





C. O. Kappe

The author presented on this page has recently published his 10th article in Angewandte Chemie in the last 10 years:

"Microwave Effects in Organic Synthesis: Myth or Reality?": C. O. Kappe, B. Pieber, D. Dallinger, Angew. Chem. 2013, 125, 1124-1130; Angew. Chem. Int. Ed. 2013, 52, 1088-1094.

C. Oliver Kappe

Date of birth: June 18, 1965

Position: Professor of Organic Chemistry, University of Graz (Austria)

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Education: 1984-1989 Degree in chemistry, University of Graz

1992 PhD with Gert Kollenz, University of Graz

1993-1994 Postdoc with Curt Wentrup, University of Queensland 1994-1996 Postdoc with Albert Padwa, Emory University

2004 Novo Nordisk Lecturer; European Federation for Medicinal Chemistry Prous Award; Awards:

2008 Fellow of the Japan Society for the Promotion of Science; 2010 B&C Privatstiftung Houska

Microwave chemistry and microwave effects, continuous-flow chemistry, process intensification, **Current research**

interests: nanocatalysis, sustainable chemistry Hobbies: Playing soccer and traveling

My favorite quote is ... "when the going gets tough, the tough get going".

My favorite time of day is ... early morning.

My favorite way to spend a holiday is ... to relax somewhere on a quiet beach enjoying the ocean and a good book.

The secret of being a successful scientist is ... to work hard.

My favorite name reaction is ... the Biginelli reaction.

f I could be a piece of lab equipment, I would be ... a microwave reactor.

The most important thing I learned from my students is ... that chemistry in the lab is still a lot of fun.

The principal aspect of my personality is ... dedication.

My favorite composer is ... Sergei Rachmaninov.

My favorite book is ... Into the Wild (Jon Krakauer).

The natural talent I would like to be gifted with ... is to master more languages (in particular Portuguese).

The most important future applications of my research are ... in sustainable manufacturing.

My 5 top papers:

- 1. "Synthesis and Reactions of 'Biginelli Compounds'": C. O. Kappe, P. Roschger, J. Heterocycl. Chem. 1989, 26, 55-64. (My first entry into organic synthesis, written as an undergraduate.)
- 2. "Controlled Microwave Heating in Modern Organic Synthesis": C. O. Kappe, Angew. Chem. 2004, 116, 6408-6443; Angew. Chem. Int. Ed. 2004, 43, 6250-6284. (Our first major review on the topic of microwave chemistry and my most cited article by far.)
- 3. "Nonthermal Microwave Effects Revisited-On the Importance of Internal Temperature Monitoring and Agitation in Microwave Chemistry": M. A. Herrero, J. M. Kremsner, C. O. Kappe, J. Org. Chem. 2008, 73, 36-47. (Several previous and highly publicized claims of nonthermal microwave effects are in fact the result of erroneous temperature measurement.)
- 4. "Microwave Chemistry in Silicon Carbide Reaction Vials: Separating Thermal from Nonthermal Effects": D. Obermayer, B. Gutmann, C. O. Kappe, Angew. Chem. 2009, 121, 8471-8474; Angew. Chem. Int. Ed. 2009, 48, 8321-8324. (Most effects experienced in microwave chemistry are the result of purely bulk temperature phenomena and do not involve specific or nonthermal microwave effects.)
- "Synthesis of 5-Substituted 1H-Tetrazoles from Nitriles and Hydrazoic Acid by Using a Safe and Scalable High-Temperature Microreactor Approach": B. Gutmann, J.-P. Roduit, D. Roberge, C. O. Kappe, Angew. Chem. 2010, 122, 7255-7259; Angew. Chem. Int. Ed. 2010, 49, 7101 – 7105. (Extremely explosive and toxic hydrazoic acid can be handled safely in a microreactor environment.)

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