

Talk for Short Course on "Flexible Electronics",  
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# **Applications of Flexible Organic Light Emitting Diodes**

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## **Abstract**

Organic light emitting diodes are next generation light sources made of very thin layers of organic materials around 100 nm to 200 nm. They distinguish themselves from other light sources by their large area and uniform emissive nature. This enables creating large area homogeneous lighting surfaces without using complicated light management solutions like diffusers or waveguiding structures. Being very thin and light weight, they are suitable to make flexible lighting and display devices. They can be made transparent enabling see through devices and when tiled upon each other can create 3D effects. This gives designers enormous freedom for creative design ideas. An overview of OLED technology will be given for general understanding. Advantages of OLEDs over competitive technologies will be discussed in detail with respect to lighting, display and signage application. Different kind of OLED prototypes developed at the center highlighting different application possibilities will be presented and other ideas where flexible OLEDs could find application will be discussed.