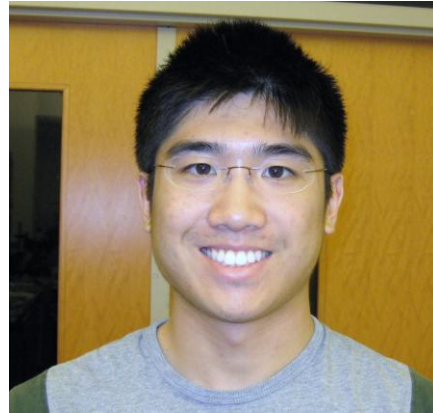


Project Title : Fabrication of a novel solid state  
p-CuO/n-ZnO based photovoltaic device



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THE UNIVERSITY  
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National Institute for Materials Science

# Project Background and Goals

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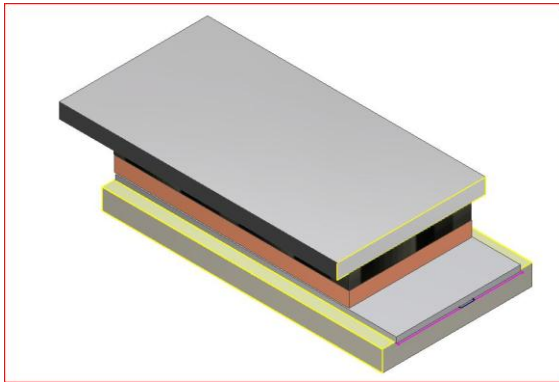
## Background

- The development of oxide thin film photovoltaic devices have been of recent interest due to it's inexpensive cost, abundance, and chemical stability in various environments.
- The basis of a simple PV device is the p-n junction, which consists of a p-type and n-type semiconductor.
- High quality thin film p-CuO/n-ZnO heterostructures have not been researched extensively for use in PV devices and have the potential as an inexpensive and reliable alternative to silicon based solar cells.

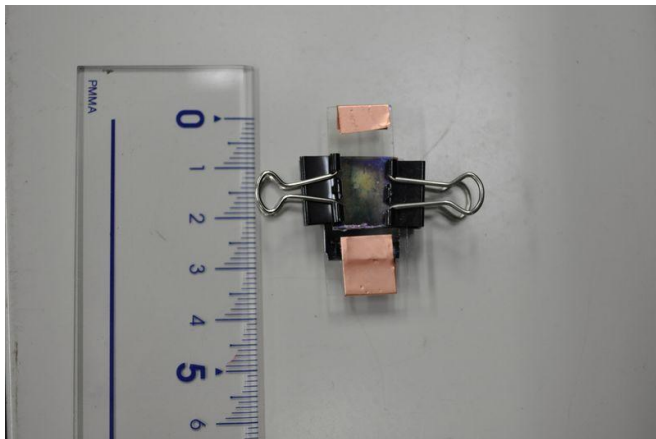
## Project Goals

- Find optimal conditions for thin film synthesis
- Build a working prototype solar cell
- Test electrical performance of solar cell

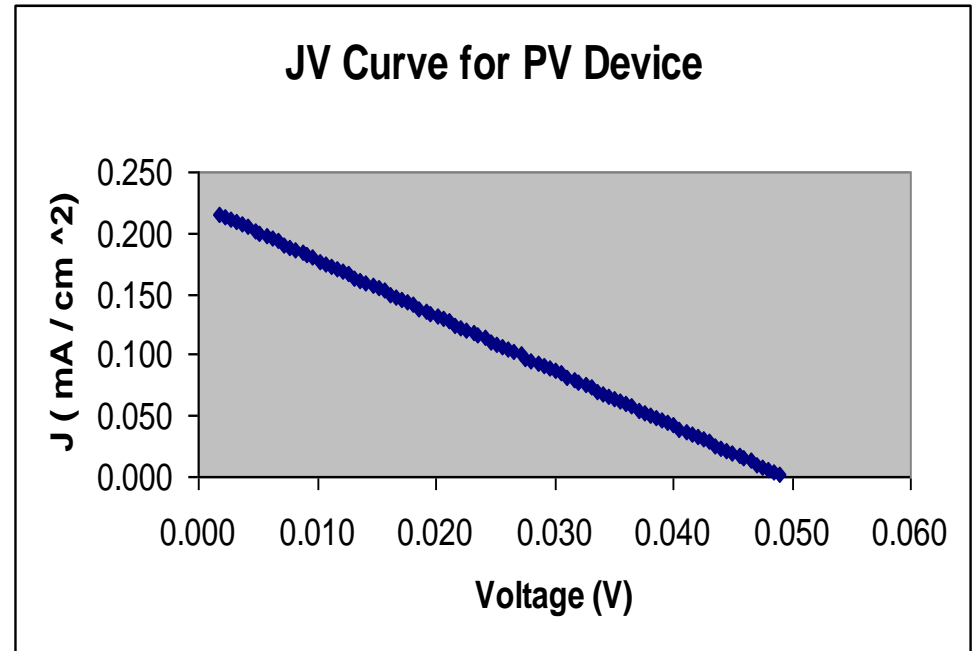
# Project Results



Solar Cell Design



A Prototype Solar Cell



- Found optimal conditions for thin film synthesis
- Completed working prototypes
- Solar cells were successfully tested for their PV properties