



R. Kempe

The author presented on this page has recently published his 10th article since 2000 in Angewandte Chemie: "Molecular Lanthanoid-Transition-Metal Cluster Through C-H Bond Activation by Polar Metal-Metal Bonds": M. V. Butovskii, O. L. Tok, V. Bezugly, F. R. Wagner, R. Kempe, Angew. Chem. 2011, 123, 7837-7840; Angew. Chem. Int. Ed. 2011, 50, 7695 - 7698With this work, R. Kempe has

been featured on the inside cover of Angewandte Chemie.



Rhett Kempe

Date of birth: February 20, 1964

Position: Professor and Chair of Inorganic Chemistry II, University of Bayreuth (Germany)

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Education: 1984–1989 Studies of Chemistry at the University of Leipzig (Germany)

1992 PhD, University of Leipzig with Prof. Dr. J. Sieler

1992–1993 Postdoc with Prof. Dr. R. R. Schrock, MIT, Cambridge (USA)

1993–1994 Postdoc with Prof. Dr. C. Krüger, MPI für Kohlenforschung, Mülheim (Germany) 1994–1998 Habilitation with Prof. U. Rosenthal, MPG AG Komplexkatalyse, Rostock

(Germany)

2000–2001 Visiting Research Scholar with Prof. R. Robson, University of Melbourne

(Australia)

Awards: 1988 Karl-Marx-Stipendium; 1993 DAAD-Postdoc-Stipendium; 1998 Karl-Winnacker-Stipen-

dium; 1998 Heisenberg-Stipendium; 2000 Visiting Research Scholar Award University of

Melbourne

Current research Our research activities focus on two topics—catalyst design and metal–metal bonding. Within **interests:** the catalyst design project we are interested in homogeneous catalysis (asymmetric catalysis.

the catalyst design project we are interested in homogeneous catalysis (asymmetric catalysis, controlled polymerization reactions, and transition-metal-catalyzed organic synthesis) and heterogeneous catalysts (hybrid systems of polymeric supports and metal nanoparticles—M@MOF (metal organic frameworks), M@SPB (spherical polyelectrolyte brushes) as well as M@SiCN (SiCN precursor ceramics). Within the metal-metal bonding project we are interested

in polar bonds and very high bond orders.

Hobbies: "Sports" (in alphabetical order): beach volleyball, biking, canoeing, football, golf, hiking,

sailing, scuba diving, and skiing

When I was eight(een) I wanted to be ... a boat builder/yacht maker.

My favorite drink is ... whisky (Islay).

The most significant historic event of the past 100 years ... to me was the reunification of Germany.

 M_y first experiment was ... (at the age of 11) the reaction of H_2O_2 with manganese dioxide, in which the released gases powered a turbine—the environmentally friendly H_2O_2 engine.

admire ... my wife.

The secret of being a successful scientist is ... pressure resistance, efficiency, and creativity.

 M_y favorite molecule is ... [La(ReCp₂)₃], also because I properly can assign its NMR signals.

If I had one year of paid leave I would ... sail around the world (despite it being a too short period of time).

he principal aspect of my personality is ... the joy of exploring.

My 5 top papers:

- "Metal Metal Distances at the Limit: A Coordination Compound with an Ultrashort Chromium – Chromium Bond": A. Noor, F. R. Wagner, R. Kempe, Angew. Chem. 2008, 120, 7356–7359; Angew. Chem. Int. Ed. 2008, 47, 7246–7249. (Our entrance to metal – metal quintuple bonding, highlighted by Nature, Science, Nature Chemistry, and others.)
- "Stable Bimetallic Gold-Platinum Nanoparticles Immobilized on Spherical Polyelectrolyte Brushes: Synthesis, Characterization, and Application for the Oxidation of Alcohols": M. Schrinner, S. Proch, Y. Mei, R. Kempe, N. Miyajima, M. Ballauff, Adv. Mat. 2008, 20, 1928-1933. (An (early) example of synergism in heterogeneous catalysis applying well-defined nanoalloys.)
- "Molecules containing rare-earth atoms solely bonded by transition metals": M. V. Butovskii, C. Döring, V. Bezugly, F. R. Wagner, Y. Grin, R. Kempe, *Nature Chem.* 2010, 2, 741–744. (My favorite molecule—a bridge between bimetallic complexes and intermetallic phases.)
- "Catalytic Alkylation of Methyl-N-Heteroaromatics with Alcohols": B. Blank, R. Kempe, J. Am. Chem. Soc. 2010, 132, 924–925. (A novel sustainable C–C coupling reaction.)
- 5. "Highly Enantioselective Amido Iridium Catalysts for the Hydrogenation of Simple Ketones": T. Irrgang, D. Friedrich, R. Kempe, Angew. Chem. 2011, 123, 2231– 2234; Angew. Chem. Int. Ed. 2011, 50, 2183–2186. (An example that highly enantioselective catalysts can be stabilized by very simple and inexpensive ligands.)

DOI: 10.1002/anie.201106369