

Title: Nanostructured Thin Flexible Single Crystalline III-V Solar Cells

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Solar cells based on III-V materials provide the highest power conversion efficiency. However, the cost of III-V materials and cells is too high. This talk is on our development of III-V Nanostructures in order to enable low-cost thin, flexible, freestanding single crystalline III-V film solar cells. We have developed advanced nanocone photon management to enable nearly complete absorption of above bandgap photons with very thin III-V materials and demonstrated good power efficiency.