VISIONS IN CHEMISTRY
THE TORKIL HOLM SYMPOSIUM
DGI-byen, CPH Conference Center Jan. 31 - Feb. 01 2020
PROGRAMME
**The Themes**
Topics to be presented include: molecular nanotechnology, chemical biology, drug discovery and delivery, organometallic catalysis, molecular bioscience, organic functional systems, and total synthesis of complex target molecules.

**The Aim**
The aim of the Torkil Holm Symposium is to bring together world-leading experts, from both academia and industry, to present a broad range of topics within the field of chemical science.

**The Sponsor**
Thanks to a generous donation from the Torkil Holm Foundation, the fifth Torkil Holm “Visions in Chemistry” Symposium will take place in Copenhagen on January 31 and February 01, 2020.

**Dr. phil Torkil Holm**
Dr. phil Torkil Holm is a distinguished emeritus in organic chemistry at the Technical University of Denmark.

**The Danish Academy of Technical Sciences**
Since the first symposium in 2000, ATV has structured these symposiums, which are today regarded among the world’s most influential. The Danish Academy of Technical Sciences (ATV) is an independent, member-driven think tank. ATV’s vision is that Denmark shall be one of five leading Science and Engineering regions in the world – to the benefit of future generations.

**The Torkil Holm Prize**
During the symposium the Torkil Holm Research Award for Chemistry will be announced. The prize will be awarded to a young researcher, who has already established his or her credentials as an independent investigator in any area of chemical science and who shows great promise for further scientific development. Candidates from Danish academia, private research institutions and industry are all eligible for the prize.

**Networking**
The Torkil Holm Symposium provides an excellent environment for networking with some of the best in the chemistry field. This is further promoted by scientific and social gathering in appropriate breaks for discussion including seated lunch breaks and a symposium dinner.

Join the Torkil Holm Symposium to boost your network and experience world class chemistry.

**The ATV Scientific Organizing Committee**
PROGRAMME

FRIDAY JANUARY 31 2020

08:30 Registration and breakfast

09:00 Symposium opening and welcome
Professor David Tanner, Technical University of Denmark
Chairman of the ATV Scientific Organizing Committee

09:05 SESSION 1
Chaired by Professor Jan O. Jeppesen

Artificial Molecular Pumps and their Potential Uses
Nobel Laureate, Sir Fraser Stoddart

Coordination Self-Assembly: From Origins to the Latest Advance
Professor Makoto Fujita

Coffee and tea break

11.30 The Torkil Holm Prize 2019
Chaired by Professor Klaus Bock
Lecture by prize winner

12.30 Lunch

13.30 SESSION 2A
Chaired by VP Klaus Bæk Simonsen

Activity-based Proteomics - Protein and Ligand Discovery on a Global Scale
Professor Benjamin Cravatt

Versatile Oxidative Coupling Reactions for Site-Specific Protein Modification
Professor Matthew B. Francis

Coffee and tea break

SESSION 2B
Chaired by Professor Morten Meldal

The Development of a Biocatalytic Route to Daurismo
Senior Principal Scientist Angela Puchlopek-Dermenci

Designing a Once-Weekly GLP-1 for Optimal and Convenient Blood Glucose Regulation
VP Jesper Lau

18:00 Symposium dinner

SATURDAY FEBRUARY 01 2020

09:00 Breakfast

09:30 SESSION 3
Chaired by Professor Kurt Vesterager Gothelf

A New Reactivity Paradigm: trans-Hydrogenation, gem-Hydrogenation and trans-Hydrometalation of Alkynes
Professor Alois Fürstner

The Simplicity of Complex Rearrangements
Professor Nuno Maulide

Coffee and tea break

Necessity is the Mother of Invention: Natural Products and the Chemistry they Inspire
Professor Sarah Reisman

12.30 Lunch

13.30 SESSION 4
Chaired by Professor David Tanner

On Demand Synthesis: The When, Why and How of Flow Chemistry
Professor Timothy F. Jamison

Molecular Editing Through Enantio-selective and Remote C-H Activation
Professor Jin-Quan Yu

15.25 Symposium closing remarks
Professor David Tanner, Technical University of Denmark
Chairman of the ATV Scientific Organizing Committee
THE SPEAKERS

**Professor Alois Fürstner** is Director at the Max-Planck-Institut für Kohlenforschung. His research is focused on the development of organometallic catalysts as well as on their application to the synthesis of structurally complex and biologically significant targets. Major lines of research comprise alkene and alkyne metathesis, platinum and gold catalysis, iron-catalyzed bond formation, and mechanistically unorthodox trans-addition chemistry. He received several awards, including the first Mukaiyama Award, the Prelog Medal, the Karl Ziegler Prize, and the HC Brown Award for Creative Research in Synthetic Methods.

**SPR Angela Puchlopek-Dermenci** is a Senior Principal Scientist at Pfizer where she leads API teams in drug development. After studies at U. New Hampshire, Angela did her PhD at Yale with Scott Miller (peptide catalysis) followed by postdoctoral studies with Sarah Reisman (total synthesis). At Pfizer, Angela has led the team working on DaurismoTM, which gained FDA approval in 2018. Angela was recognized in 2018 as an ACS Young Investigator and is also associate editor for Organic Process Research and Development.

**Professor Benjamin F. Cravatt** is a Professor and Chair at the Dept. of Chemistry at the Scripps Research Institute. The group’s focus is to develop proteomic technologies to characterize proteins with an important role in human physiology and disease. Dr Cravatt commenced his education at Stanford University and then received a PhD from the Scripps Institute, since then the center of his research. He is an Associate Editor for JACS and has co-founded several bio-tech startups. He has received a number of scientific awards and is a member of three scientific American academies.

**Nobel Laureate, Sir Fraser Stoddart**, 2016 Nobel Laureate in Chemistry, is a Board of Trustees Professor of Chemistry at Northwestern University. He obtained all his degrees from Edinburgh University and spent time at Queen’s University, ICI and the Universities of Sheffield and Birmingham before moving to UCLA in 1997. He has mentored 450 students and postdoctoral fellows, has over 1150 publications, launched two startup companies, and was honored by Her Majesty Queen Elizabeth II as a Knight-Bachelor in 2007.

**VP Jesper Lau** After his PhD in organic chemistry at University of Southern Denmark and stay in the group of Professor Barry Trost at Stanford University in California, Jesper Lau joined Novo Nordisk in 1990. Jesper Lau has 28 years’ experience in pharmaceutical discovery and holds a broad knowledge in small molecule based therapeutics as well as a comprehensive know-how within protein engineering. In addition he is adjunct professor at Fudan University in Shanghai since 2016.
THE SPEAKERS

Professor Jin-Quan Yu
After completing his MSc at Chinese universities, JQY graduated further and has worked in both the UK and the US, where he now holds a position as professor at Scripps Research Institute at La Jolla, CA. At the Center for Selective C-H Functionalization his group works combines mechanistic studies with kinetics and computational studies to deepen the understanding of the obtained insights. JQY has received numerous awards and fellowships from scientific and commercial institutions in China, Japan, Europe and USA.

Professor Makoto Fujita
is University Distinguished Professor at The University of Tokyo, Japan. PhD 1987. After working in Chiba Univ., Institute for Molecular Science (IMS), Nagoya Univ., he moved to the Univ. of Tokyo in 2002 as a full professor where he was appointed as Univ. Distinguished Professor in 2019. Since 2018, he has also been appointed as Distinguished Professor at IMS. He has pioneered the field of coordination self-assembly. Selected Awards: Imperial Prize and the Japan Academy Prize, 2019; Wolf Prize in Chemistry, 2018.

Prof. Matthew B. Francis
began his studies at Miami University and earned his Master’s and PhD degrees from Harvard. At Berkeley, his research focused on DNA-based methods for the assembly of polymers and dendrimers customized to drug delivery. Since 2001 he has headed a research unit involving development of organic reactions for protein modification for use in a.o. diagnostic imaging, water treatment and solar cell development. Matt has received numerous awards and prizes. He is currently the Chair of the UC Berkeley Chemistry Department and a Faculty Scientist at the Berkeley Lab.

Professor Nuno Maulide
was born in Lisbon in 1979. He is a Full Professor and Chair of Organic Synthesis at the University of Vienna since 2013. His research interests focus on the exploration of high-energy intermediates in organic chemistry and have been acknowledged by several awards including the Bayer Early Excellence Award 2012, the Heinz Maier Leibnitz Prize 2013, the Elisabeth Lutz Prize of the Austrian Academy of Sciences 2016 and three ERC Grants – StG 2011, CoG 2016 and PoC 2018. He has been named Scientist of the Year in Austria by the Associated Press Austria for 2018.

Professor Sarah Reismann
earned a BA in Chemistry from Connecticut College in 2001, and her PhD in chemistry from Yale University in 2006. From 2006–2008, Sarah worked as an NIH fellow at Harvard University, and then joined the faculty at the California Institute of Technology where she is now a Professor of Chemistry and a Heritage Medical Research Institute Investigator. Her laboratory seeks to discover, develop, and study new chemical reactions within the context of natural product total synthesis.

Prof. Timothy F. Jamison
Tim did his undergraduate education at UC Berkeley. A research assistantship at ICI Americas was his first experience in chemistry research. Back at Berkeley, he conducted undergraduate research for 3 years. He undertook his PhD studies at Harvard. Tim then moved to the lab of Prof. Eric N. Jacobsen (Harvard), where he was a Damon Runyon-Walter Winchell postdoctoral fellow. In 1999, he began his career at MIT, where his research program focuses on new methods of organic synthesis and their implementation in the total synthesis of natural products.
**Dates**
January 31 - February 01, 2020
Friday, Jan. 31: 08.30 am - 11.00 pm  
(incl. symposium dinner)
Saturday, Feb. 01: 09.00 am - 3.00 pm

**Registration**
Please register at www.atv.dk no later than Jan. 17, 2020

**Participation Fee**
Includes breakfast both days, coffee and tea breaks, lunches both days, symposium dinner and free bar  
(from 6.00 to 11.00 pm) Friday, Jan. 31

Ordinary participants: DKK 3,650
Graduate participants: DKK 1,000
All prices are excl. 25 % VAT

**Payment**
Invoice and confirmation will be forwarded upon receipt of registration. If cancellation is received later than January 17, 2020, the participation fee cannot be refunded.

**Accommodation**
Accommodation must be arranged individually by the participants.

**The ATV Scientific Organizing Committee**
Professor Klaus Bock, Torkil Holm Foundation
Professor Kurt Vesterager Gothelf, Aarhus University
Vice President Ole Kirk, Novozymes A/S
Professor Morten Meldal, Copenhagen University
Vice President Klaus Bæk Simonsen, H. Lundbeck A/S
Professor David Tanner (Chairman), Technical University of Denmark
Professor Jan Oskar Jeppesen, University of Southern Denmark

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**Symposium Secretariat**
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**Venue**
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www.dgi-byen.com

▼From left to right: Managing Director of ATV Lia Leffland, Vice President Ole Kirk, Novozymes, Sponsor Torkil Holm and Professor Klaus Bock