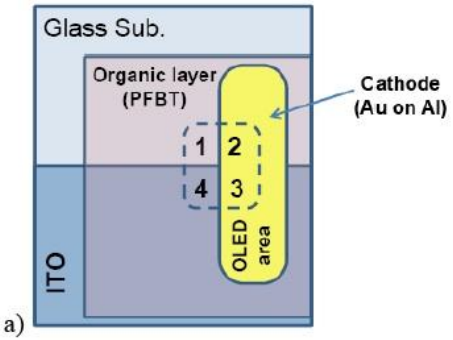
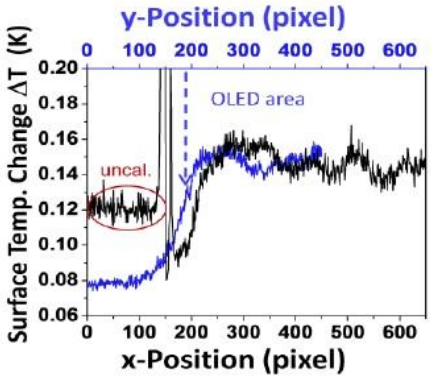
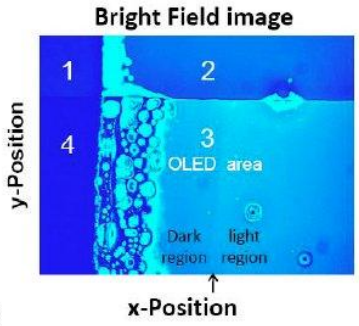
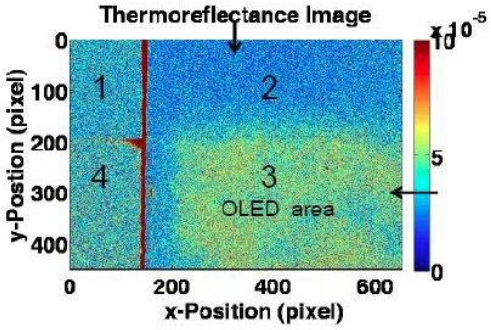
Thermoreflectance Microscopy: Metrology for Optoelectronic Devices

The luminance and lifetime of OLEDs decrease dramatically with increased device operating temperature due to self-heating; this problem is particularly severe in OLEDs operated at high-brightness conditions. For stand-alone OLEDs, self-heating leads to measured rises in average temperatures of up to 60˚ C, with local temperature rises of up to 200˚ C, reducing lifetime by 20x or more. *Thermoreflectance imaging*, can be used through glass to characterize the thermal performance of an operating OLED and inspect the temperature profile spatially to help increasing the lifetime of high brightness OLEDs with better thermal design.









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