K. Rurack

Knut Rurack

Date of birth:	July 20, 1966
Position:	Head of Chemical and Optical Sensing Division, Federal Institute for Materials Research and Testing (BAM), Berlin
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Education:	1985–1990 Chemistry and Food Chemistry Studies, Universities of Kiel and Münster 1990–1995 Worked at a Federal Research Institute for Chemistry and Veterinary Medicine, for Greenpeace's Water Campaign, and for the radio 1995–1999 PhD with Prof. W. Rettig, Humboldt Universität zu Berlin 1999–2000 Postdoc with Prof. P. Reich, BAM, Berlin
Current research interests:	Modularly configurable hybrid materials; sensor platforms; dye chemistry and optical spectroscopy; rapid tests
Hobbies:	Music, badminton, cooking, hiking

*The author presented on this page has recently published his **10th article** in Angewandte Chemie in the last 10 years:*
"Towards Chemical Communication between Gated Nanoparticles": C. Giménez, E. Climent, E. Aznar, R. Martínez-Máñez, F. Sancenón, M. D. Marcos, P. Amorós, K. Rurack, *Angew. Chem. Int. Ed.* **2014**, *53*, 12629–12633; *Angew. Chem.* **2014**, *126*, 12838–12843.

I lose track of time when … I listen to music (especially live).

My favorite saying is … "Starting is easy, but perseverance is an art".

The worst advice I have ever been given was … give up chemistry (chemistry teacher, 10th grade).

The best advice I have ever been given is … study chemistry (chemistry teacher, 11th grade—often it is not the subject but rather the teacher that makes the difference).

I can never resist … fresh tostas de cabrales con carne de membrillo.

My three favorite authors (fiction) are … Daniel Pennac, Wilhelm Genazino, and James Kelman.

My top three records of all time are … *Roxy & Elsewhere* (Zappa/Mothers of Invention), *Discipline* (King Crimson), and *Mondo Cherry* (Jacques Palminger & Kings of Dub Rock).

My favorite piece of research is … the seminal work of Linda A. Saari and W. Rudolf Seitz on a fiber-optical chemical sensor (*Anal. Chem.* **1982**, *54*, 821).

If I were not a scientist, I would be … making radio programs.

My favorite time of day is … twilight, when I am cycling across Tempelhof Airfield.

My favorite place on earth is … the North-German Wadden Sea.

The biggest problem that scientists face is … finding the best answers to the right questions.

My 5 top papers:

1. "A Selective and Sensitive Fluoroionophore for Hg^{II}, Ag^{I}, and Cu^{II} with Virtually Decoupled Fluorophore and Receptor Units": K. Rurack, M. Kollmannsberger, U. Resch-Genger, J. Daub, *J. Am. Chem. Soc.* **2000**, *122*, 968–969. (A simple design trick allowed probes to maintain their fluorescence when bound to quenchers.)
2. "Rational Design of a Chromo- and Fluorogenic Hybrid Chemosensor Material for the Detection of Long-Chain Carboxylates": A. B. Descalzo, K. Rurack, H. Weißhoff, R. Martínez-Máñez, M. D. Marcos, P. Amorós, K. Hoffmann, J. Soto, *J. Am. Chem. Soc.* **2005**, *127*, 184–200. (It all depends on the interface …)
3. "Selective, Sensitive, and Rapid Analysis with Lateral-Flow Assays Based on Antibody-Gated Dye-Delivery Systems: The Example of Triacetone Triperoxide": E. Climent, D. Gröninger, M. Hecht, M. A. Walter, R. Martínez-Máñez, M. G. Weller, F. Sancenón, P. Amorós, K. Rurack, *Chem. Eur. J.* **2013**, *19*, 4117–4122. (A modular system for a very broad range of highly selective and sensitive applications.)
4. "Fluorescent Sensory Microparticles that 'Light-up' Consisting of a Silica Core and a Molecularly Imprinted Polymer (MIP) Shell": W. Wan, M. Biyikal, R. Wagner, B. Sellergren, K. Rurack, *Angew. Chem. Int. Ed.* **2013**, *52*, 7023–7027; *Angew. Chem.* **2013**, *125*, 7161–7165. (Organic indicator dyes can be embedded into a rigid polymer matrix and still give a selective fluorescence light-up response.)
5. "Test-Strip-Based Fluorometric Detection of Fluoride in Aqueous Media with a BODIPY-Linked Hydrogen-Bonding Receptor": P. Ashokkumar, H. Weißhoff, W. Kraus, K. Rurack, *Angew. Chem. Int. Ed.* **2014**, *53*, 2225–2229; *Angew. Chem.* **2014**, *126*, 2257–2261. (Tells the whole story from molecular design to a useful application.)

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