc.

### GREEN CHEMISTRY

① Prevent wastage



- # Green Chemistry
- ① Prevent wastage
  - ② Atom economy
  - ③ Safer synthesis
  - ④ Safer products
  - ⑤ Design for benign chemicals
  - ⑥ Design for degradation
  - ⑦ Design for energy efficiency
  - ⑧ use Renewable feed stock
  - ⑨ Reduce derivatives
  - ⑩ Catalysis
  - ⑪ Accident prevention
  - ⑫ Pollution prevention