



The Honor Society of Food Science and Technology

Phi Tau Sigma Newsletter *July 2019*

News:

Chapter Annual Reports Due:

(Contributed by Amy Simonne, Ph.D., Chapter Affairs Committee Chair)

August 1 is the absolute deadline for Chapters to send in their Annual Reports. We are anxious to learn what your Chapter has done in the past year. Please also provide one or more articles about your Chapter activities that are in the format to be printed in the Phi Tau Sigma Newsletter (up to one page, verdana 10 font, one or two photos).

In order to receive the *Certificate of Merit* or *Certificate of Excellence*, Chapters must submit their annual reports for evaluation by August 1.

Chapter of Merit and Chapter of Excellence Criteria

Each year, Phi Tau Sigma Chapters are recognized for their exemplary volunteer service, excellence in leadership, and dedication to the food science and technology profession with the *Chapter of Merit* or *Chapter of Excellence* designation.

In order to be eligible for a **Chapter of Merit** designation, the following criteria must be met:

- Must nominate at least one new member
- Must have an annual induction ceremony
- Annual Report must be submitted by the deadline (Includes activities over that past academic year, current year leadership, list of next year's leadership)
- Chapter should demonstrate continuing education or community service
- Chapter ensures that forwarding contact information (particularly email addresses) is sent by all graduating members, or the Chapter, to the Executive Director (National/International level)

In order to be eligible for the **Chapter of Excellence** designation, the following criteria must be met:

- Criteria for Chapter of Merit are met
- The Chapter increases in membership by 5% based on current membership
- Chapter activities have good attendance (30% of active members)
- Chapter nominates at least one person for an award or scholarship (does not need to be from Chapter) sponsored by Phi Tau Sigma. (Note that the nominee does not have to be chosen to receive the award or scholarship.)

- Provide at least one article for the Phi Tau Sigma Newsletter (may be part of the Annual Report or independent from it).

Please send your annual report to the current Chair of the Chapter Affairs Committee, Dr. Amy Simonne (asim@ufl.edu), and a copy to Phi Tau Sigma Executive Director, Dr. Kathryn L. Kotula (klkotula@msn.com).

Are you contributing to the EMGAM Campaign?

Phi Tau Sigma grows through membership. The Chapters are doing their part through student nomination. Here's your opportunity to participate in growth through the "Every Member Get a Member" (EMGAM) Campaign for Phi Tau Sigma. To facilitate nominating a colleague or someone you know who should be a member, links are found in the documents section of this Newsletter, or go to <http://www.phitausigma.org/growing/>. Be a leader! Nominate a colleague today.

Calendar:

->Phi Tau Sigma Scholarship and Awards Schedule:

- November 30: Deadline to submit nominations to the Awards Committee for the Dr. Daryl B. Lund International Scholarship.
- February 1: Deadline to submit nominations to the Awards Committee for the Phi Tau Sigma Special Recognition Award, the Phi Tau Sigma Student Achievement Scholarship, the Dr. Gideon "Guy" Livingston Scholarship, and the Phi Tau Sigma Founders' Scholarship.
- April 1: Deadline to submit nominations to the Awards Committee for the Phi Tau Sigma Outstanding Chapter of the Year Award.

Send completed nomination forms to both Awards Committee Chair Poulson Joseph, Ph.D., (pjoseph@kalsec.com) and Executive Director Kathryn L. Kotula, Ph.D. (klkotula@msn.com). (More information: <http://www.phitausigma.org/awards/>)

- >December 18: Deadline to submit Nominations for the **Dr. Carl R. Fellers Award**, and other IFT Achievement Awards. (More information: <http://www.ift.org/membership/awards-and-recognition/achievement-awards.aspx>)

->Phi Tau Sigma Chapter Schedule:

- November 1: Deadline to order Honor Cords and lapel pins to ensure delivery before Fall graduation dates
- March 15: Deadline for membership nominations to ensure decisions from the Membership and Qualifications Committee before the Annual Meeting
- April 1: Deadline to order Honor Cords and lapel pins to ensure delivery before Spring graduation dates
- May 1: First call for Chapter annual reports
- June 1: Second call for Chapter annual reports
- July 1: Final call for Chapter annual reports
- August 1: Deadline for Chapter annual reports

Reminder to all Chapters: In order to receive the *Certificate of Merit* or *Certificate of Excellence*, Chapters must submit their annual reports for evaluation by **August 1**. Please

send your annual report to the current Chair of the Chapter Affairs Committee, Amy Simonne, Ph.D. (asim@ufl.edu) with a copy to Dr. Kathryn L. Kotula (klkotula@msn.com).

-> Election schedule:

December 15: Nominations due to Nomination and Election Committee
(Jamie Valenti-Jordan, M.S., Chair (jamie@catapultserv.com))
January 2: Nominations and Elections Committee convenes
January 21: Deadline for Nomination and Elections Committee to submit slate of candidates to President
February 5: Last date on which nominations by petition may be submitted
March 2: List of candidates will be emailed to the Members for balloting
March 30: Deadline for casting ballots
April 8: Deadline for tabulation of ballots
June 2: Phi Tau Sigma President will present the newly elected individuals to the Membership at the Annual Business Meeting of Phi Tau Sigma

-> July 12-15, 2020, Institute of Food Technologists Annual Meeting, Chicago, IL:

July 15 (Sunday): (times tentative)

11:00am-12:15pm Phi Tau Sigma Executive Committee Meeting
12:15pm-1:30pm Lunch Break
1:30pm-2:30pm Phi Tau Sigma Leadership Council Meeting and Annual Business Meeting
12:30pm-1pm Student Competition Poster Set-up
1:00pm-2:30pm Student Poster Competition Judging
3:30pm-4:20pm Phi Tau Sigma and IFT Division Competition Awards Ceremony (also called: Phi Tau Sigma Annual Recognition Event)
6:00pm-7:00pm IFT Awards Celebration, includes the presentation of the Dr. Carl R. Fellers, Ph.D. Award sponsored by Phi Tau Sigma (Meet the Award winners at the IFT Networking Reception immediately following.)

Student Research Synopsis: Experimental measurement of factors affecting bubble dynamics—applications to the frying process (Contributed by: Shreya N. Sahasrabudhe, Ph.D., Shreyas S. Chaudhari, M.S., and Prof. Brian E. Farkas, Ph.D., Department of Food Science, Purdue University)

Adapted from recently published work: *Sahasrabudhe, S.N.; Chaudhari, S.S.; Farkas, B.E. Experimental measurement of factors affecting dynamics of bubble growth from a submerged orifice: Applications to the frying process. J. Food Eng., 2019, 251, 36-44. <https://doi.org/10.1016/j.jfoodeng.2019.02.005>.*

Introduction: Frying is a conjugate boiling problem consisting of simultaneous heat and mass transfer between the oil and food.¹ Heat is convected from the hot oil to the crust, and conducted from crust to the core, resulting in water evaporation.¹ Thus, the food material acts as a vapor generating matrix¹, where water is lost by evaporation in the form of bubbles formed in hot oil at the food's surface.² The heat transfer coefficient plotted over time shows a characteristic curve; reaching its peak value at a high rate of moisture loss.³ The heat transfer rate is minimum when the bubbling stops.^{3,4} Bubble growth and

detachment can be described as a balance between stabilizing forces (viscous, surface tension, inertia) and destabilizing forces (buoyancy, pressure).⁵ Change in process variables including oil temperature, solid and liquid physicochemical properties can affect bubble dynamics during frying. Despite the importance of bubbling and bubble characteristics in frying, there has been no fundamental study on understanding the impact of fluid and surface properties on bubble dynamics. Hence, the aim of the present study was to experimentally examine the impact of oil quality, temperature, orifice diameter and surface wettability on bubble dynamics and develop hypotheses to qualitative describe the impact on heat and mass transfer rates.

Materials and Methods: An assembly (Fig. 1) was built for mechanistic understanding of bubble dynamics in frying based on a single pore. Pressurized nitrogen gas was supplied through an in-line regulator to a flow meter connected to an orifice submerged in oil. Variables studied were orifice size (100 μ m-1mm), oil temperature (room and 170°C), and oil quality (fresh oil- Total polar material (TPM) content 4%, used oil- TPM 15%). A high-speed video camera (Photron FastCam) at 2000 fps and 4x zoom, was used to record the bubble behavior, in the formation and ascendance processes. A purpose-built MATLAB code based on Di Bari and Robinson⁶ was written to determine relevant bubble characteristics; bubble volume, coordinates of bubble interface, and instantaneous contact angle. Volume was estimated using MATLAB combined with SolidWorks. Dynamic angle was calculated by reading the video and processing it single frame at a time in MATLAB. Bubble frequency was calculated based on the formation and lag time between subsequent bubbles.

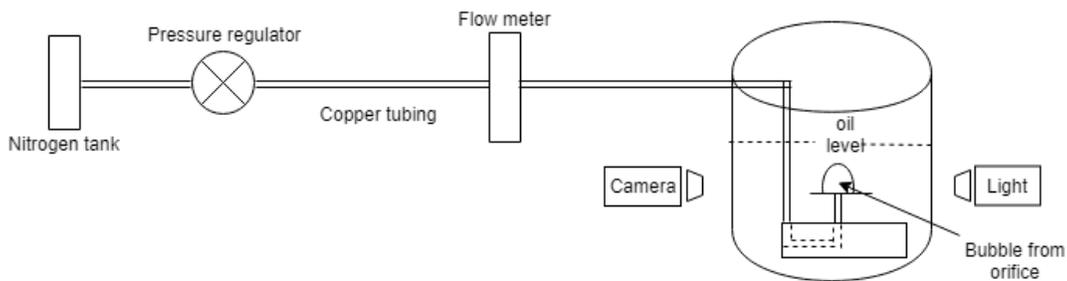


Fig. 1: Submerged orifice assembly to measure bubble dynamics

Results and Discussion: Bubble formation occurred in three stages: nucleation, growth and detachment similar to literature findings.⁶ Decrease in bubble volume and formation time (Table 1) with increasing temperature was attributed to decrease in fluid density, viscosity, and surface tension.⁷ Increased wettability with temperature⁸, resulted in faster rewetting and thus higher bubbling frequency. Decrease in orifice diameter led to increase in bubble frequency and shifted the bubble pattern from single bubbling to a pairing regime (Table 1). Bubbles from a wettable steel surface had a lower volume and higher frequency compared to a non-wettable Teflon surface (Table 1). Low wettability prevented oil from rewetting the void created due to bubble pinch-off during the time between consecutive bubbles thus resulting in lower frequency. Bubbles with lower volume and higher frequency were observed with used oil compared to fresh oil (Table 1). Increased bubble frequency was attributed to increased wettability with oil use.⁹ Degradation of oil during frying may result in enhanced heat transfer rate due to formation of a higher number of small bubbles (Table 1). Heat transfer during frying is thus controlled by temperature of oil, oil quality, as well as food properties such as surface wettability and pore size distribution. The results from this study can be used to understand the changes in heat transfer coefficients in frying as the oil and food properties are changed.

Table 1: Summary of the effects of liquid and surface properties on the formation time, lag time, bubble frequency, bubble volumes and heat transfer for vegetable oil data

Property	Change in property	Formation time	Lag time	Bubble Frequency	Bubble Volume	Heat transfer rate
Temperature	↑	↓	↓	↑	↓	↑
Surface wettability	↑	↑	↓	↑	↓	↑
Oil degradation (TPM content)	↑	Higher at room temperature Same/ lower at 170°C	↓	↑	↓	↑
Orifice diameter	↓	↓	↑	1 to 0.5 mm: single bubbling 0.25 mm: pairing w/wo coalescence 0.1 mm: chain bubbling	Increased from 1 to 0.5 mm 0.25mm- large coalesced bubbles 0.1mm - small volume bubbles	↑

References:

- (1) Farkas, B. E.; Hubbard, L. J. Analysis of Convective Heat Transfer during Immersion Frying. *Dry. Technol.* **2000**, *18* (6), 1269–1285. <https://doi.org/10.1080/07373930008917776>.
- (2) Farkas, B. E.; Singh, R. P.; Rumsey, T. R. Modeling Heat and Mass Transfer in Immersion Frying. I, Model Development. *J. Food Eng.* **1996**, *29* (2), 211–226. [https://doi.org/10.1016/0260-8774\(95\)00072-0](https://doi.org/10.1016/0260-8774(95)00072-0).
- (3) Safari, A.; Salamat, R.; Baik, O.-D. A Review on Heat and Mass Transfer Coefficients during Deep-Fat Frying: Determination Methods and Influencing Factors. *J. Food Eng.* **2018**, *230*, 114–123.
- (4) Farinu, A.; Baik, O.-D. Heat Transfer Coefficients during Deep Fat Frying of Sweetpotato: Effects of Product Size and Oil Temperature. *Food Res. Int.* **2007**, *40* (8), 989–994.
- (5) Ramakrishnan, S.; Kumar, R.; Kuloor, N. R. Studies in Bubble Formation—I Bubble Formation under Constant Flow Conditions. *Chem. Eng. Sci.* **1969**, *24* (4), 731–747. [https://doi.org/10.1016/0009-2509\(69\)80065-5](https://doi.org/10.1016/0009-2509(69)80065-5).
- (6) Bari, S. D.; Robinson, A. J. Experimental Study of Gas Injected Bubble Growth from Submerged Orifices. *Exp. Therm. Fluid Sci.* **2013**, *44*, 124–137. <https://doi.org/10.1016/j.expthermflusci.2012.06.005>.
- (7) Sahasrabudhe, S. N.; Rodriguez-Martinez, V.; O’Meara, M.; Farkas, B. E. Density, Viscosity, and Surface Tension of Five Vegetable Oils at Elevated Temperatures: Measurement and Modeling. *Int. J. Food Prop.* **2017**, *0* (0), 1–17. <https://doi.org/10.1080/10942912.2017.1360905>.
- (8) Aydar, A.; Rodriguez-Martinez, V.; Farkas, B. Determination and Modeling of Contact Angle of Canola Oil and Olive Oil on a PTFE Surface at Elevated Temperatures Using Air or Steam as Surrounding Media. *LWT - Food Sci. Technol.* **2016**, *65*, 304–310. <https://doi.org/10.1016/j.lwt.2015.08.022>.
- (9) Sahasrabudhe, S. N.; Staton, J. A.; Farkas, B. E. Effect of Frying Oil Degradation on Surface Tension and Wettability. *LWT* **2019**, *99*, 519–524. <https://doi.org/10.1016/j.lwt.2018.10.026>.

Lifetime Member Tribute: Hong You, Ph.D.

Director of Research and Development, Eurofins Scientific, Inc.

Why did you become a Lifetime Member?

Phi Tau Sigma is the community of the very elite food scientists. It provides excellent network platform for food professionals and numerous scholarship opportunities for students. As a representative of the largest analytical services company within the United States for food/dietary supplement testing, it is important for me to stay tuned for the updates of the field through Phi Tau Sigma. It is an honor for me to become a Lifetime Member and be able to establish a connection to the community throughout my entire career.



Education:

- Doctor of Philosophy (Ph.D.) in Nutritional Sciences, Iowa State University May 2016
- Master of Engineering in Food Science, China Agricultural University May 2011
- Bachelor of Engineering in Pharmaceutical Engineering, South China University of Technology June 2008

Experience/Accomplishments:

- Director of R&D December 2017 - Present
Eurofins Supplement Analysis Center
- Editorial Board Member June 2018 - Present
Journal of Food Biochemistry
- Principal Scientist June 2016 - December 2017
Eurofins Supplement Analysis Center

Areas of Expertise:

Bioactive component analysis in food, botanicals, nutraceuticals, and pharmaceuticals.
Nutrient bioavailability in human and animals
Health-promoting effects of functional foods

Awards and Honors (selected list):

- AOAC Official Methods Board Award for Achievement in Technical & Scientific Excellence 2017
- Iowa State University Graduate College Research Excellence Award (top 10% of graduates) 2016
- IFT ([Institute of Food Technologists](#)) Iowa Food Industry Scholarship (3/39) 2016
- Iowa State University Nutritional Sciences David R. Griffith Research Excellence Award (1/31) 2015
- 14th Annual Norman Borlaug Lecture Poster Competition - 1st Place Award 2015
- Stanley Herren Graduate Fellowship 2013 - 2015
- Mars (China) Graduate Scholarship (4/121) 2008
- School of Biological Sciences Dean Scholarship 2007
- Outstanding Social Contribution Scholarship 2005

Personal: Family, Interests, Hobbies:

I enjoy playing with my 5-year-old daughter and 2-year-old son in my leisure time. My wife is a Learning Science Ph.D. student and a professional artist who always gives me interesting inputs from a different perspective.

Advice to university students and career food scientists and technologists:

I recommend young professionals to be always in the mode of taking challenges and seizing opportunities as soon as they show up. You never know what will happen tomorrow so it is important to enjoy and live in the moment.

Chapter News:

Phi Tau Sigma – Hoosier Chapter at Purdue University – 2018-2019 Activities

The Phi Tau Sigma Hoosier Chapter at Purdue University has continued improving and expanding its activities while remaining highly committed to excellence. We welcomed 4 new members at our annual luncheon in April. Additionally, we recognized our Outstanding Senior, Caitlinn Lineback, for her scholarship, service, and food science



Hoosier Chapter and Purdue Food Science members with guest speaker Peter Erickson, M.S. at our annual luncheon

activities. Our invited speaker for the annual luncheon, Peter Erickson (B.S. & M.S. in Food



Students at our breakfast mentoring event in Spring 2019 – undergraduate and graduate students engaged in thoughtful conversation about graduate school

Science from University of Massachusetts), former Executive Vice President for Innovation, Technology and Quality at General Mills Inc., provided an excellent motivational talk on insights to a career the field of Food Science. The Chapter organized and carried out two mentoring events for undergraduate students to give them insights to graduate school. Additionally, our Hoosier Chapter facilitated a panel discussion with the Outstanding Food Science Awardees in the Department of Food Science at Purdue University

(Richard Carlson, Vice President of Quality at Hormel Foods; Mary Carunchia, Principal Scientist at PepsiCo; Jonathan Gray, Senior Director of Research & Innovation at Danone North America; Matthew Schaefer, Global Director of Quality & Commercialization at Bloomin' Brands; and Lilian Were, Associate Professor, Chapman University). A number of our Hoosier Chapter members also participated in campus service activities, such as volunteering at Purdue's Spring Fest, the IFTSA Midwest Area Meeting hosted at Purdue University, and the Lafayette regional youth science and engineering fair. In the future, the Hoosier Chapter aims to continue organizing and improving upon these events, with special focus on encouraging membership in Phi Tau Sigma, increasing attendance at events, and implementing more service-related activities. We look forward to a successful upcoming year!

Member News:

News from the University of Massachusetts, Food Science Department

(contributed by Eric A. Decker, Ph.D., Professor and Department Head, Lifetime Member Phi Tau Sigma)

The Food Science Department at the University of Massachusetts (Amherst) has had a great grant year with over \$2.7 million dollars in new funds secured by Hang Xiao, Ph.D. (Lifetime Member), Guodong Zhang, Ph.D. (Member in Good Standing), and Matthew Moore, Ph.D. (Member in Good Standing).

Additionally, we had faculty member Hang Xiao, Ph.D. (Lifetime Member) join the ranks of the 'most highly-cited scientist in the world' bringing the total number of most highly-cited scientists in the Department to 4 along with D. Julian McClements, Ph.D. (Lifetime Member), Yeonhwa Park, Ph.D. (Lifetime Member), and myself (Eric A. Decker, Ph.D., Lifetime Member). We now have more highly cited faculty than any other Food Science Department in the world.

Head of Food Science at UMass Amherst Elected President of International Industry Group

Professor Eric Decker, head of food science at the University of Massachusetts Amherst, and Lifetime Member of Phi Tau Sigma, has been elected president of the American Oil Chemists' Society (AOCS), a century-old group that aims to advance the science and technology of oils, fats, proteins, surfactants and related materials. He has served as vice president of the organization over the past year.



Among the world's most highly cited researchers in agriculture, Decker began his one-year term as president at the [2019 AOCS annual meeting](#) May 5-8 in St. Louis, Mo. Next year, he will serve as past president.

"It's an honor to be recognized by your peers and have the chance to work with the great members of the top international scientific organization on fats and oils," Decker says. "Over the next year I hope to help the organization do more work on sustainable foods and improving the health and wellness of the food supply."

Decker has more than 350 publications and has served on committees of the FDA, Institute of Medicine, Institute of Food Technology, USDA and American Heart Association. Most recently, he was one of 13 appointed members of the National Academies of Sciences (NAS) Committee to Review the Dietary Reference Intakes (DRIs) for sodium and potassium, an 18-month process that culminated in [new recommendations](#) last month.

Decker's current research focuses on efforts to improve nutrition by incorporating more stable, unsaturated fatty acids into foods while preventing oxidative rancidity that causes food waste. He and UMass Amherst food science colleagues are also developing technologies to increase the levels of healthy bioactive lipids in foods.

Decker has been recognized for his research with awards from the AOCS, the Agriculture and Food Chemistry Division of the American Chemical Society (ACS), the International Life Science Institute, Royal Society of Chemistry and Institute of Food Technologists.

The AOCS was founded in 1909 as the Society of Cotton Products Analysts. As oil and fat chemistry began to emerge, the name was changed and, since the 1920s, AOCS methods have been internationally recognized.

[From: <https://www.umass.edu/newsoffice/article/head-food-science-umass-amherst-elected>]

Dr. Betsy Booren Named as an AMSA Fellow And 2019 Signal Service Award Winner

The American Meat Science Association (AMSA) has announced that Dr. Betsy Booren, Lifetime Member of Phi Tau Sigma, is a recipient of the 2019 AMSA Signal Service Award. The AMSA Signal Service Award was established in 1956 and is given to members in recognition of devoted service and lasting contributions to the meat industry and to the association. The Signal Service Award is sponsored by Cargill, Elanco Animal Health and Johnsonville, LLC. Dr. Betsy Booren was honored on Tuesday, June 25, 2019 at a special awards banquet at the AMSA 72nd Reciprocal Meat Conference in Loveland, Colorado.



Dr. Betsy Booren, Ph.D., has lived in land-grant college towns most of her life. She spent her childhood in Lansing, MI where she became an expert collegiate sport watcher. The eldest of three girls, she was active in 4-H, where she participated in everything but showing animals. Her foray into the food industry started when she was a summer employee at Bil-Mar Foods. After two summers working, she switched out of a pre-med program into a food science program and never looked back. She earned her Bachelor of Science from Michigan State University, a Master of Science from University of Nebraska-Lincoln, and a Ph.D. from Texas A&M University.

Dr. Booren began her career in food science at the North American Meat Institute (NAMI) and its affiliated organizations, where she spent seven years in a variety of roles, including vice president of scientific affairs as well as president for the Foundation of Meat and Poultry Research and Education. In these positions, she executed the scientific policy platform for the meat and poultry industry and leveraged the industry's scientific needs leading to better understanding of pathogens of concern for the industry. Dr. Booren spearheaded the scientific analysis for much of the U.S. beef, pork, lamb, veal, and turkey packers and processors on a variety of issues including food safety, health and nutrition, biotechnology, food quality, food processing, new technologies and public health initiatives.

Dr. Booren then joined the law firm of Olsson Frank Weeda Terman Matz PC as a senior policy advisor, where she put her extensive knowledge of food science and safety to work on behalf of the firm's food industry clients. In this capacity, she provided scientific and technical analysis and counsel for clients to ensure USDA and FDA regulatory compliance. In her current position as senior vice president of science and technology for the Grocery Manufacturers Association (GMA), Dr. Booren provides strategic leadership and executes the scientific and regulatory policy platforms for consumer packaged goods (CPG) industry. She and her team works with industry to ensure regulatory compliance and provides informed scientific analysis on a variety of issues including product safety, new technologies and public health initiatives.

She has experience working with regulatory and public health agencies on interagency collaborations, including *L. monocytogenes* risk assessment, food attribution, and whole genome sequencing. She was influential in ensuring meat and poultry products remain components of healthy lifestyle as recognized in domestic and international policies such as *Dietary Guidelines for Americans* and within the World Health Organization. Dr. Booren is a lead instructor for Preventive Controls for Human Foods, Preventive Controls for Animal Foods, and Foreign Supplier Verification Programs FSPCA courses.

Dr. Booren is an active member of the International Association for Food Protection, Institute of Food Technologists, and American Meat Science Association, where she had served on the Board of Directors. She spent 2-terms as a member of the USDA's National Advisory Committee on Meat and Poultry Inspection. Dr. Booren serves as a Board of Director for the Charles Valentine Riley Memorial Foundation, which strives to promote a broader and more complete understanding of agriculture as the most basic human endeavor and to enhance agriculture through increased scientific knowledge.

[From: AMSA eNewsletter June 14, 2019, Volume 56e, Number 411]

Dues Reminder:

Your dues status is listed in the cover email of this Newsletter. If you have not already paid your dues, Phi Tau Sigma Member dues are \$40 per year, but students get a discount so their dues are \$20 per year. Lifetime Membership is \$400 (just once). Please access the Phi Tau Sigma Membership Dues Page at: <http://www.phitausigma.org/membership-dues/>. Proceed on to pay by PayPal. Once you are successful with your PayPal payment, you will receive a receipt. If you do not receive a receipt, please try again.

Dues can also be paid by check payable to **Phi Tau Sigma**, (made with U.S. Funds and drawn on a U.S. Bank). (Do not send a money order.)

Mail your check to: **Kantha Shelke, Ph.D.** (Do **not** address to Phi Tau Sigma.)
33 West Ontario, Suite 57F, Chicago, IL 60654.

You are welcome at any time to give a donation to the Dr. Carl R. Fellers Award Fund, the Dr. Gideon "Guy" Livingston Scholarship Fund, Phi Tau Sigma Student Achievement Awards Fund, Phi Tau Sigma Special Recognition Award Fund, Dr. Daryl B. Lund International Scholarship Fund, Phi Tau Sigma Founders' Scholarship, Phi Tau Sigma Chapter of the Year Award, the Program Fund, or the General Fund.

We also ask each Chapter to send a list of their current, and lapsed, members along with contact information to the Chapter Affairs Committee Chair, Amy Simonne, Ph.D. at: asim@ufl.edu, to help ensure our records are accurate.

Phi Tau Sigma Store

Phi Tau Sigma has an online store. Items featured include Honor Cords, Official Lapel Pins, Banners (podium and wall/table), Annual and Lifetime Member dues, printed Certificates of Membership, and an opportunity to make tax deductible donations to Phi Tau Sigma. The Society Store can be found by going to www.phitausigma.org/store.

Editorial: Put a Smile on Your Heart

(Contributed by Kantha Shelke, Ph.D., Phi Tau Sigma Treasurer and Lifetime Member)

It is a fact. Donating money simply makes you feel better and has no ill side effects if done judiciously. When you donate money, even if it is just a few dollars, you are raising the bar at Phi Tau Sigma—truly the ONLY Honor Society of Food Science and Technology. Please tell at least 10 other people.



The returns are amazing: you get a tax deduction; you are helping food scientists and food technologists in need; your name in the roster motivates fellow members and friends to do the same; if you set a scheduled donation of even \$5 a month it adds up a lot without denting your budget; give, especially if you cannot volunteer your time...you will still leave a legacy that many will thank you for.

So, take out your check books and write a check to Phi Tau Sigma...to put a smile on your heart. Directions for donating are below. Even better, you can set it up as an automated system ...every little bit counts and your little bit will go a long way to make a difference in the Honor Society of Food Science and Technology.

Directions for donations: Go to the Phi Tau Sigma Store <http://www.phitausigma.org/store/> Click the yellow donate button, and follow the PayPal prompts.

OR

Send a check payable to **Phi Tau Sigma**, (made with U.S. Funds and drawn on a U.S. Bank). (Do not send a money order.)

Mail your check to: **Kantha Shelke, Ph.D.** (Do **not** address to Phi Tau Sigma.)
33 West Ontario, Suite 57F, Chicago, IL 60654.

Thank you!

About Phi Tau Sigma Communications:

The Phi Tau Sigma Newsletter Committee includes: Kathryn Kotula, Ph.D., Editor-in-Chief, Chair (kkotula@msn.com), Claire Zoellner, Ph.D., Associate Editor (cez23@cornell.edu), Anthony W. Kotula, Ph.D., Afef Janen, Ph.D., Hossein Daryaei, Ph.D., Tianxi Yang, Ph.D., and Yiren Yue, B.S. (Ph.D. Candidate). Please be responsive to their inquiries for information for the Newsletter.

The Newsletter Committee particularly wishes to share news from Phi Tau Sigma Members and Chapters. Any items for the monthly Phi Tau Sigma Newsletter should be emailed in Word (97-2003 compatibility mode) to Editor Kathryn L. Kotula, Ph.D. at kkotula@msn.com or Associate Newsletter Editor Claire Zoellner at cez23@cornell.edu. Write "Phi Tau Sigma Newsletter" in the subject line. Please provide the information by the 1st of the month. Thanks.

Documents:

Phi Tau Sigma Documents can be found on our website at: www.phitausigma.org.

Phi Tau Sigma Membership Nominations

<http://www.phitausigma.org/membership-nomination-form-pdf/>
<http://www.phitausigma.org/membership-nomination-form-word/>

Phi Tau Sigma Scholarships and Awards Forms

<http://www.phitausigma.org/awards/>

Phi Tau Sigma Constitution and By-Laws

<http://www.phitausigma.org/constitution/>
<http://www.phitausigma.org/bylaws/>

Phi Tau Sigma Mentorship Program

<http://www.phitausigma.org/mentorship/>

Every Member Get A Member Campaign

<http://www.phitausigma.org/growing/>

Donors, Sponsors, and Contributing Partners:

Phi Tau Sigma accepts donations and has a variety of available sponsorship opportunities.

Phi Tau Sigma is a non-profit 501(c)(3) charitable organization, so your contributions are tax deductible to the extent provided by U.S. law.

Donations and sponsorships may come from, but are not limited to, Corporations, Companies, Universities, Government agencies, Associations, Consultants, and individuals.

Contributions are appreciated in any amount, and can be made by way of the Phi Tau Sigma website (<http://www.phitausigma.org/sponsor/>). Donations by check can be made by contacting: Treasurer Kantha Shelke, Ph.D. (kantha@corvusblue.net), 33 West Ontario, Suite 57F, Chicago, IL 60654. Please write "Donation" or "Sponsorship" in the subject line.

Contributions of \$500 or more will be recognized publicly by the Society at the annual meeting, on the Phi Tau Sigma website, in printed material associated with relevant programs and events, and in the Phi Tau Sigma monthly Newsletter. Sponsorships of awards and scholarships are also available at levels of contribution sufficient to cover the associated cost of the award or scholarship. Endowments are also accepted.

Sponsorship opportunities are available for the Phi Tau Sigma Annual Recognition Event, Phi Tau Sigma Special Recognition Award, Phi Tau Sigma Student Achievement Award (up to 3 will be awarded), the Dr. Gideon "Guy" Livingston Scholarship Fund, the Phi Tau Sigma Founders' Scholarship, the Dr. Daryl B. Lund International Scholarship Fund, and the Phi Tau Sigma Outstanding Chapter of the Year Award. Donations can be made towards the awards and scholarships listed above, as well as the Program fund and the General fund. There are also endowment opportunities for student scholarships named for the sponsoring company.

Phi Tau Sigma has a **Contributing Partners Program** with five levels of sponsorships as described below. The Contributing Partner receives all of the benefits in the previous levels, plus the addition of the benefit listed for that level.

Bronze (\$5,000)

- Company listing in the "Donors and Sponsors" section of the Phi Tau Sigma Newsletter.
- Recognition with company name on www.PhiTauSigma.org
- Prominent recognition at all major Phi Tau Sigma events

Silver (\$10,000)

- Bronze benefits.
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- Silver benefits.
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For more information contact the Treasurer, Kantha Shelke, Ph.D.

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A donation was made towards a Phi Tau Sigma Scholarship by a Phi Tau Sigma Lifetime Member who wishes to remain anonymous.

Another donation was made towards a Phi Tau Sigma Scholarship by a Phi Tau Sigma Lifetime Member who wishes to remain anonymous.