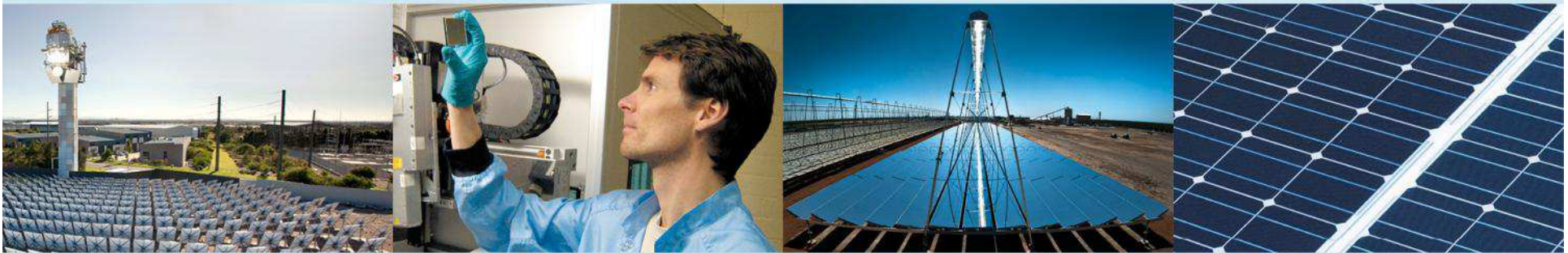


Solar Breakfast

14 August 2012

Parliament House, Canberra



ASI established in 2009

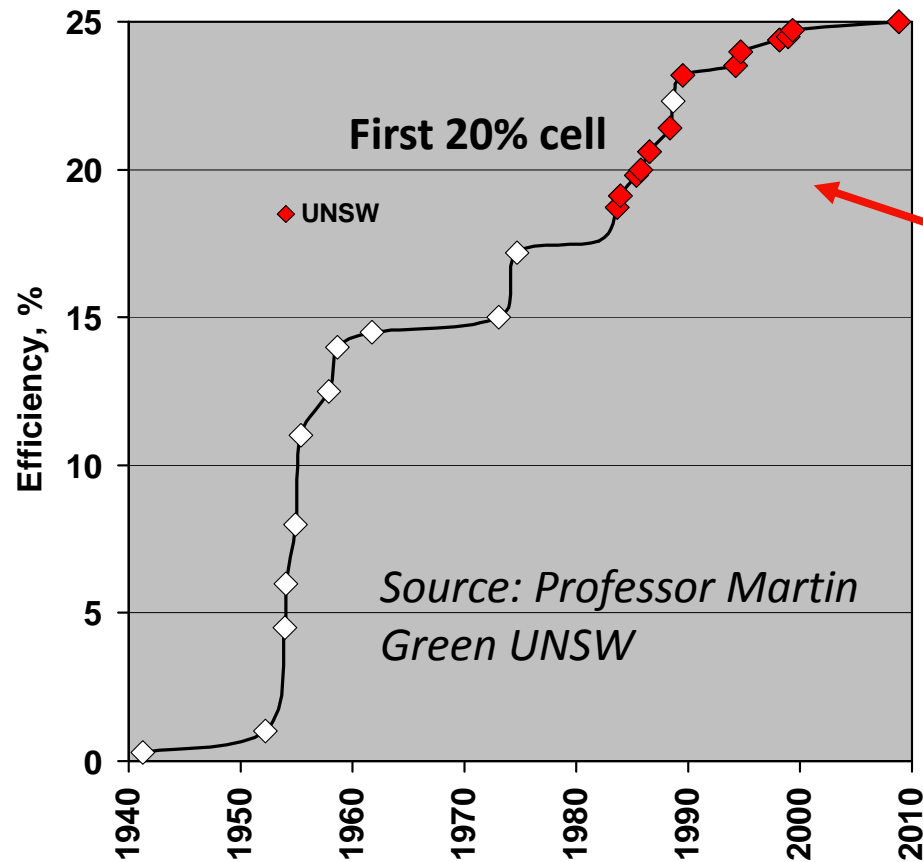


ASI Board and Staff



Absent: Prof Mick Cardew-Hall, Olivia Coldrey and Katrina Mentis

Australian technology and research capability world leading



Australian alumni now leaders in a global industry



UNSW Tech Transfer

Trina, Solarfun CTO

Suntech/ Sunergy/ JA Solar/
Sunrise Global

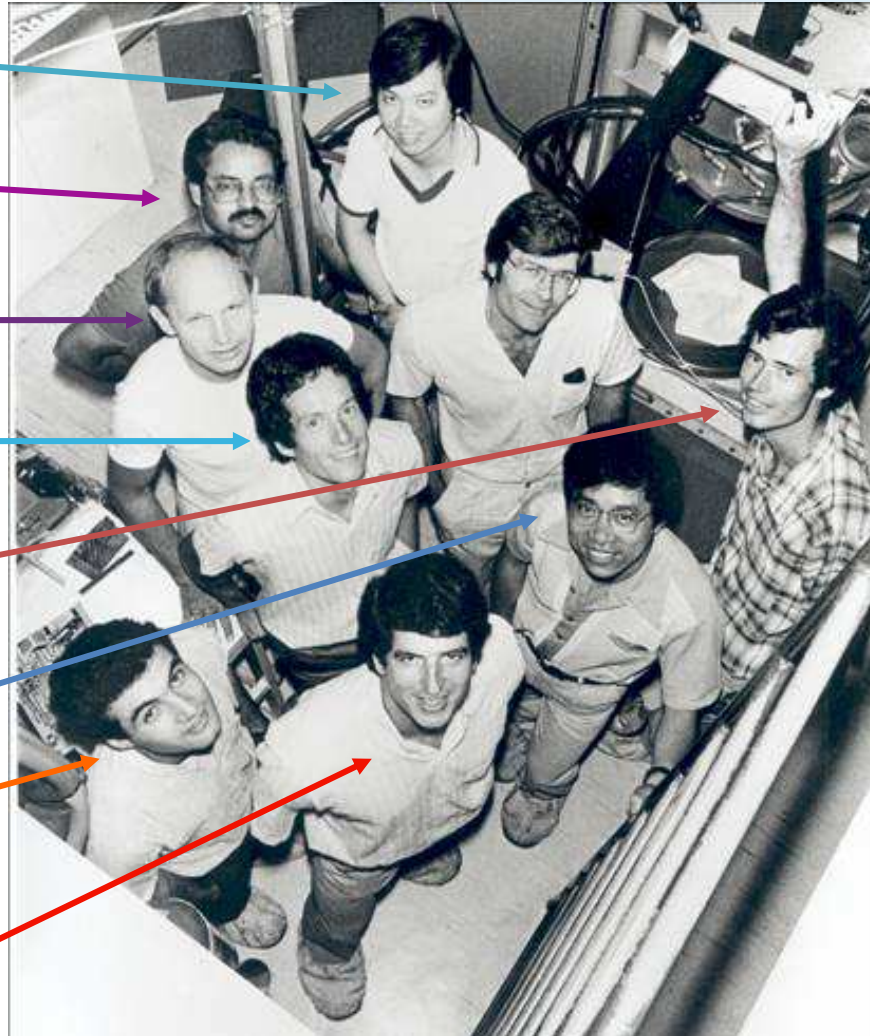
ANU CoE

UNSW PV CoE/
Suntech CTO

China Sunergy CTO

CSG Solar CEO

UNSW PV Centre of
Excellence (PV CoE)



Keeping Australia at the forefront of solar research and development



- Proactively foster and support excellent R&D
- Accelerate commercial deployment of PV and CSP technologies
- Investing in programs and people

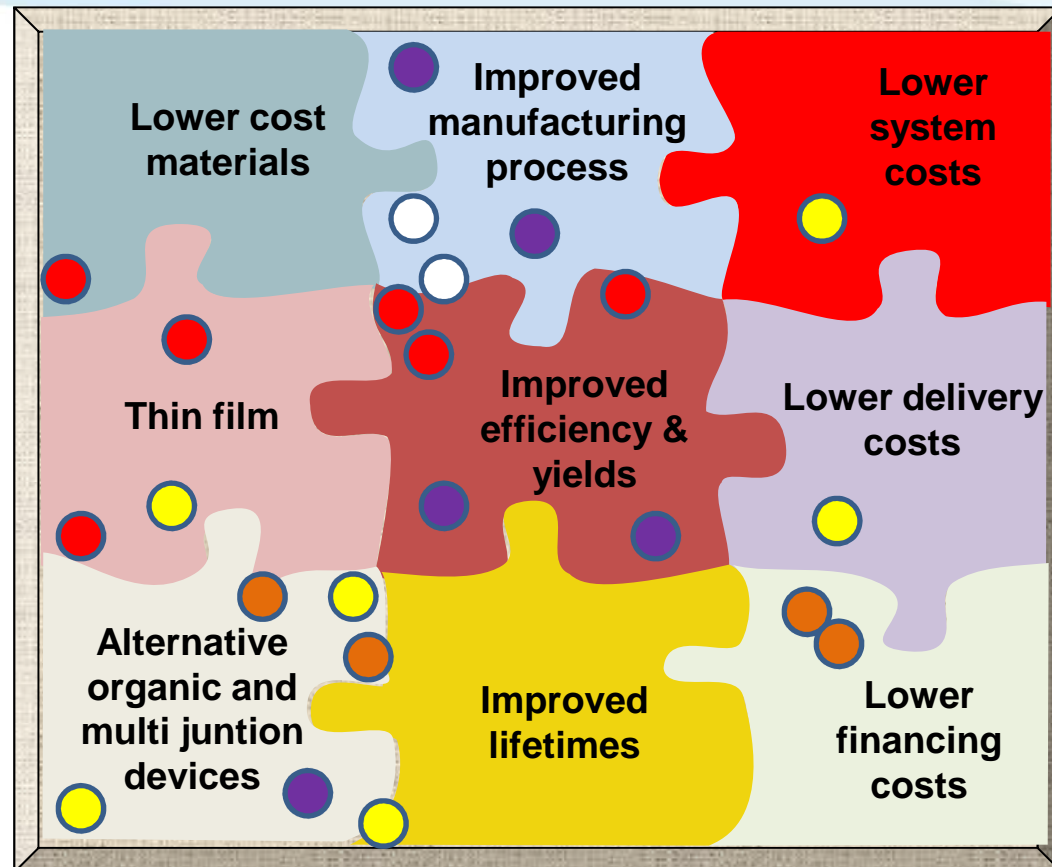


PV R&D Portfolio 23 Projects

ASI \$47m leveraging \$145m



- Foundation Projects
- Round 1
- Round 2
- Round 3
- USASEC
- Aust.-Germany



Full details on ASI website – R&D Projects

Case study: Overcoming the fundamental performance limitations of commercial solar cells



- UNSW/Suntech \$4.4m;\$14.7m
- Investigating improvements to *device performance and reduced manufacturing costs* while delivering high production yields for solar cells
- Potentially opening up new avenues for cost effective industrial manufacturing
- 2012 Collaborative Innovation Award for collaboration on Pluto technology



Case study: Expanding the value proposition for Building Integrated PV



- Australia's BlueScope Steel, Germany's Fraunhofer Institute, University of Wollongong
- \$0.5m ASI funding for \$1.6m project
- Optimise the design and sizing of thin film building integrated PV thermal systems to suit installation on existing buildings. To lower cost and improve value.

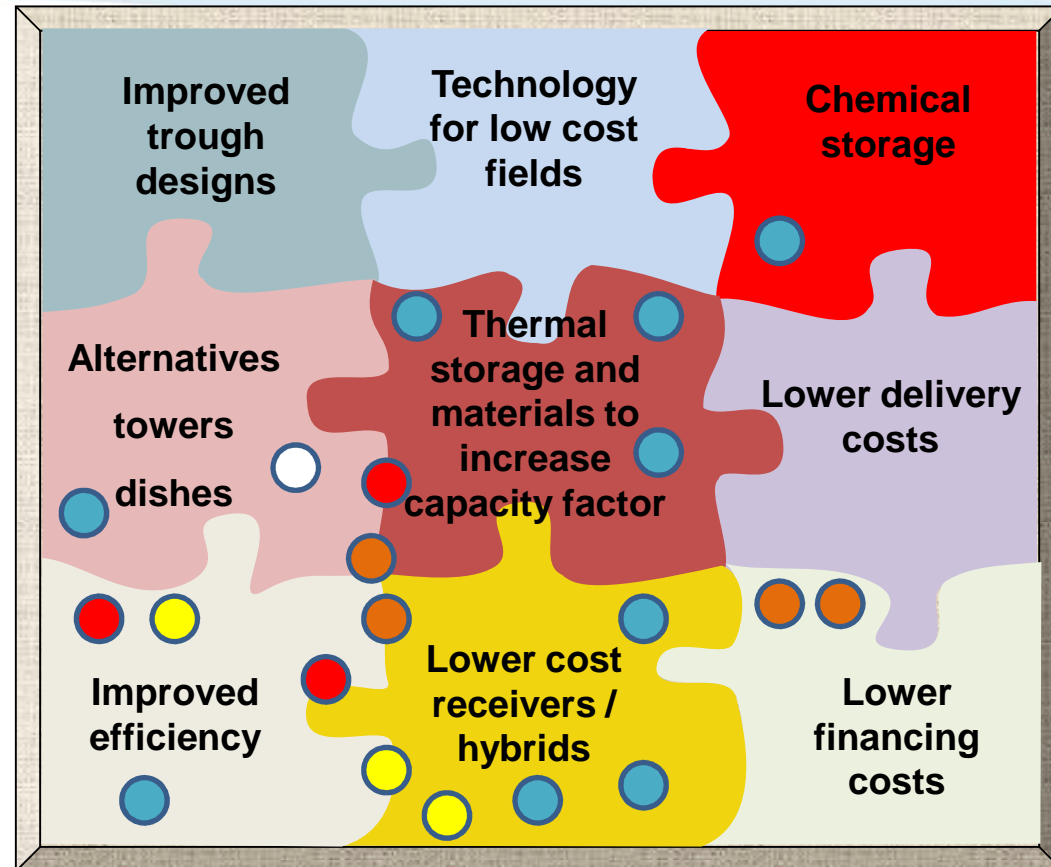


CSP R&D Portfolio 21 Projects

ASI \$41m leveraging \$114m



- Foundation Projects
- Round 1
- Round 2
- Round 3
- USASEC
- Aust.-Germany



Full details on ASI website – R&D Projects

Case study: Roof-mounted hybrid CST system for distributed generation of heating, cooling and electricity



- ANU, CSIRO, UNSW, Chromasun Pty Ltd, New Energy Partners Pty Ltd
- \$3.2m ASi funding for \$9.5m project
- Develop/commercialise improved roof-mounted hybrid solar concentrator PV/ thermal product for cost effective delivery of heating/cooling/electricity



Case study: Commercialisation of Graphite Energy solar storage receiver



- ASI \$1.8m for \$3.8m project to assist next gen Graphite receiver development/commercialisation.
- Receiver leverages the unique properties of graphite as an effective heat storage medium.



Graphite Energy's Facility at Lake Cargelligo, NSW

Beyond technology projects: Enabling research approx \$2.7m



- Strategic Plan for PV in Australia
- PV statistics for the Annual PV Power Systems Trends in Photovoltaic Applications report, prepared by the IEA
- Solar RD&D Funding Sources and Models
- **Review of the Potential for CSP in Australia**
- Solar Generation Australian Market Modelling
- Solar Forecasting
- One minute solar data
- **Daly River (NT) Load Optimisation**
- Forecasting and Characterising Grid Connected Solar Energy and Developing Synergies with Wind
- **Characterising the Effect of High Penetration Solar Intermittency on Australian Electricity Networks**
- Integrated Solar Radiation Data Sources over Australia

World leading Australian research infrastructure



Process and
Characterisation
Facility at the
Australian
National University

World leading Australian research infrastructure



CSIRO's
Solar Thermal
Research Hub

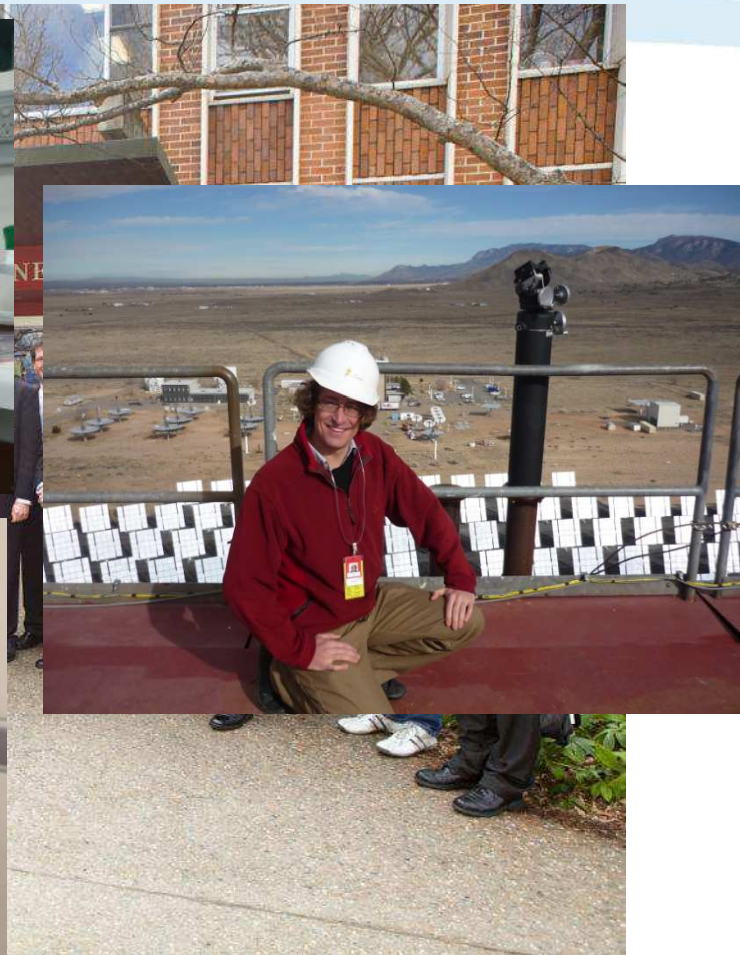
Plus projects with
Abengoa and
Mitsubishi

World leading Australian research infrastructure



Solar Industrial
Research
Facility at the
University of
NSW

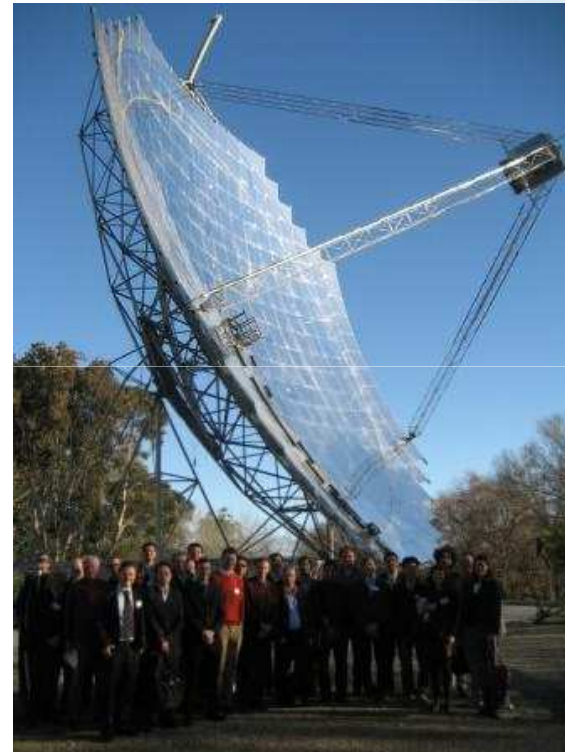
Supporting the next generation



Three Minute Solar Thesis Challenge



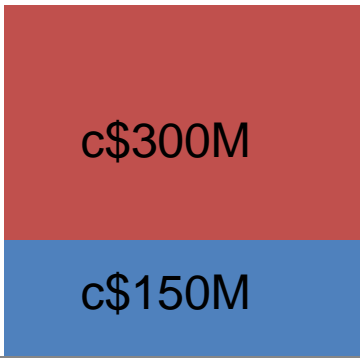
Knowledge Sharing incl seminars,
workshops, exchanges, portal



Partners – investment ratio c2:1



- ASI
- Research and Industry



ASI Portfolio c\$450M



Performance Indicators



- End 2012, R&D portfolio around 60 projects, \$140m ASI funding, \$450m total value
- Supporting 220 FT researchers, 80 early career, 31 scholarships
- 96% respondents believe their project will have **major impact on efficiency and cost**
- 70% say ASI funds have **helped secure Australian and international project partners**
- 93% believe ASI projects will **generate IP** that will be commercialised; 56% within 5 years
- ASI helped 64% present at conferences and secure media coverage

Thank you, ASI Staff!



Absent: Olivia Coldrey and Katrina Mentis



Thank you

www.australiansolarinstitute.com.au