UNIVERSITY of ROCHESTER

Department of Chemistry
2019 Victor J. Chambers Distinguished Lecturer
* * REVISED WELCOME RECEPTION TIME 3:45 PM* *

Prof. Dr. Thorsten Bach

Technische Universität München – Department of Chemistry

"Chirality and Light: Enantioselective Catalysis of Photochemical Reactions"
Monday, September 23rd, 5:00 pm
140 Lander Auditorium, Hutchison Hall
Welcome Reception at 3:45 pm, 1st Floor Lounge

"Natural Product Synthesis from Different Perspectives"
Tuesday, September 24th at 5:00 pm
108 Eisenberg Room, Goergen Hall

"C-H Activation Reactions at sp^3-and sp^2-Carbon Centers"
Wednesday, September 25th at 12:00 pm
140 Lander Auditorium, Hutchison Hall

Prof. Dr. Thorsten Bach carried out his undergraduate studies at the University of Heidelberg and at the University of Southern California where he conducted his Diplom thesis research with Professor George A. Olah. He received his Ph.D. in 1991 from the University of Marburg under the supervision of Professor Manfred T. Reetz and subsequently carried out post-doctoral work as a NATO Fellow with Professor David A. Evans at Harvard University. He started his independent career in 1992 at the University of Münster where he completed his Habilitation in 1996. In 1997, he moved to the University of Marburg as an Associate Professor and was appointed to the Chair of Organic Chemistry I (Full Professor) at the Technische Universität München (TUM) in 2000. In 2010, he became an affiliated member of the Catalysis Research Center at TUM and in 2015 a member of the Institute of Advanced Study.

Professor Bach's research primarily focuses on the development and application of catalytic methods which enable previously unknown transformations employing both photochemical and conventional techniques. The application of these methods to the total syntheses of natural products is a major interest of his group and has – among others – led to the first total syntheses of wailupemycin B, punctaporonin C, lactiflorin, and pinolinone. Furthermore, his group has made significant advances in the syntheses of alkaloids as well as the structure elucidation and total synthesis of cyclic peptides. In transition metal catalysis, the Bach group has extensively explored regioselective cross-coupling chemistry and diastereoselective carbocation reactions. Currently, there is a major research interest in new Pd- and Ni-catalyzed processes for C(sp^2)-H activation and supramolecular approaches to the regioselective and enantioselective transformation of C(sp^3)-H bonds. In photochemistry, the group continuously pursues the enantioselective formation of complex molecules employing catalytic approaches based on chiral sensitizers and chiral acids. The former catalyst class activates substrates by energy transfer while the latter activates substrates by modification of the chromophore (chromophore activation). Visible light has been identified as the ideal energy source to promote these and related photochemical processes.

Professor Bach has coauthored more than 250 publications and presented more than 350 invited lectures. He serves as an Advisory Board member of Bicoll Ltd. and as an Associate Editor of Synthesis. He has been an elected member of the German Academy of Sciences (Leopoldina) since 2006 and of the Bavarian Academy of Sciences since 2009. He was chairman of the Department of Chemistry in the years 2006 to 2009 and was an elected board member of the organic division of the *Gesellschaft Deutscher Chemiker (GDCh)* from 2004 to 2007. He has been granted several national and international awards, including the AstraZeneca Research Award for Organic Chemistry (2001), the Novartis European Young Investigator Award (2003), the Degussa Award for Chirality in Chemistry (2006), an ERC Advanced Grant (2015), a JSPS Fellowship (2016), the Horst-*Pracejus* Award of the *GDCh* (2017), and the Emil-*Fischer* Medal of the *GDCh* (2018). Among others, he has held the Novartis Lectureship (2003), the *Feutrill* Memorial Lecture (2007), the *Boehringer Ingelheim* Lectureship (2009), the Honda-*Fujishima* Lectureship of the Japanese Photochemistry Association (2014), and the Jerome A. *Berson* Lecture (2016).

Host: Alison Frontier, 414 Hutchison Hall, (585) 275-2568, alison.frontier@rochester.edu