



A. Kirschning

The author presented on this page has recently published his **10th article** since 2000 in *Angewandte Chemie*: “Molecular Basis of Elansolid Biosynthesis: Evidence for an Unprecedented Quinone Methide Initiated Intramolecular Diels–Alder Cycloaddition/Macrolactonization”: R. Dehn, Y. Katsuyama, A. Weber, K. Gerth, R. Jansen, H. Steinmetz, G. Höfle, R. Müller, A. Kirschning, *Angew. Chem.* **2011**, 123, 3968–3973; *Angew. Chem. Int. Ed.* **2011**, 50, 3882–3887.

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Education:	1980–1986 Undergraduate university education at Southampton University (UK; B.Sc.) and University of Hamburg (Germany; diploma) 1989 PhD with Prof. Dr. E. Schaumann, University of Hamburg 1989–1990 Postdoctoral position with Prof. H. G. Floss at the University of Washington, Seattle (USA)
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Current research interests:	Our research is based on three major fields and the underlying theme is synthesis. Though seemingly rather broad and diverse, we follow a principle philosophy by searching for knowledge, techniques, and methodologies from sciences adjacent to chemistry that have the potential to be incorporated into the synthetic chemist's portfolio. From the field of engineering we started to include microreactors and flow devices into synthesis in 1999. In physics we found that the superparamagnetism of iron oxide nanoparticles is ideally suited to inductively heat flow reactors from inside. Biology provided principle techniques of molecular biology and microbiology for carrying out mutasyntheses in a chemical environment. These tools all contribute to our advanced natural-product chemistry with medicinal impact.
Hobbies:	History, literature, long distance running, water coloring

In a spare hour I ... would like to run at sunset or sunrise.

The biggest challenge facing scientists is ... to keep their autonomy and independence and preserve spare time for creativity.

Chemistry/science is fun because ... it is one of the last fields in which you are paid for probing your own thoughts and ideas and (trying) to be creative.

The most significant historic event of the past 100 years ... has been the creation of modern Europe that led to 60 years of peace on a continent that is founded on centuries of bloody history and mutual distrust.

My favorite saying is ... “You come from nothing, you’re going back to nothing. What have you lost? Nothing!” (Monty Python).

I admire ... my wife, my two daughters, and my friends.

My 5 top papers:

1. “Timing of the $\Delta_{10,12}$ – $\Delta_{11,13}$ –Double Bond Migration During Ansamitocin Biosynthesis of *Actinosynnema pretiosum*”: F. Taft, M. Brünjes, T. Knobloch, H. G. Floss, A. Kirschning, *J. Am. Chem. Soc.* **2009**, 131, 3812–3813. (Describes the first study that combines organic synthesis and mutasynthesis to show how dienes in polyketide natural products are formed that result from formal diene migration.)
2. “Molecular Basis of Elansolid Biosynthesis: Evidence for an Unprecedented Quinone Methide Initiated Intramolecular Diels–Alder Cycloaddition/Macrolactonization”: R. Dehn, Y. Katsuyama, A. Weber, K. Gerth, R. Jansen, H. Steinmetz, G. Höfle, R. Müller, A. Kirschning, *Angew. Chem.* **2011**, 123, 3968–3973; *Angew. Chem. Int. Ed.* **2011**, 50, 3882–3887. (Elansolid is a beautiful example of how nature plays the art of chemistry in a highly creative and sophisticated way.)
3. “Total Synthesis of Thuggacin B”: M. Bock, R. Dehn, A. Kirschning, *Angew. Chem.* **2008**, 120, 9274–9277; *Angew. Chem. Int. Ed.* **2008**, 47, 9134–9137. (This communication describes the first total synthesis of a polyketide natural product that exerts strong antibiotic properties.)
4. “Inductive Heating for Organic Synthesis by Using Functionalized Magnetic Nanoparticles Inside Microreactors”: S. Ceylan, C. Frieze, C. Lammel, K. Mazac, A. Kirschning, *Angew. Chem.* **2008**, 120, 9083–9086; *Angew. Chem. Int. Ed.* **2008**, 47, 8950–8953. (This article discloses the first use of superparamagnetic nanoparticles as inductively heatable material in organic synthesis with miniaturized flow reactors.)
5. “PASSflow Syntheses Using Functionalized Monolithic Polymer/Glass Composites in Flow-Through Microreactors”: A. Kirschning, C. Altwicker, G. Dräger, J. Harders, N. Hoffmann, U. Hoffmann, H. Schönfeld, W. Solodenko, U. Kunz, *Angew. Chem.* **2001**, 113, 4118–4120; *Angew. Chem. Int. Ed.* **2001**, 40, 3995–3998. (This work shows several pioneering aspects of current organic synthesis with flow reactors.)

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