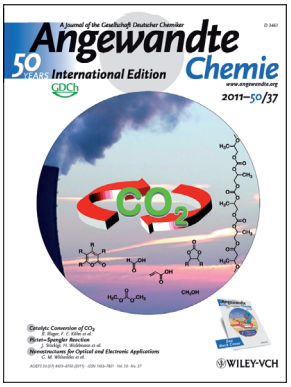
W. A. Herrmann

The author presented here has recently published his **10th article** since 2000 in *Angewandte Chemie*: M. Cokoja, C. Bruckmeier, B. Rieger, W. A. Herrmann, F. E. Kühn, *Angew. Chem.* **2011**, *123*, 8662–8690; *Angew. Chem. Int. Ed.* **2011**, *50*, 8510–8537.
This work by W. A. Herrmann has been featured on the cover of Angewandte Chemie:



Wolfgang A. Herrmann

Date of birth:	April 18, 1948
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Education:	1971 Undergraduate degree, diploma thesis supervised by Prof. Ernst Otto Fischer, TU Munich 1973 PhD from the University of Regensburg supervised by Prof. Henri Brunner 1975–1976 Postdoctoral position at Pennsylvania State University with Prof. Philip S. Skell
Awards:	**1985** Wilhelm Klemm Award of the German Chemical Society; **1987** Gottfried Wilhelm Leibniz Award of the German Research Foundation; **1989** Humboldt Research Award; **1991** Max Planck Research Award; **2004** ACS Award in Organometallic Chemistry; **2007** Bavarian Order of Merit
Research interests:	Organometallic chemistry, catalysis
Hobbies:	Music, in particular solo performances on piano and organ

The greatest scientific advance of the last decade was … the decoding of the human genome.

When I was eighteen I wanted to become … a chemist, and so I did.

If I could be described as an animal … it would definitely be a Bavarian lion to give a good roar.

Chemistry is fun because … it advances creativity.

Looking back over my career, I … would allow myself more frequent retreats for creative thinking if I could.

My favorite drink is … the wheat beer from TUM's Bavarian State Brewery Weihenstephan.

If I could be anyone for a day, I would be … the former German Chancellor Konrad Adenauer.

My first experiment was … an ill-fated oxyhydrogen reaction.

My favorite quote is … "True adventures happen inside your head, if they are not inside your head, they are nowhere else" (André Heller).

My favorite time of day is … the late evening when I have time to work without distraction or for playing the piano.

The secrets for being a successful scientist are … unconventional approaches, perseverance, and the ability to improvise.

If I had one year of paid leave I would … dedicate my time to music and study one of the Mozart piano concertos.

The most important thing I learned from my students is … to critically question basic textbook knowledge.

The principal aspect of my personality is … determination, unfortunately paired with impatience.

What I appreciate most about my friends is … honesty.

My favorite composer is … Wolfgang Amadeus Mozart.

My favorite book is … "The History of Europe" by Thomas Nipperdey, for Europe is our future!

The natural talent I would like to be gifted with … is to be able to play piano and organ with world-class virtuosity (which I am light-years away from).

My motto is … "God writes straight with crooked lines" (Augustine), because it proves right again and again.

Has your approach to publishing your results changed since the start of your career?

Yes indeed. In contrast to my earlier days, I don't publish isolated results any more, but rather contextually. This is due to the fact that I have already made my mark as a scientist. If I was to start again, I would publish in the same style as then.

What do you think the future holds for your field of research?

Molecular catalysis will replace heterogeneous catalysis step by step, since the latter works under much harsher conditions with respect to factors such as temperature and pressure. Also bioinorganic chemistry will maintain its rapid advance, which is already largely finished for organometallic catalysis. The understanding of the many metals in living organisms is still in its infancy, as is the catalytic utilization of biogenic resources (plant material). A lot of new territory remains to be explored. One other main target is the selective catalytic conversion of methane to value-added chemicals.

My 5 top papers:

1. "A Novel Class of Ruthenium Catalysts for Olefin Metathesis": T. Weskamp, W. Schattenmann, M. Spiegler, W. A. Herrmann, *Angew. Chem.* **1998**, *110*, 2631 – 2633.
   This work describes the applicability of ruthenium complexes with N-heterocyclic carbene ligands for catalytic olefin metathesis, and is based on a previous patent. This catalyst principle, which was novel at the time, led to a later Nobel Prize (2005).
2. "Metal Complexes of Heterocyclic Carbenes—A Novel Catalytic Structural Principle in Homogeneous Catalysis": W. A. Herrmann, M. Elison, J. Fischer, C. Köcher, G. R. J. Artus, *Angew. Chem.* **1995**, *107*, 2602 – 2605; *Angew. Chem. Int. Ed. Engl.* **1995**, *34*, 2371 – 2374.
   This work is the first report of the application of metal complexes with N-heterocyclic carbene ligands in catalysis, as exemplified by the palladium-catalyzed Heck reaction. My research group has published more than 100 papers on this topic. Heterocyclic carbenes are now well established as steering ligands in catalysis.
3. "Exhaustive Oxidative Decarbonylation of Metal Carbonyls by Light and Oxygen: The Example of (μ^5-C_5Me_5)ReO_3": W. A. Herrmann, R. Serrano, H. Bock, *Angew. Chem.* **1984**, *96*, 364 – 365; *Angew. Chem. Int. Ed. Engl.* **1984**, *23*, 383 – 385.
   The chemistry of organometallic oxides with high metal oxidation states started with this serendipitous result. Soon afterwards, compounds of general composition R–ReO_3 proved to be remarkable oxidation catalysts.
4. "Methylrhenium Oxides: Synthesis from Re_2O_7 and Catalytic Activity in Olefin Metathesis": W. A. Herrmann, J. G. Kuchler, J. K. Felixberger, E. Herdtweck, W. Wagner, *Angew. Chem.* **1988**, *100*, 420 – 422; *Angew. Chem. Int. Ed. Engl.* **1988**, *27*, 394 – 396.
   The first efficient synthesis of CH_3ReO_3 started the systematic examination of this compound class and its application in catalysis. Meanwhile CH_3ReO_3 has become available in kilogram quantities, based on an improved, patented procedure. CH_3ReO_3 is the most efficient epoxidation catalyst reported to date.
5. "Polymeric Methyltrioxorhenium: Some Models for its Electronic Structure": H. S. Genin, K. A. Lawler, R. Hoffmann, W. A. Herrmann, R. W. Fischer, W. Scherer, *J. Am. Chem. Soc.* **1995**, *117*, 3244 – 3252.
   Heating of CH_3ReO_3 leads to the first reported polymeric organometallic oxide. The golden-colored, brasslike material displays unusual one-dimensional conductivity in its layered structure. The effect is based on the presence of methyl-deficient d^1 Re^{VI} centers. "Polymeric CH_3ReO_3" is the prototype of a new organometallic class of solid materials.

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