

LMI-EFRC Annual Meeting and Webinar
California Institute of Technology
September 2-4, 2015

Wednesday, September 2, 2015

6:30 pm **PI Dinner**, West Room, Athenaeum

Thursday, September 3, 2015

Gates-Thomas Laboratory, Dabney Lounge & Gardens, and Winnett Lounge

7:30-8:15am **Breakfast** *Gates-Thomas Laboratory, 2nd Floor Balcony*

8:30-10:30 New Approaches to Full Spectrum Solar Energy Conversion

Public Webinar, Hall Auditorium at the Gates-Thomas Laboratory

- 8:30-9:00 **Paul Alivisatos:** "Quantum Dot Luminescent Concentrators"
9:00-9:30 **Shanhui Fan:** "Control of Thermal Radiation Using Photonic Structures for Energy Applications"
9:30-10:00 **Jennifer Lewis:** "Printing Functional Materials"
10:00 -10:30 **Panel Discussion:** "Enabling Science for Full Spectrum Conversion"
(Harry Atwater, Jennifer Dionne, Eli Yablonovitch)

10:30-11:00 **Break**

11:00-11:15 **Welcome and Introductions** *Winnett Lounge*
(Ralph Nuzzo and Carrie Hofmann)

11:15-12:15 **Poster Session I** *Winnett Lounge*

12:15-1:15 **Lunch** *Dabney Gardens*

1:30-2:30 **Presentations** *Winnett Lounge*
Nate Lewis "New Aspects of Light-Matter Interactions in Template-Free Patterned Nanostructures and Magnetic Field Oriented Patterned Microstructures" (30 min)
Nate Thomas "Spectrally Selective Semiconductor Absorbers for Solar Thermal Energy Conversion" (15 min)
Daniel Bacon-Brown "3D materials" (15 min)

2:30-3:30 **Brainstorm Session: The 4th Dimension: *Functional* 3D Materials**
(Facilitated by Paul Braun)

3:30-3:45 **Break** *Winnett Balcony*

- 3:45-4:45 **Poster Session II** *Winnett Lounge*
- 4:45-5:15 **In-Room RG breakouts, grouping poster slides by RG, with short discussion time** *Winnett Lounge*
- 5:30-6:00 **Cocktail "hour"** *Dabney Gardens*
- 6:00
after dessert **Dinner** *Dabney Lounge*
- Keynote Presentation:**
 "Light-Matter Interactions in Self-ordering Molecular Assemblies"
 Mike Wasielewski, ANSER Center, Northwestern

Friday, September 4, 2015

Winnett Lounge

- 8:00-8:30 **Breakfast*** *Winnett Balcony*
 (*LMI Executive Committee & Advisory Board – meet at Athenaeum@ 7:30am)
- 8:30-9:30 **Presentations** *Winnett Lounge*
 John Rogers "Optical Materials and Module Architectures for Ultrahigh Efficiency Photovoltaics" (30 min)
 Mahsa Kamali "Conformal Optics with Dielectric Metasurfaces" (15 min)
 Soo Jin Kim "Semiconductor Metafilm Absorber with Designer Absorption Spectra" (15 min)
- 9:30-10:30 **Brainstorm Session: Combining Spectrum Splitting and Concentrating Optics for Full Spectrum PV** (Facilitated by Harry Atwater)
- 10:30-10:45 **Break** *Winnett Balcony*
- 10:45-11:30 **Discuss Progress to date toward 4-Year Goals** *Winnett Lounge*
 Planning for October DC Meeting
 Planning for 2016 Science Review
- 11:30-12:30 **Lunch/Depart for airport if necessary**
- 12:30-5:00 **Additional discussion time/ facility tours as desired**