



## NECEM Seminar: Routes to High Efficiency Solar Cells: Next Generation Photovoltaics

Dr Ian R. Sellers, University of Oklahoma

2pm October 4th 2018

Northumbria University, Northumberland Building room 305

(Building number 16 on the map, room 305 is on the third floor)

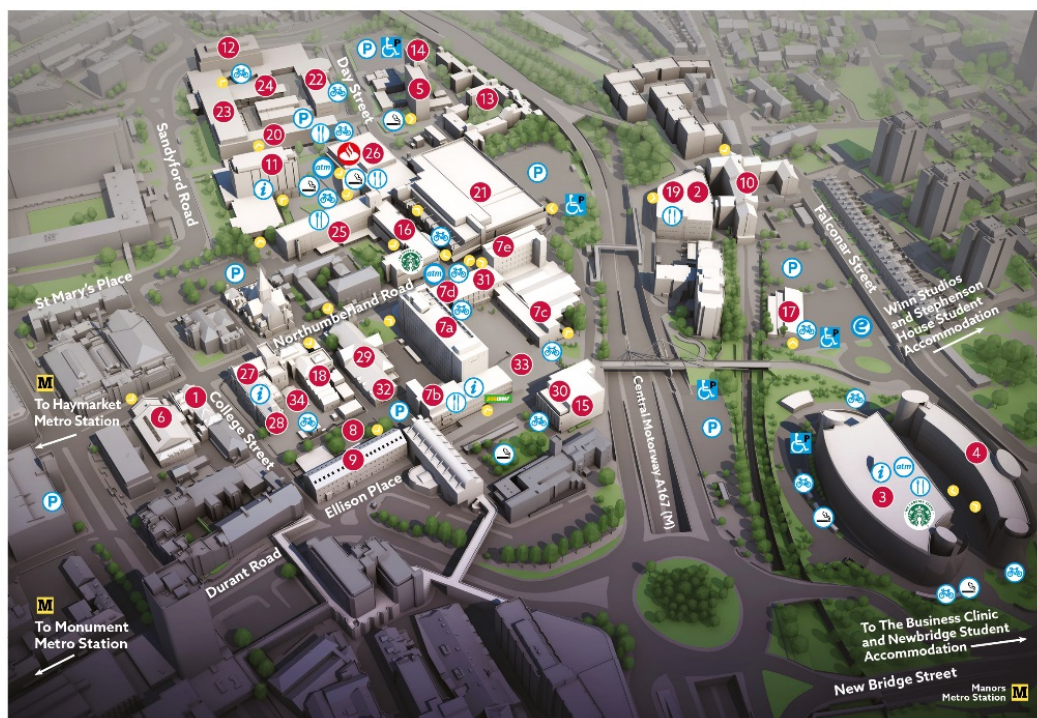
**Routes to High Efficiency Solar Cells: Next Generation Photovoltaics, Ian R. Sellers, University of Oklahoma**

To enable the large-scale implementation of solar cells for utility-scale energy applications improvements in power conversion efficiency and system cost reductions must be achieved. To circumvent the fundamental limitations of single energy-gap solar cells, devices based on third generation (3G) processes have been proposed. In this presentation I will introduce such concepts, and describe projects we are currently undertaking at the University of Oklahoma that are focused on developing such systems based on quantum wells and quantum dots. I will also briefly discuss our recent work aimed at investigating the feasibility of CIGS solar cells for space applications; programs that have evolved from the recently formed Oklahoma Photovoltaics Research Institute, a statewide PV center aimed at developing sustainable PV programs within Oklahoma.



**Northumbria University**  
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- 1 Burt Hall
- 2 Campus Services
- 3 City Campus East 1 – Business and Law
- 4 City Campus East 2 – Design School
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- 6 Drill Hall
- 7a Ellison Building A Block
- 7b Ellison Building B Block
- 7c Ellison Building C Block
- 7d Ellison Building D Block
- 7e Ellison Building E Block
- 8 Ellison Gardens
- 9 Ellison Terrace
- 10 Glenamara House
- 11 Library
- 12 Lippman Building
- 13 Lovaine Halls and Flats
- 14 Muslim Prayer Facility
- 15 Nixon Hall
- 16 Northumberland Building
- 17 Northumbria Nursery
- 18 Occupational Health Centre
- 19 Pandori Building
- 20 Pandori Grab and Go
- 21 Pandori Building
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