Welcome! We cherish the opportunity to reach out to all of you – alumni, current students, community members, faculty – and keep you informed of recent happenings in our department. Feel free to let others know about our electronic newsletter.

There have been several recent significant developments. At the university level, all of you are likely aware that as of July 1, 2018, IPFW will split (or ‘divorce’ as Dr. Friedel calls it) into Purdue Fort Wayne (PFW) and Indiana University Fort Wayne (IUFW). The chemistry department has been a Purdue department in terms of course offerings and degrees so the change will not significantly affect us. However, you will begin seeing the new PFW logo, branding and signage.

At the departmental level, we are excited about our newest degree program – a B.S. in Biochemistry – officially starting in fall 2018. This degree offering is particularly well-suited for students who wish to enter the workforce in a biochemically-related industry, to pursue graduate studies in biochemistry or to gain admission into a health-related professional school (such as medical, dental or pharmacy school). We welcome any and all inquiries about this new degree.

We are also pleased to report the creation of a Department of Chemistry Community Advisory Board (CAB) composed of 20 members, including a number of alumni. We held two introductory meetings in the fall (with about 10 members at each meeting) and are currently in the planning stages for spring meetings. We are excited that there has been so much local interest in serving on the CAB. Please visit http://www.ipfw.edu/departments/coas/depts/chemistry/news/cab.html to see our mission statement, goals, membership and bylaws.

In this issue, we spotlight one of our faculty – Dr. Peng Jing – and also one of our alumni – Christine Bishop. We think you will find their stories, on pages 2 and 4 respectively, valuable and interesting. We also congratulate our students who won chemistry awards and scholarships in 2017 and look forward to seeing these students added in upcoming years to the list of departmental graduates; both the student awardees and the 2017 graduates can be found on page 3.

We have added a relatively new feature to our newsletter so that any of you who wish to make a donation to the department may now do so electronically through the newsletter. A major source of departmental scholarships comes through donations; we thank those of you who have contributed in the past and any of you who wish to do so in the future.

Again, welcome to this, now the fourth, issue of the newsletter. We would love to hear from you with your feedback and information for future stories.
My hometown is XiAn, China, which is well-known for its more than three thousand years of history and which was used as the capital of sixteen Chinese dynasties. When I was a child, I was fascinated by history books, from which I learned stories about many past scientists and which inspired me to set a goal of one day becoming a scientist.

I started my first research project in college when I was a junior. Because of my high GPA, I was allowed to choose a research lab to join and to become a laboratory research assistant until I graduated. At that time, I chose Prof. Ruonong Fu as my research advisor because he had a good reputation in analytical chemistry in China, and he led a very large research group of Ph.D. and master’s degree students. My assigned research topic was to design, synthesize and characterize highly selective novel stationary phases for gas chromatography. The research was not easy because it required students to know material from not only analytical chemistry but also from organic chemistry and polymer chemistry. Under the supervision of Prof. Fu, I studied on my own relevant books and chemical literature and I performed experiments with graduate students in his lab. In addition, I met with him regularly to discuss the progress of my research. Because the university required that all students who were engaged in research maintain a high cumulative GPA, I continued to attend my undergraduate classes, complete all the assignments each week, and pass the exams with very high grades. As a result, my undergraduate life was very busy and I typically found myself in one of five locations – classrooms, research lab, university library, student dining hall, and my dorm.

To effectively manage my time, I usually conducted research on weekends or holidays so as not to affect my studies. As high speed internet technology was still in its infancy at that time, I had to use the Chemical Abstracts manually to search the literature. Furthermore, copiers and printers were not as popular as they currently are. Finally, my hard work paid off. After four years of undergraduate studies, I earned my bachelor’s degree with a cumulative GPA above 3.8. I was granted an exemption from the National Entrance Examination for Graduates, and allowed to enter Professor Fu’s lab as a master’s degree graduate student. In my first year of graduate study, I published my first paper in a top American Chemical Society journal, Analytical Chemistry; the publication was based on my undergraduate work. As a graduate student, I published a total of four papers and made two oral presentations at one national and one international meeting, respectively. My achievements in graduate school also helped me to secure a faculty position at Xi An Jiaotong University, one of the top universities in China.

Upon leaving China, I went to Japan for my Ph.D. degree and later came to the United States for postdoctoral work and, subsequently, my current faculty position at IPFW. My research at IPFW covers two different areas. One area is at the intersection of biology, chemistry and physics. It is using bilayer membrane technology, a useful tool in cell biology, to study the functions of the portal proteins in the DNA packaging motors of various types of bacteriophages. The goal of the project is to identify a potential new target in antiviral therapy. The other area is at the intersection of protein chemistry, molecular biology, and analytical chemistry. It is to explore the possibility of using the mutant portal proteins as single-molecule biosensing motifs, e.g., DNA sequencing at the single-molecule level. Therefore, students working in my lab get extensive research training and learn the concepts and skills from two different areas. One student in my lab received the Sigma Xi 2017 undergraduate student research award. He also won the first place award at the 20th annual IPFW student research and creative endeavor symposium. Many of the students who worked with me became graduate students at universities such as Ohio State University, Oregon State University and Vanderbilt University. Two of the students were coauthors in my publications.

My publications can be found in top journals such as Nature Nanotechnology, Nano Letters, Biomacromolecules, Biophysical Journal, and the Journal of Chromatography A. As a researcher, I also submitted a patent application for the technology developed at IPFW. All the achievements that I have made in the different research areas are due to the research experience I acquired during my undergraduate career. From that experience, I learned how to engage in a new research area and how to identify the issues that need to be addressed in the research area. I also learned that, in order to become a productive researcher, one must have two indispensable characteristics. First, you must concentrate on your research; i.e., while you are involved in research, you must be immersed in that activity to the point of losing track of time. Tireless work yields more productive results. Secondly, you must have both courage and perseverance. Research is an adventure full of unexpected pitfalls. You should be well-prepared and have the courage to overcome challenges. Overall, the research experience I had as an undergraduate student benefitted my career as a research scientist.
The department held its annual spring award banquet in March 2017. Students were recognized for their academic achievements and service to the department.

Arthur W. Friedel Endowed Chemistry Scholarship: Katelyn Tepper

CRC Freshman Chemistry Award: Madalyn Hanes

Outstanding Organic Chemistry Student Scholarship: Paul Bojrab

David P. Onwood Scholarship: Kedric Milholland

William F. Erbelding Award in Analytical Chemistry: Tyler Marshall

Undergraduate Award in Organic Chemistry: Benjamin Burris

Leepoxy Plastic Inc. Scholarship: Madalyn Hanes

The Ken Stevenson Outstanding Chemistry Major Award: Jenna Cavacini

Outstanding Chemistry Major: Benjamin Burris

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Congratulations 2017 Graduates!

Spring 2017:
- Sammy Abdalla
- Christine Bishop
- Benjamin Burris
- Barrett Busick
- Gabrielle Carlston
- Tyler Korte
- Louis Relue
- Austin Ryman

Fall 2017:
- Robert Goldin
- Thomas Klingenerger
- Nicholas Manns
- Todd Yoder

Congratulations to our graduates!
Alumni Spotlight: Christine Bishop

1. What made you decide to pursue a degree in chemistry?

I always have really enjoyed science, even when I was a young child. I always tried to figure out how things worked, or what would happen if we changed a condition of something. When I took chemistry in high school, I fell in love with it. When it came time to decide on a major, I had a hard time choosing between nursing and chemistry. I originally chose nursing, but after a couple of years, I decided that chemistry is a better fit with my passions.

2. What did you personally gain from earning a degree? How do these skills help you in your duties at your current job?

I feel that I have a good, working, knowledge of chemistry and could apply what I have learned in various career settings that I may find myself in in the future. Currently, through some strange course of events, I am a secondary science educator. I use what I learned in college every single day. Not only do I use the content that I learned in my classes, but I also learned study skills and habits that I attempt to pass on to my students so that they may be prepared to become college students some day.

3. Do you have any memorable experiences within the IPFW Department of Chemistry that you would like to share?

I would say that the most memorable experiences within the department all center on the time spent with the Chemistry Club. By joining the club, I was able to find like-minded friends who were taking the same classes as I was, so by default became my study group too. I had a lot of fun going on trips with them, such as Fermilab in Illinois. However, my favorite moments would be the multiple times I got to witness the professors getting a pie in the face during our mole week fundraiser.

4. Do you have recommendations for future students that are considering pursuing a degree in chemistry?

The good thing about obtaining a degree in chemistry is that there is such a range of jobs available to you. There are various branches of chemistry that you can pursue that the possibilities are endless. You also do not have to be "stuck in a lab” with this degree. There are many careers where having a background in chemistry would be useful.

If you do decide to pursue a degree in chemistry, the best advice I can give is that if you can get through organic chemistry, you can get through anything. Stay on top of the material and you will be fine.

Friends of Chemistry: Give the Gift of Opportunity

Gifts of all sizes to the Department of Chemistry at IPFW make a difference and impact the lives of our students. To make a gift, simply mail a check to:

IPFW Department of Chemistry
2101 East Coliseum Blvd.
Fort Wayne, IN 46805

Make checks payable to: IPFW Foundation and write Dept. of Chemistry in the memo.

Gifts can also be made online at www.ipfw.edu/chemistry by selecting our Give Now button. To make a gift over the phone or learn more about ways to give, call the Office of Advancement at 260-481-6962.

Have you considered partnering with IPFW through estate planning? Annuities, bequests, and endowments create new opportunities for our students, including financial support and access to educational resources. To learn more, including how your gift impacts students, contact IPFW Office of Advancement at 260-481-6962 or giving@ipfw.edu.

Thank you for giving the gift of opportunity!