

This talk will review the activities of Thomas Swan's Early Stage Researcher within the PARSEM project. It will include a description of the research related training undertaken at Cambridge University and an outline of the methods that will be used to address our research objectives.

The initial work on a novel method for screening LED wafers and predicting their likely device performance, based on probe contact electroluminescence will be presented. The issues relating to the development of this technique will also be discussed.

Future work will involve optical and electrical studies of LED wafers and appropriate test structures, together with XRD and AFM measurements, as needed, to gain an insight into the factors limiting the performance of the current material with a view to improving this. A study of the factors which influence the electrical characteristics of probed contacts made to LED structures, and the electroluminescence derived there from, will also be carried out in order to establish a fast and accurate means of assaying wafer quality.