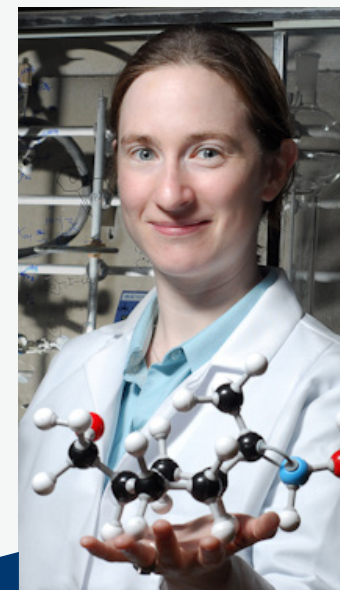


## Lecture abstract

This presentation will describe our group's recent advances in developing metal-mediated/catalyzed methods for introducing fluorine into organic molecules. Our efforts into this area are guided by detailed fundamental studies of stoichiometric organometallic bond-forming reactions. These fundamental studies will be described in detail, and their translation to practical applications (particularly in the context of the synthesis of PET imaging agents) will be discussed.



Dr. Melanie S. Sanford

**Melanie S. Sanford** is currently the Moses Gomberg Distinguished University Professor of Chemistry and Arthur F. Thurnau Professor of Chemistry at the University of Michigan. She received her B.S. and M.S. degrees at Yale University in 1996 where she carried out undergraduate research in the laboratory of Professor Robert Crabtree. She pursued graduate studies at the California Institute of Technology under Professor Robert Grubbs. Following postdoctoral work at Princeton University with Professor John Groves, she joined the faculty at the University of Michigan in 2003. She has won a number of awards, including the ACS Award in Pure Chemistry, the Sackler Prize, the Blavatnik Award, and a MacArthur Foundation Fellowship. She is a member of the National Academy of Sciences and a Fellow of the ACS.

# The 23<sup>rd</sup> Annual Lyle Ramsay Dawson Lecture

*Established in memory of Lyle Ramsay Dawson  
Distinguished Professor and Former Head of  
the Department of Chemistry*

## New Synthetic Methods for C-F Bond Formation: From Fundamental Science to Applications

Dr. Melanie S. Sanford  
Moses Gomberg Distinguished University  
Professor of Chemistry and  
Arthur F. Thurnau Professor of Chemistry at the  
University of Michigan, Ann Arbor

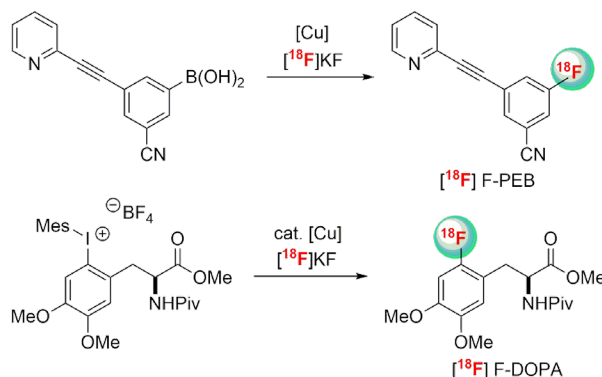
Friday, November 8, 2019 | 3:00 PM  
W.T. Young Library Auditorium

*\*Reception to immediately follow.*



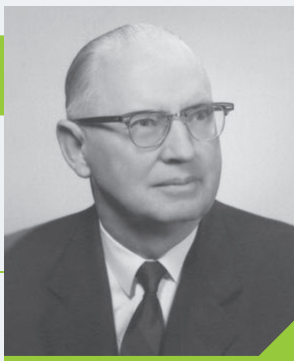
### Fluorination

Metal-catalyzed or mediated (radio) fluorination methods



### New $S_NAr$ methodology





## LYLE RAMSAY DAWSON

Lyle Ramsay Dawson was a native of Illinois and received his undergraduate degree from the University of Illinois in 1932. He received his Ph.D. degree in 1935 from the University of Iowa.

Dr. Dawson served in several academic positions in Illinois, Wisconsin, Nebraska and

Louisiana and also worked on the Manhattan Project as a Research Chemist and Group Leader in the Metallurgical Laboratory at the University of Chicago. In 1946, he was awarded the War Department's Certificate of Merit and a U.S. Patent for his efforts on the Manhattan Project, which led to the discovery of a fundamental process for the extraction and purification of the elements plutonium and neptunium. He was a member of the committee that organized the Oak Ridge Institute of Nuclear Studies and was a council member of the Institute.

Professor Dawson came to the University of Kentucky in 1945 as Head of the Department of Chemistry. He provided key leadership in initiating and building the doctoral program in chemistry at the university. For example, in his first decade in the department, he individually obtained the major portion of extramural research support. During his twenty-five years with the department, he held contracts for fundamental chemical research with the U.S. Army, the National Science Foundation and the Atomic Energy Commission.

He directed or co-directed seventeen Ph.D. dissertations and nine M.S. theses. He was a talented research director and had a special ability to imbue his students with a concise, clear and complete scientific writing style. He published more than fifty research papers dealing with the chemistry of nonaqueous solutions and coauthored a reference book on the subject.

Dr. Dawson was a master teacher both in the classroom and in less formal conferences and discussions. His leadership and mentoring led many graduate teaching assistants and junior faculty members to become more effective teachers. His uncompromising devotion to high achievement standards in course-work, research, education and training set the tone for our department for years to come.

Another significant contribution to the department was Professor Dawson's indefatigable advocacy for a new chemistry building. His leadership in soliciting and designing a replacement for the former chemistry building, Kastle Hall, culminated in the opening of the current Chemistry-Physics Building in 1963.

He also served the campus community in other ways. Dr. Dawson was elected a Distinguished Professor in the College of Arts and Sciences in 1954—1955, and was appointed to the rank of Distinguished Professor in the field of Physical Chemistry by the University of Kentucky Board of Trustees in 1956. He served as Acting Dean of the Graduate School in 1954—1955, 1956 and 1960—1961.

Dr. Dawson's contributions outside the university were well recognized. He was a Fellow of both the American Institute of Chemists and the American Association for the Advancement of Science. He was a member of the American Chemical Society, Electrochemical Society, Sigma Xi, Omicron Delta Kappa, Alpha Chi Sigma and Kappa Delta Pi, serving leadership roles in each of these organizations. He served several times as a Tour Lecturer and Visiting Scientist under the sponsorship of the American Chemical Society. He was also active in a variety of other nonacademic organizations.

Dr. Dawson's twenty-five years in the department represent a truly outstanding combination and balance of administrative leadership, teaching, research and service. Although Dr. Dawson passed away in 1976, his impact on the department continues to this day. The endowment of the Lyle Ramsay Dawson Lecture Series by his beloved daughter, Venita Dawson Curry, permits us to rejoice in this legacy and to continue our tradition of world-class chemical research.

Questions and comments about the Dawson Lecture can be directed to

Dr. Kenneth Graham.

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