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2014 FluoroFest North Carolina

Nov. 6-7, 2014



Presented in Conjunction with
The 2014 Carolina Biophysics
Symposium



University of
North Carolina



Duke University



NC State
University



Wake Forest
University

Photophysics & Life

Photon Trapping, Storage and Harvesting
Biosensors in Cell Signaling & Diagnosis
Novel Applications of Luminescence

Horiba Organizers: John Enterline, David Birch, Ishai Nir
North Carolina Organizers: Barry Lentz, John Papanikolos

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FluoroFest Workshop

Location: Durham Hilton, 3800 Hillsborough Rd.

FluoroFest Workshop

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Program at a Glance

Thursday November 6th

- 8:00 – 9:00 Sign In & Confirm Registration, Poster Set Up, Coffee & Cookies
- 9:00 – 9:15 Welcome to Carolina Biophysics Symposium/FluoroFest 2014 – Barry Lentz, Ishai Nir
- 9:15 – 9:30 Introduction of Barry Lentz (Plenary Speaker) by Ishai Nir
- 9:30 – 11:15 Plenary Talk: **Barry Lentz**: Reflections of an Old Timer
- 11:15 – 11:45 **Coffee Break**
- 11:45 – 12:00 Group Photo
- 12:00 – 1:00 **Lunch**

Session I: Trapping photons and what to do with them

- 1:00 – 1:15 **John Papanikolos, Professor of Chemistry, UNC-CH**: “Solar Energy: Strategies for Using Harvested Photons”
- 1:15 – 1:45 **John Papanikolos, UNC-CH**: “Electron Dynamics in Photon Harvesting Proteins”
- 1:45 – 2:15 **Andrew Moran, Associate Professor of Chemistry, UNC-CH**: “Development of Multidimensional Resonance Raman Spectroscopy for Studies of Photochemical Dynamics”
- 2:15– 2:45 **Eric Grumstrup, Assistant Professor of Chemistry & Biochemistry Montana State University**: “Next-Generation Photovoltaic Materials”
- 2:45 – 4:00 **Fluorescence application workshop 1**
(Hands-on session with instruments) and Posters
- 4:00 – 4:30 **Coffee & Cookie Break**
- 4:30 – 5:00 **Marcus Jones, Assistant Professor of Chemistry & Biochemistry UNC Charlotte**: “Photon-harvesting nanocrystals, mechanism of action and design”
- 5:30 – 6:30 **Round Table**
- 6:45 **Group Dinner** The Pit in Durham; 321 W. Geer Street, 919-282-3748

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Friday November 7th

8:30 – 9:00 Coffee & Cookies

Session II: Cells and how they work together

9:00 – 9:30 **David Birch, Professor of Physics** University of Strathclyde: “Melanin Fluorescence and Structure”

9:30 – 10:00 **Brian Cummins, Post-doctoral Research Scholar** NCSU/UNC-CH: Biomedical Engineering Department: “A point-of-surgery diagnostic for parathyroid hormone utilizing the fluorescent microarray”

10:00 – 10:45 **Kerry Bloom, Thad L. Beyle, Distinguished Professor of Biology** UNC-CH: “The Organization and Distribution of Chromosomes During Cell Division”

10:45 – 11:15 Coffee Break

11:15 – 12:00 **Klaus Hahn, Thurman Professor of Pharmacology** UNC-CH: “Cell Conversations and How We Listen to Them”

1:00 – 2:15 **Fluorescence application workshop 2
(Hands-on session with instruments) and Posters**

Session III: Novel Applications of Luminescence

2:15 – 2:45 **Martin Guthold, Associate Professor of Physics** Wake Forest University: “Blood Coagulation, fibrin fibers and vascular disease”

2:45 – 3:15 **Keith Weninger, Professor of Physics** NCSU: “Macromolecular Complex Structure Revealed via Single Molecule FRET”

3:15 – 3:45 **Benjamin Stanford, Director of Applied Research,** Hazen and Sawyer, P.C.: “Fluorescence in modern Water Analysis”

3:45 – 4:15 **Rick Ludescher, Professor of Food Science and Dean of Academic Programs** School of Environmental and Biological Science: “Florescence in Modern Food Analysis”

4:15-4:45 **Adam Hall** Wake Forest University: “DNA Sequencing using Nanopores?”

4:45-5:15 **Philip Yip, Graduate Student** University of Strathclyde: “dSTORM Super-Resolution Microscopy of 25 atom gold clusters”

5:15 – 5:30 Closing remarks, **Barry Lentz and Ishai Nir**