



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

***TeraWatts, TeraGrams, TeraLiters 2016
Workshop on Challenges and Opportunities
for Future Sustainable Production of Chemicals and Fuels***

***Monday, February 1, 2016
1601 Elings Hall, UC Santa Barbara Campus***

7:45am Shuttle Pick-up at Best Western

Welcome and Introduction

- 8:15-8:30 am

Part 1: Challenges and Options

- The future(s) of food and the chemical pathways and resources in food production.
 - 8:30-8:50 James Rogers (Apeel Inc.), The Shift From Molecules To Microstructure: Redefining The Interface Between Produce And The External Environment
 - 8:50-9:00 Discussion
- New Sustainable Feedstocks and Intermediates: What might they be? Do we know all the options?
 - 9:00-9:20 Tim Searchinger (Princeton), Bioenergy, double-counting and the competition for land
 - 9:20- 9:30 Discussion
 - 9:30-9:50 David Constable (ACS Green Chemistry Institute), The Global Chemistry Enterprise is Completely Unsustainable – What are you going to do about it?
 - 9:50- 10:00 Discussion
 - 10:00-10:20 Kathy Ayers (Proton On-Site), Megawatts and Gigawatts on the way to Terawatts
 - 10:20-10:30 Discussion
 - 10:30-10:50 Rick Wagner, (Chevron Phillips), Sustainable practices produces products with a sustainable future
 - 10:50-11:10 Discussion
- Options for Environmentally and Economically Sustainable Chemicals and Power
 - 11:10 –11:30 Shane Ardo (UC Irvine), Solar energy promises
 - 11:30-11:40 Discussion
 - 11:40–12:00 Tom Jaramillo (Stanford), Unconventional routes to conventional chemicals
 - 12:00-12:50 Discussion and Working Lunch
 - 12:50-1:10 Mikael Nilsson (UC Irvine), Possibilities and Challenges for Next Generation Nuclear Reactors
 - 1:10-1:30 Discussion

Part 2: Social, Governmental, and Economic Barriers

- Climate change and/or global decarbonisation as a business challenge and opportunity
 - 1:30 – 1:50 Mark Way (Swiss-Re), Will Assets be Uninsurable from Climate Change
 - 1:50 - 2:10 Discussion
- Societal and media challenges
 - 2:10 –2:30 Peta Ashworth (Univ. Queensland), The Public: The problem or the solution for sustainability?
 - 2:30 - 2:40 Discussion
 - 2:40 – 3:00 Leah Stokes (UCSB), The Changing Politics of Renewable Energy Technologies
 - 3:00 - 3:10 Discussion
 - 3:10 - 3:30 Hanna Breetz (ASU), The systems (r)evolution in energy metrics: implications for regulation and innovation
 - 3:30 - 3:45 Discussion
- How governments are helping and hindering innovation in sustainability
 - 3:45 – 4:05 Sarah Anderson (UCSB), How Difficult Compromise On Sustainability Policy Really Is
 - 4:05 – 4:15 Discussion
 - 4:15 – 4:35 Matto Mildenerberger (UCSB), Cross-national differences in political barriers to environmental reforms: The importance of tailoring political advocacy strategies
 - 4:35 - 4:45 Discussion

Summary Discussion and Wrap-up

- 4:45 – 5:30 Closing and Wrap-up, Are there Big Ideas that might work?
- 6:30 pm Dinner for Speakers and Panel Members at Alumni House