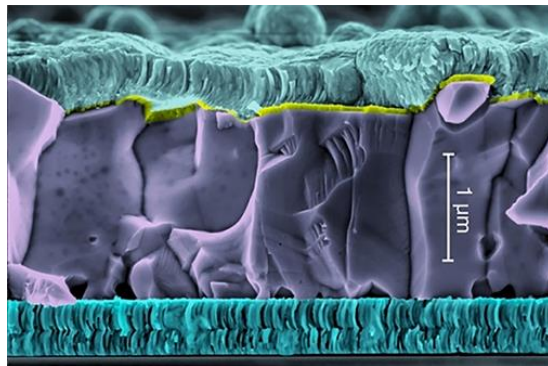


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## Impact of defects on electrical characteristics of Cu(In,Ga)Se<sub>2</sub>-based solar cells

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Cu(In,Ga)Se<sub>2</sub> is a semiconductor material used as an absorber in thin-film solar cells. High efficiency (> 22%), fast and relatively low-cost technological fabrication, as well as excellent stability are major advantages of these cells. One of the most important factors determining the efficiency of Cu(In,Ga)Se<sub>2</sub>-based solar cells are point defects. Their importance comes not only from the fact that they act as recombination centers, but also from their influence on the band diagram due to the non-uniform distribution of the electric charge or because of the Fermi level pinning. Deep defects are also at the origin of metastable effects observed in Cu(In,Ga)Se<sub>2</sub>-based solar cells, such as persistent photoconductivity or reversible changes of the fill factor. In the seminar research directions of the Semiconductor Group at Warsaw University of Technology will be shortly outlined and summarized.