

John Montgomery was born in 1965 in Concord, N.C. He studied chemistry at the University of North Carolina in 1987 under the direction of Profs. Joe Templeton and Maurice Brookhart where his undergraduate research experience sparked his interest in organometallic chemistry. He received his Ph.D. at Colorado State University in 1991 under the direction of Prof. Louis Hegedus, and he was an American Cancer Society Postdoctoral Fellow at the University of California at Irvine from 1991 - 1993 with Prof. Larry Overman. In 1993, he began his independent career at Wayne State University, and he moved to the University of Michigan at Ann Arbor in 2005, and in 2013 he was appointed as the Margaret and Herman Sokol Professor of Synthetic or Medicinal Chemistry. He current serves as the Director of the Michigan Chemistry-Biology Interface Training Program funded by NIGMS.

He has received a number of awards including a Pfizer Michigan Green Chemistry Award (2007), American Chemical Society Arthur C. Cope Scholar Award (2001), Johnson and Johnson Focused Giving Grant (2001), Camille Dreyfus Teacher Scholar Award (1998), National Science Foundation CAREER Award (1996), 3M Corporation New Faculty Award (1996), and he was recently elected as a Fellow of the American Association for the Advancement of Science (2011). He has coauthored over 90 research publications and presented over 220 invited lectures at various symposia, meetings, academic institutions, and pharmaceutical and biotechnology companies.

John's independent career has focused on the use of transition metals in reaction discovery, synthetic methodology development, mechanistic chemistry, and complex molecule synthesis. A number of new nickel-catalyzed reactions have been discovered in his laboratory involving the reductive coupling of two π -components with a reducing agent. Among these, the reductive coupling of aldehydes and alkynes, enones and alkynes, and aldehydes and allenes have been most extensively developed. Total or formal syntheses completed by the Montgomery group using nickel-catalyzed reductive couplings as key steps include several members of the allopumiliotoxin, kainic acid, and domoic acid families of natural products as well as testudinariol A, isogeissoschizine, aigialomycin D, and methymycin. Other new catalytic reactions developed include the reductive cycloaddition of enals and alkynes, the [4+2+1] cycloaddition of dienes, alkynes, and diazoalkanes, the crossed cycloaddition of cyclopropyl ketones and enones, the three-component coupling of enoates, aryl iodides, and aldehydes, and several coupling processes involving redox isomerization. Other current interests include the discovery of new glycosylation methods and the use of biocatalytic transformations in organic synthesis.