



THE FILTER PRESS

Newsletter of the Georgia Section of the American Chemical Society

Volume 19, Number 1

January 2009

Culinary Spectroscopy, Part-13: Better Cooking through Chemistry

Dr. Jerry DeMenna, Chem-Chek Labs & FUN-SCIENCE Academics

January Meeting: Wednesday, January 14th

Continuing in the new year with another food topic, the Georgia Local Section welcomes Dr. Jerry DeMenna. He states that cooking is nothing more than Organic Reaction Chemistry using Reagents that are edible (*usually*), and can involve pH Adjustment (acidity / alkalinity), Neutralization (elimination), Esterification (structure change), Dehydration (loss of water), Pyrolysis (charring/carmelization), Condensation (new molecules), Distillation (loss of volatiles), ad infinitum! All of these will cause “new” compounds to be synthesized!



For others, there are more Scientific ways to accurately measure the effects of Cooking processes.

The composition of “Foods” in general are based on the final products of these Synthetic Reactions, and the “quality” is a function of the yield of the desired End-Product. Proteins, Carbohydrates and Fats are the Raw Materials; but there are *MILLIONS* of By-Products that determine the *MANY* Flavors & Aromas! Classic Chefs like Julia Child, James Beard and even Emeril Lagasse; use their “SENSES” (smell, taste, sight) to gauge to quality of their cooking.

These series of Lectures describes the multitude of Analytical Techniques to help develop and control the quality of a Meal! Author denies any claims of induced indigestion.

Reservation deadline is 5PM, Wednesday, January 7th —see page three for all details.

Greening the Filter Press

The Executive Committee voted that beginning with the April 2009 Filter Press, and coincident with Chemists Celebrate Earth Day, the Filter Press will only be distributed electronically. If you do not have access to email, kindly provide the mailing address that you wish to be used to the editor, and a Local Section Volunteer will mail a copy to you. In addition, now's a good time to make sure that your preferred email address is up-to-date—send email updates to hernandez@gatech.edu.



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Deborah Sauder
Georgia Gwinnett College
(678) 407-5844
dsauder@ggc.usg.edu

CHAIR-ELECT:

David Gottfried
Georgia Institute of Technology
404-894-0479
david.gottfried@mirc.gatech.edu

PAST-CHAIR

Terry Say
Say Consulting, LLC
terrysay@aol.com

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Georgia Institute of Technology
toby.block@chemistry.gatech.edu

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(770) 423-6256
jpowers@kennesaw.edu

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Georgia Local Section Election Results

David Gottfried is the new Chair-elect for 2009. Toby Block continues as secretary for 2009/2010. Barbara Broadway is the member-at-large for 2009/2010. Rigoberto Hernandez and Lissa Dulany are councilors for 2009/2010/2011. Holly Davis and Dabney Dixon are alternate councilors for 2009/2010/2011. Congratulations to all, and thanks for voting.

It's local Science Fair time again!

Would you like to participate as a judge in a science fair this spring? So far, we have obtained information about three: The 2009 Fulton County Regional Science and Engineering Fair, the 2009 Gwinnett Middle School science fair, and the 2009 Georgia Science and Engineering Fair. Read on.

Serving as a science fair judge is a rewarding experience that will take little of your valuable time but provide students the chance to interact with an experienced professional from their own field of interest and give them constructive feedback on their research. Experiences such as this are essential in their growth and development as future scientists, mathematicians, and engineers.

The Fulton County Regional Science and Engineering Fair gives students, grades 6 – 12, within the Fulton County public, private, charter and home schools the opportunity to explore and investigate the world of science, mathematics, and technology through hands-on research and experimentation in order to refine their understanding of the scientific process. By participating in scientific research, students develop science problem solving and research skills and an appreciation for science that will prepare them for their future.

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January Meeting: Wednesday, January 14th**Culinary Spectroscopy, Part-13:
Better Cooking through Chemistry**

Dr. Jerry DeMenna, FUN-SCIENCE Academics

6:30 PM meet & mingle, cash bar
 7:00 PM dinner served (entrée selection below)
 7:45 PM meeting presentation

Location: The Colonnade Restaurant
 1879 Cheshire Bridge Road
 Atlanta, GA 30324
 404-874-5642

Menu
 Appetizer: Waldorf Salad

Choice of
Marinated London Broil, served with garlic
 roasted potatoes, haricot verts and red wine demi **OR**
Broiled Flounder, served with baked potato
 and pole beans

Dessert: Banana Pudding

Tea and Coffee included
 Cost for meal option: \$25 per person; \$15 for
 teachers, students and retirees. Payment should
 be made to the "Georgia Section ACS" and will
 be collected at the door. If you make a reserva-
 tion and then don't attend, you will be charged
 for the meal, as we have to guarantee the number
 of meals.

**RSVP for dinner reservations with entrée
 choice** to David Gottfried to 404-894-0479 or to
 david.gottfried@mirc.gatech.edu **by 5:00 pm**
on Wednesday, January 7th.

Directions

From 75 South/North: Take 85 North Exit
 Buford Highway, Exit Monroe Drive (Sub
 Exit), Left off exit, Straight through the next
 intersection, Two blocks down on the right.
From 85 South: Exit Cheshire Bridge Rd.,
 Left at the light off exit, 3/4 of a mile on the
 left-hand side.

From 400 South: Exit Sidney Marcus, Left off
 exit, Next light take a left, Next light right,
 (Intersection of Buford Highway and Lenox)
 3/4 of a mile on the left-hand side.

It's local Science Fair time again

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To participate as a judge, please contact Jeralyn B. Keel at 404.763.6815 or keelj@fultonschools.org to obtain a registration form, which must be completed and submitted by **January 14, 2008**. You may duplicate this invitation to your colleagues who may want to participate.

The Fulton County Science and Engineering Fair will take place February 18 – 19, 2009 at the Professional Learning Center (South) at 3121 Norman Berry Drive East Point, GA 30344. Senior and junior divisions will be judged separately. Judges should expect to arrive at approximately 9:15 A.M. for a continental breakfast and orientation and finish at approximately 3:30 P.M. An awards ceremony will be held at 3:30 and you are invited to stay. Lunch will be provided.

The Georgia Science and Engineering Fair (GSEF) is April 1-4, with judging usually on the Thursday. For the past several years, the Georgia Local Section of the American Chemical Society has provided a special award, so we will need 4-6 judges to assist in this selection. More details will be forthcoming next month.

Chair-Elect David Gottfried also participates in the Gwinnett middle school science fair, as the chair of the Scientific Review Board. We're assuming that they also would appreciate some help judging the projects, and in the past that the Georgia Tech student affiliates have helped out with science demonstrations.

**Need better ideas
 for product
 development?**

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 talk!**

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