Building the P-OLED Technology Platform J. H. Burroughes

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We have seen significant improvements in the basic P-OLED performance, with blue lifetime now at 12,000 hours at 400 cd/m², and efficiencies continuing to improve. However, for P-OLED to be commercialized, many technologies need to be developed or aligned to this technology. In this talk, I will present CDTs development route from fundamental understanding of P-OLEDs to obtain improved performance, through ink jet printing development to enhance manufacturability to system development to obtain the best display performance possible. Materials development has been driven by developing a good model of device operation and materials degradation. Ink jet printing development, has required, machine and head development with partner companies and process and ink development by CDT. The design of the display, plays a key role in the final performance. I will discuss some of the technologies and relationships that Cambridge Display Technology Ltd., has been working on to maximise P-OLED display performance.