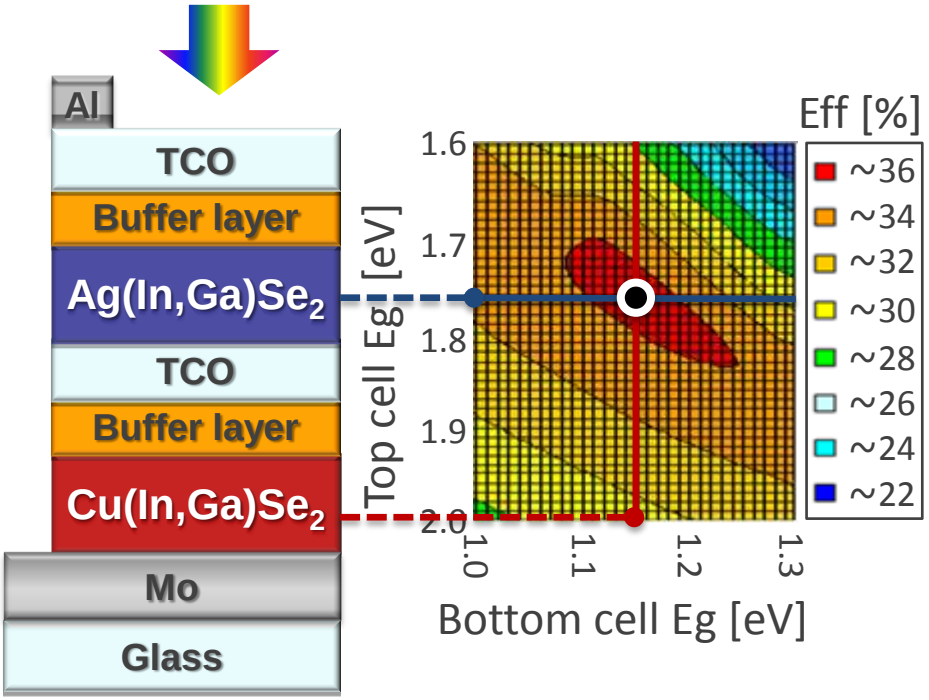
Development of High Efficiency $Ag(In,Ga)Se_2$ Solar Cells

Background

In order to get high efficiency over 35%, the top cell of the tandem solar cell requires a band gap 1.75 eV.
$Ag(In,Ga)Se_2$ is a candidate for the top cell.



Efficiency of tandem solar cell vs. band gap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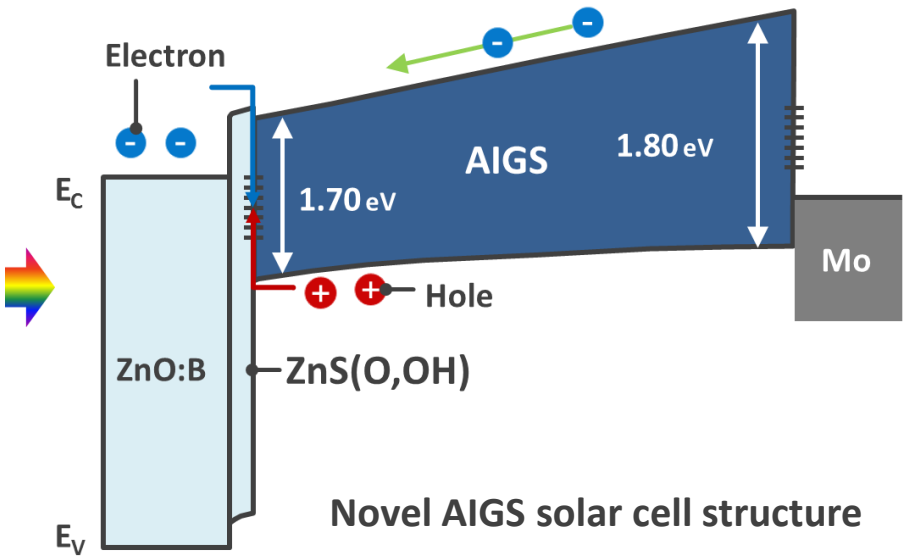
Research plans

1. Increase of hole concentration in AIGS
2. Formation of graded band profile
3. Application of ZnS(O,OH) buffer layer



Novel AIGS solar cell structure