



Contribution ID: 555

Type: Oral Presentation

Biological photovoltaic building blocks for solar energy harvesting

Monday, 4 July 2016 09:00 (1 hour)

Abstract content (Max 300 words) http://events.saip.org.za/getFile.py/target=_blank Formatting & Special chars

The harvesting of solar energy in photosynthesis is dependent upon an interconnected macromolecular network of membrane associated chlorophyll-protein complexes. In the past decade my workgroup and others have elucidated the structure and functioning of these networks to great detail. Here I will briefly discuss our efforts in high resolution AFM imaging of native membranes and the models derived from light spectroscopy. In the second part I will discuss our recent efforts in applying and mimicking the natural assemblies in hybrid biosolar cells, photosynthesis based electrodes as components for sensors, photovoltaics and, possibly, photo-fuels. If time allows, I end with our recently designed algae powered robot which showcases the possibilities and won the 18th Japan Media Arts Festival New Face Award.

Apply to be considered for a student award (Yes / No)?

No

Level for award (Hons, MSc, PhD, N/A)?

N/A

Main supervisor (name and email) and his / her institution

N/A

Would you like to submit a short paper for the Conference Proceedings (Yes / No)?

No

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Yes

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Session Classification: Winter School: The Biophysics of Cells and Macromolecules

Track Classification: Track F - Applied Physics