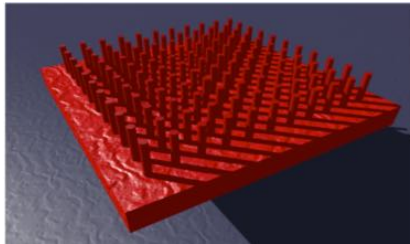# PI: Jeremy Munday
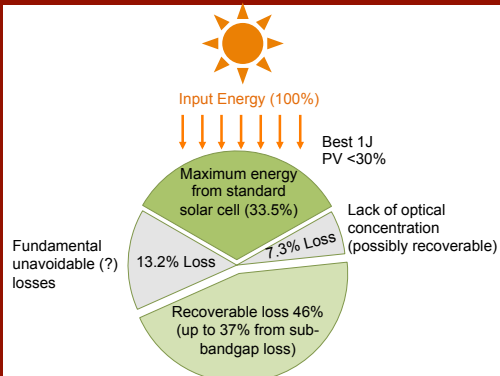
## Munday Lab
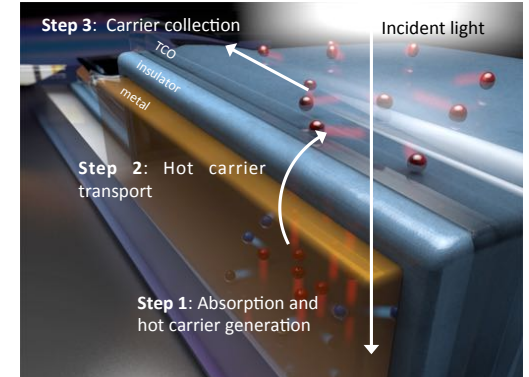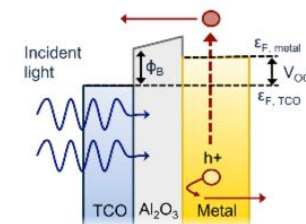For Solar and Quantum Technologies

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## Solar energy



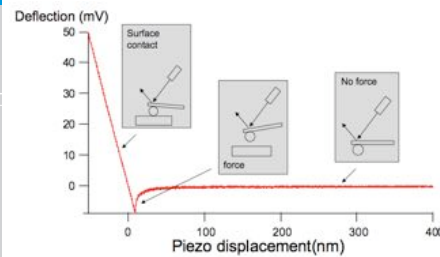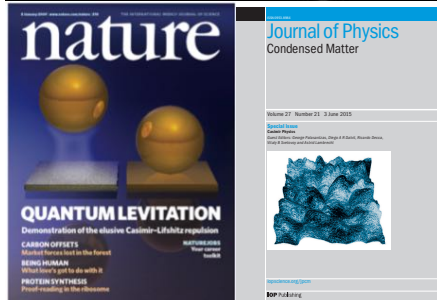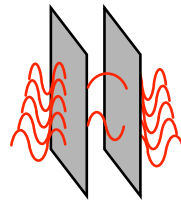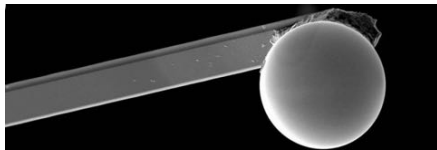**Can we use photonics to beat tradition efficiency limits of solar cells?**

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## Hot electron plasmonics

**Can hot electrons be used to make novel devices?**



Step 3: Carrier collection

Incident light

Step 2: Hot carrier transport

Step 1: Absorption and hot carrier generation

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## Quantum fluctuations – forces and torques from *nothing*

**Can we manipulate the quantum fluctuations of vacuum to drive nanomachines?**



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## Space travel using radiation pressure

**Can switchable optical materials propel and steer a space craft?**



Solar sail