



GEORGIA SECTION

HERTY MEETING Announcement



ACS Local Section
Georgia

Thursday, September 20, 2018

The 84th Annual Herty Award Dinner

Honoring Dr. Sandra J. Rosenthal,
Vanderbilt University
2018 Herty Award Medalist

“Quantum Dots on My Mind”

Location:

Georgia Tech Hotel & Conference Center
800 Spring Street NW
Atlanta, GA 30308

Directions: [Click Here](#)

6:30 pm Meet and mingle

7:00 pm Dinner

8:00 pm Herty Award Program

Menu:

Salad: Baby greens, crispy pancetta, shaved fennel, carrot strings and toasted almonds with orange vinaigrette dressing.

Select One Entrée:

1. Seared free-range chicken — airline-cut chicken breast with white cheddar and chive mashed potatoes, garlic haricots verts, and creamy hazelnut pinot grigio sauce.
2. Seared atlantic salmon — pan seared salmon, new potatoes and local mushroom hash, broccolini lemon caper sauce
3. Cavatappi pasta — corkscrew pasta, grilled asparagus, and seasoned grilled squash and marinated roasted tomatoes, and tossed in a basil-parmigiano broth (vegetarian)

Dessert:

chocolate flourless cake

(Iced Tea, Freshly Brewed Regular & Decaffeinated Coffee, and a selection of hot Teas are included)

RSVP by 5:00 pm on Friday, September 14, 2018 at

<https://goo.gl/3ymMNk>

Price: \$40 regular; \$30 retired, current ACS members and K-12 teachers, \$20 students

(Parking is included with your attendance)

Payment: At the door Cash, credit card, or check to: “Georgia Section ACS”

Note: If you make a reservation and then do not attend, you will be charged for the meal as we have to guarantee the number of meals.



Dr. Sandra J. Rosenthal

“Quantum Dots on My Mind”

ABSTRACT: *Nanomaterials are fascinating and poised to revolutionize many technology sectors for one simple reason: when you shrink materials down to the nanoscale new properties emerge, and those properties can be exploited in fantastic applications. Quantum dots, nanometer sized semiconductor crystals, are one such nanomaterial. In this talk we will explore how quantum dot properties arise from their nanometer dimensions. I will then give three quantum dot vignettes. The first is the story of the discovery of white-light emitting quantum dots. The second relays our initial effort to correlate quantum dot structure with their photophysics at the ensemble level. This led to the commercialization of quantum dots for biological imaging and ultimately also QLED displays manufactured by Samsung. We will conclude, literally, with quantum dots on the brain.*

BIO: Sandra J. Rosenthal was born in Urbana, Illinois in 1966 and raised in Arlington Hts., Illinois. She earned her Bachelor of Science from Valparaiso University in 1987, graduating with Honors in Chemistry. While at Valpo Rosenthal played Division 1 basketball, starting her junior and senior seasons at point guard. She received her Ph. D. from the University of Chicago with Graham Fleming in 1993. Her thesis work focused on ultrafast solvent dynamics revealed by femtosecond fluorescence upconversion spectroscopy. Following an NSF Postdoctoral Fellowship at UC Berkeley and Lawrence Berkeley National Laboratory with Chuck Shank and Paul Alivisatos she joined the chemistry



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department at Vanderbilt University in 1996 as an Assistant Professor.

Rosenthal is currently the Jack and Pamela Egan Professor of Chemistry, Professor of Physics, Pharmacology, and Chemical and Biomolecular Engineering at Vanderbilt University. She is also the Director of the Vanderbilt Institute for Nanoscale Science and Engineering (VINSE), a trans-institutional Institute to foster discovery in nanoscience comprised of 55 faculty members from the College of Arts and Sciences, the School of Engineering, and the Vanderbilt University Medical Center. Rosenthal has published more than 165 publications and edited two volumes on NanoBiotechnology. She is the recipient of a National Science Foundation Career Award, a Distinguished Faculty Award, the Popular Mechanics Breakthrough Award, and the Madison Sarratt Prize and Jeffery Nordhaus Award for excellence in undergraduate teaching. In 2011 she was elected a Fellow of the American Association for the Advancement of Science. In 2014 she received the SEC Faculty Achievement Award that recognizes the most outstanding teacher-researcher at Vanderbilt University, and in 2015 she received the Distinguished Alumni Award from the Valparaiso University Alumni Association. This award

honors alumni who have enhanced the prestige of Valparaiso University by virtue of their character, integrity, and nationally recognized personal accomplishments.

Rosenthal's research interests include the synthesis, characterization, and application of semiconductor nanostructures in neuroscience and solid-state lighting. She is an inventor on seven issued patents, including patents for ultrasmall (less than 2.0 nanometers in diameter) CdSe nanocrystals that emit light covering the visible spectrum. This was the first demonstration that a single material could emit broad-spectrum white light and has implications for energy efficient solid-state lighting. In another first Rosenthal and collaborator Randy Blakely demonstrated that highly fluorescent, highly photostable core/shell nanocrystals could be utilized to track neurotransmitter transporter proteins. These proteins regulate the neurotransmitters serotonin and dopamine which are out of balance in mental illness. These experiments aim to elucidate molecular mechanisms of these devastating diseases.

Sandra Rosenthal, husband Adam List (VU 1986), and daughter Jaimie live in Nashville, TN.