

Editorial Board Focus: Professor David A. Nicewicz (University of North Carolina at Chapel Hill, USA)

Background and Purpose. From time to time, SYNFORM portraits Thieme Chemistry Editorial Board or Editorial Advisory Board members who answer several questions regarding their research interests and revealing their impressions and views on the developments in organic chemistry as a general research field. This Editorial Board Focus presents Professor David A. Nicewicz (University of North Carolina at Chapel Hill, USA) who joins the Editorial Board of SYNLETT with effect of January 1, 2018 as a new member.

Biographical Sketch



Prof. D. A. Nicewicz

Dave Nicewicz was born and raised in the United States in Central New Jersey, before moving to North Carolina, where he completed his Bachelor's (2000) and Master's (2001) degrees in Chemistry at the University of North Carolina (USA) at Charlotte with Professor Craig A. Ogle. He then moved to the University of North Carolina at Chapel Hill (USA) where he completed his Ph.D. with Professor Jeffrey S. Johnson. Dave's studies were focused on the development of acyl anion equivalents generated via 1,2-Brook rearrangements from silylglyoxylates, which he was able to successfully apply to a total synthesis of zaragozic acid C to complete his Ph.D. in 2006. Following his graduate education, Nicewicz moved back to his native New Jersey in 2007, where he was a Ruth L. Kirschstein Postdoctoral Fellow in the laboratories of Professor David W. C. MacMillan. It was during this time that Nicewicz pioneered the use of ruthenium photoredox catalysis in combination with chiral amine organocatalysis to develop a general method for enantioselective aldehyde alkylation. In July of 2009, Dave went on to begin his independent career at the University of North Carolina at Chapel Hill, where his laboratory has focused on organic photoredox catalysis for the development of novel chemical reactivity. He has received a number of awards early on in his career from the University of North Carolina (James Moeser Award for Distinguished Research; Ruth Hettleman Prize for Artistic and Scholarly Achievement), industry (Boehringer Ingelheim New Investigator Award in Organic Chemistry; Amgen Young Investigator Award; Eli Lilly Grantee Award), private foundations (Packard Fellowship in Science and Engineering; Camille

Dreyfus Teacher-Scholar Award) as well as international recognition (Society of Synthetic Organic Chemistry, Japan Lectureship Award; The 13th Hirata Award, Nagoya University). In 2015, he was promoted to the rank of Associate Professor, where he leads a research group focused on organic methodology development, catalysis and complex molecule synthesis.

INTERVIEW

SYNFORM Please comment on your new role as a Member of the Synlett Editorial Board!

Prof. D. A. Nicewicz I am excited to be a part of the SYNLETT Editorial Board and to have the opportunity to view the newest science before it hits the press. In addition to my excitement in joining an excellent Editorial Board steered by Ben List, I am also happy to hear that Rubén Martín will also be joining me on the SYNLETT team – I believe this will create a great mix of young and established scientists that will no doubt strengthen the journal. In this regard, I am eager to learn more and contribute to new ways to improve the submission and review process. As a specific example, it is encouraging to see that SYNLETT is breaking new ground in the latter area with Intelligent Crowd Review, which I believe could be the future of peer review.

SYNFORM What do you think about the modern role and prospects of organic synthesis?

Prof. D. A. Nicewicz Organic synthesis in the 21st century has to focus on sustainability. There is almost nothing that synthetic organic chemists can't make and so our goal

moving forward should be designing new catalytic processes that avoid the use of toxic or expensive reagents, make use of abundant and renewable chemical feedstocks and design new materials that have a minimal impact on our environment. For these reasons, I truly believe there are a multitude of new opportunities for catalysis, methods development and polymer chemistry that can be applied and at the same time, are scientifically stimulating.

SYNFORM *Please let us know more about your research activities in general and what the focus of your group's current research is?*

Prof. D. A. Nicewicz My laboratory's goals, from a broad prospective, are to develop new enabling technologies that speak to the themes mentioned in my previous comment: design new catalytic processes that minimize waste and environmental impact by introducing scientifically-stimulating concepts. To this end, my laboratory is focused on the use of simple visible-light-absorbing organic dyes that catalyze organic transformations via single electron transfer processes. We have employed organic photoredox catalysis for alkene anti-Markovnikov hydrofunctionalization reactions, molecular rearrangements, arene and alkane C–H functionalization and recently, methods for catalysis of classical reactivity such as the Newman–Kwart rearrangement and nucleophilic aromatic substitution of aromatics. Currently, we are applying some of this methodology to the total synthesis of naturally-occurring molecules as well as medicinal agents.

