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PRESS RELEASE

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Martin Oestreich Receives the WACKER Silicone Award 2021

Munich, June 22, 2021 – Martin Oestreich, Professor of Synthesis and Catalysis at the Technical University of Berlin, is the winner of the WACKER Silicone Award 2021. Oestreich receives the award in recognition of his pioneering work in the field of organic and organosilicon chemistry. His work on combining boron and silicon with organic molecules has been a driver of basic research into the development of novel catalysts, the company noted. The award, which carries with it a purse of €10,000, will be presented on July 7th during the 19th International Symposium on Silicon Chemistry ISOS-2021 in Toulouse, France. The ceremony will be held online due to coronavirus restrictions.

Professor Martin Oestreich has been conducting research into basic catalysis issues for many years. He became known initially for his work on bond activation and the chemistry of silylium ions. In the ensuing years, he also conducted pioneering studies on transfer hydrosilylation, carbon-hydrogen silylation of aromatic compounds and the enantioselective silylation of alcohols.

Oestreich's primary focus are boron and silicon and how these elements can be combined with organic molecules to develop new catalysts. He successfully synthesized a chiral hydridosilane that

made it possible to transfer chirality to carbon, thereby enabling its use in the kinetic, non-enzymatic and reagent-controlled resolution of racemic mixtures of alcohols. Through his work on silicon cations, Oestreich was also the first to prepare a ferrocene-stabilized silylium ion in which the electron deficiency in the silicon atom is compensated not only by the iron atom on its own, but by the entire metallocenyl group. These types of compounds make excellent low-temperature catalysts, e.g. for Diels-Alder reactions.

Oestreich also created a sensation when he developed a transfer hydrosilylation that is transition-metal-free. This technology is especially relevant for industrial use. It allows safe handling of hydrosilanes, which can be highly volatile, pyrophoric and explosive. As a result, monosilane can be safely used for further chemical transformations, such as hydrosilylation. “By combining organic chemistry and silicon chemistry, Martin Oestreich has flung open the door to new research areas in catalysis,” emphasized Dr. Christoph Kowitz, head of WACKER’s corporate R&D department, in his laudatory speech. “The results of his research have enormous implications for science and also, in the long term, for us – e.g. when it comes to making even greater use of the greenhouse gas carbon dioxide in our product portfolio in the future.”

Martin Oestreich is the 21st winner of WACKER’s Silicone Award. Born in Pforzheim, Germany, the 49-year-old scientist studied chemistry in Düsseldorf, Manchester and Marburg, before obtaining his doctorate in stereoselective carbolithiation at the University of Münster. After a postdoc stint with Prof. Larry E. Overman at the University of California, he headed up an Emmy Noether junior

research group of the German Research Foundation (DFG) at the University of Freiburg, where he completed his postdoctoral thesis under Prof. Reinhard Brückner to qualify as a professor. He was appointed professor of organic chemistry there in 2006.

Since 2011, Oestreich has been researching and lecturing at the Technical University of Berlin. In his capacity as Einstein Professor, he is also a member of the Cluster of Excellence “Unifying Concepts in Catalysis (UniCat)”, the aim of which is to research and develop new catalysts by combining classical chemistry with biological and materials sciences.

Oestreich is the managing director of the Institute of Chemistry and assistant dean at the Technical University of Berlin. In 2020, he took on the role of chair of the Liebig Association of Organic Chemistry at the German Chemical Society. He has published more than 250 scientific papers and is the publisher and author of numerous textbooks.

WACKER Silicone Award

The WACKER Silicone Award presented by Munich-based chemical group WACKER is given to outstanding research scientists in the field of silicone and organosilicon chemistry. It carries with it a purse of €10,000. Previous recipients of the award since its inception in 1987 are:

2018 Prof. Herbert W. Roesky (University of Göttingen, Germany)
2016 Prof. Alexander Filippou (University of Bonn, Germany)

2014 Prof. Akira Sekiguchi (University of Tsukuba, Japan)
2011 Prof. Matthias Driess (Technische Universität Berlin, Germany)
2009 Prof. Ulrich Schubert (Technical University of Vienna, Austria)
2007 Prof. Dr. Yitzhak Apeloig (Israel Institute of Technology, Haifa)
2005 Prof. Mitsuo Kira (Tohoku University, Japan)
2003 Prof. Don Tilley (University of California at Berkeley, USA)
2001 Prof. Manfred Weidenbruch (University of Oldenburg, Germany)
1998 Prof. Robert Corriu (Université de Montpellier, France)
1996 Prof. Hubert Schmidbaur (Technical University of Munich, Germany)
1994 Prof. Edwin Hengge
1992 Prof. Richard Müller and Prof. Eugene Rochow
1991 Prof. Hideki Sakurai (Science University of Tokyo, Japan)
1989 Prof. Robert West (University of Wisconsin, USA)
1988 Prof. Nils Wiberg (†), Prof. Reinhold Tacke (University of Würzburg, Germany)
1987 Prof. Peter Jutzi (Bielefeld University, Germany), Prof. Norbert Auner (Goethe University Frankfurt, Germany)

Recipient of the WACKER Silicone Award 2021: Prof. Martin Oestreich of the Technical University of Berlin. (Photo: TU Berlin / Phil Dera)

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WACKER has a global network of 26 production sites, 23 technical competence centers and 52 sales offices.

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Silicone fluids, emulsions, rubber grades and resins; silanes; pyrogenic silicas; thermoplastic silicone elastomers

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