The College of Polymer Science and Polymer Engineering is proud to recognize all of our successful and exceptional alumni who are doing exciting things both personally and professionally. Do you know who our next alumni spotlight should feature? Email us at cpspe-alumni@uakron.edu.

Dr. Yangyang Wang, a Research and Development Staff Scientist at the Oak Ridge National Laboratory (ORNL), discusses his career path since graduating from the College of Polymer Science and Polymer Engineering and how the Polymer Science program has contributed to his success.

How has the College of Polymer Science and Polymer Engineering (CPSPE) influenced your career choice?
In the summer of 2006, I took my first international flight and arrived at Akron on August 8th. The next day, The University of Akron began its four-day celebration of the 50th anniversary of its polymer Ph.D. program. I have always felt both fortunate and proud to join CPSPE as the program entered its 51st year. Ever since I heard about CPSPE during my college years as a chemistry student, Akron had always held a very special place in my heart, for its long history of rubber and tire manufacturing and the academic standing of CPSPE in the field of polymer science. My personal memory of CPSPE and Akron is infused with polymers: the impressive polymer engineering equipment at the Sydney Olson Research Center, the Goodyear auditorium, the Paul J. Flory Reading Room, the International Rubber Science Hall of Fame portrait gallery, the ACS landmark plaque in front of the Polymer Science building in honor of the U.S. Synthetic Rubber Program, and the Charles Goodyear statue in downtown Akron. This experience of total immersion in polymers has instilled in me a strong sense of identity as a polymer scientist.

How has CPSPE prepared you for your career?
My experience at CPSPE helped me develop a rounded knowledge of polymer science. While my doctoral research in Professor Shi-Qing Wang's group focused on polymer dynamics and rheology, I was also exposed to various aspects of polymer chemistry, engineering, and industrial problems through CPSPE's well-balanced curriculum, cumulative qualification exams, and my interactions with the professors, collaborators, and fellow graduate students and postdocs. On a personal level, I am forever grateful for the guidance and counsel from my advisor, Professor S.Q. Wang, whose passion for science and teachings about critical thinking and intellectual independence have had a lasting impact on me. After graduating from CPSPE, I started a long and painstaking process of searching and establishing my own independent research identity, picking up new knowledge and techniques along the way. My current research topic, which focuses on neutron scattering and molecular simulations of polymers, is radically different from what I was doing in Prof. Wang’s group ten years ago. Yet, time and time again, I find myself going back to his research philosophy whenever I am contemplating a difficult problem. The broad and deep mental training I received at CPSPE and Prof. Wang’s group in particular is an invaluable asset for my career.

What has your journey been like since graduating from CPSPE?
After graduating from CPSPE, I joined Professor Alexei Sokolov's group at the Oak Ridge National Laboratory at the University of Tennessee-Knoxville, who at the time just relocated from Akron. My postdoctoral research focused on understanding ionic transport mechanism in polymers, using dielectric spectroscopy as my main research tool. I became a staff member of the Oak Ridge National Laboratory’s Center for Nanophase Materials Sciences (CNMS) in 2014.

What is your career path now?
The Center for Nanophase Materials Sciences is a DOE Office of Science user facility, providing the national and 

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international user community access to expertise and equipment for a broad range of nanoscience research. Part of my job responsibility is to help our users with their polymer characterization needs. At the same time, I am grateful for the outstanding research environment of the Oak Ridge National Laboratory, which allows young scientists like me to grow and pursue our own research interests. In 2019, I received the Early Career Research Program Award from the Department of Energy’s Office of Science to develop new methodologies to understand the flow and deformation behavior of polymers using neutron scattering and computer simulation.

Is there anything else you would like to share about yourself or your family?
My wife obtained her MBA degree in Finance and Information Systems from the College of Business Administration at The University of Akron. We have two kids, Isaac and Henry, both born in Tennessee. In my spare time, I love reading, writing, thinking, and cooking for my family.