



A. Berkessel

Albrecht Berkessel

Date of birth:	September 7, 1955
Position:	Professor of Organic Chemistry, University of Cologne
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Education:	1982 Diploma in Chemistry, Saarland University 1985 PhD with Prof. Waldemar Adam, University of Würzburg 1985–1986 Postdoc with Prof. Ronald Breslow, Columbia University, New York
Awards:	1991 Young Investigator Award of the Fonds der Chemischen Industrie; 1995 Prize for Chemistry, Göttingen Academy of Sciences
Current research interests:	Mechanistic and applied organo-, metal, and enzymatic catalysis, bioorganic chemistry, medicinal chemistry
Hobbies:	Mountain hiking, skiing, motorcycling, music

The author presented on this page has published more than **10 articles** in *Angewandte Chemie* in the last 10 years, most recently:

“Anion-Binding Catalysis by Electron-Deficient Pyridinium Cations”: A. Berkessel, S. Das, D. Pekel, J.-M. Neudörfl, *Angew. Chem. Int. Ed.* **2014**, 53, 11660; *Angew. Chem.* **2014**, 126, 11846.

I admire ... dedication and true achievement—in all areas of life.

My favorite way to spend a holiday is ... motorcycling (or skiing, depending on the season) in the Alps.

In a spare hour, I ... love to practice my musical instruments. Unfortunately, there are basically no spare hours.

My favorite quote is ... “very little is needed to make a happy life; it is all within yourself, in your way of thinking” (Marc Aurel).

If I could be a piece of lab equipment, I would be ... the coffee machine, as it makes people happy, quickly.

My favorite musician/band/composer is ... Jamiroquai—all three in one person.

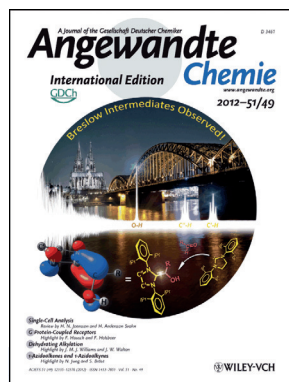
My favorite book is ... I have many, for example *The Selfish Gene* (Richard Dawkins), *Thinking, Fast and Slow* (Daniel Kahneman), *Disturbing the Universe* (Freeman J. Dyson), and all works by Primo Levi.

The natural talent I would like to be gifted with is ... to be a virtuosic musician.

I am waiting for the day when someone will invent ... a copying method (like PCR) for any given molecule.

If I could be anyone for a day, I would be ... Jon Hiseman or Victor Wooten.

My first experiment was ... generating oxygen by heating KMnO_4 in a test tube. The resulting fascination for chemistry, i.e., the ability to transform matter at will, has stayed with me ever since.



The work of A. Berkessel has been featured on the cover of *Angewandte Chemie*:

“Umpolung by N-Heterocyclic Carbenes: Generation and Reactivity of the Elusive 2,2-Diamino Enols (Breslow Intermediates)”: A. Berkessel, S. Elfert, V. R. Yatham, J.-M. Neudörfl, N. E. Schlörer, J. H. Teles, *Angew. Chem. Int. Ed.* **2012**, 51, 12370; *Angew. Chem.* **2012**, 124, 12537.

My 5 top papers:

1. “Characterization of the Key Intermediates of Carbene-Catalyzed Umpolung by X-Ray/NMR: Breslow Intermediates, Homo-enolates, and Azolium Enolates”: A. Berkessel, V. R. Yatham, S. Elfert, J.-M. Neudörfl, *Angew. Chem. Int. Ed.* **2013**, 52, 11158; *Angew. Chem.* **2013**, 125, 11364. (These species are intermediates in α,β -enal Umpolung catalysis.)
2. “Ti Salalen Catalysts Based on *cis*-1,2-Diaminocyclohexane: Enantioselective Epoxidation of Terminal Non-Conjugated Olefins with H_2O_2 ”: A. Berkessel, T. Günther, Q. Wang, J.-M. Neudörfl, *Angew. Chem. Int. Ed.* **2013**, 52, 8467; *Angew. Chem.* **2013**, 125, 8625. (Non-conjugated olefins are a notoriously difficult, but synthetically important substrate class.)
3. “Anion-Binding Catalysis by Electron-Deficient Pyridinium Cations”: A. Berkessel, S. Das, D. Pekel, J.-M. Neudörfl, *Angew. Chem. Int. Ed.* **2014**, 53, 11660;
4. “Highly Efficient Dynamic Kinetic Resolution of Azlactones by Urea-Based Bifunctional Organocatalysts”: A. Berkessel, F. Cleemann, S. Mukherjee, T. N. Müller, J. Lex, *Angew. Chem. Int. Ed.* **2005**, 44, 807; *Angew. Chem.* **2005**, 117, 817. (This report triggered a whole series of related catalytic amino acid syntheses.)
5. Hydrogenation without a Transition-Metal Catalyst: On the Mechanism of the Base-Catalyzed Hydrogenation of Ketones: A. Berkessel, T. J. S. Schubert, T. N. Müller, *J. Am. Chem. Soc.* **2002**, 124, 8693. (An early study on the base-catalyzed and transition metal-free hydrogenation of ketones.)

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