

## PROFILE: Early Excellence in Physical Organic Chemistry

## Journal of Physical Organic Chemistry

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### Max von Delius

**Date of birth:** April 21, 1982  
**Position:** Associate Professor, University of Ulm, Germany  
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**Homepage:** www.deliushgroup.net  
**Education:** Diplom (2007, University of Erlangen-Nuremberg, Germany) PhD (2010, David A. Leigh, Synthetic Molecular Walkers, University of Edinburgh, UK) Postdoc (2011–2012, Vy M. Dong, University of Toronto, Canada)  
**Awards:** Thieme Chemistry Journal Award (2014), Emmy-Noether Fellowship (2013, DFG), Leopoldina Postdoc Fellowship (2011), Zerweck Prize for outstanding Diplom (2008)  
**Current research interests:** My research group is interested in the chemistry of dynamic chemical systems and in the synthesis of functional materials. We are currently exploring orthoester exchange as a new tool for generating dynamic systems, self-assembling unprecedented cage compounds, and synthesizing polymeric materials. We are also aiming to synthesize novel (carbon-rich) materials for applications in organic photovoltaics and other promising energy conversion schemes.  
**Hobbies:** Cycling, skiing, reading, brewing beer



Max von Delius

Supramolecular superman! The von Delius, M. group uses self-assembly to create fascinating and useful new chemical systems. Max began as an Associate Professor at the University of Ulm in 2016.

**The holygrail in modern chemistry is ...** to (better) understand the origin of life at the molecular level.

**The biggest problem that young scientists face is ...** heavily dependent on their location. In Germany, it is the lack of a tenure-track system.

**If I were not a scientist, I would be ...** a teacher or the founder of a microbrewery (or both).

**My most exciting discovery to date has been ...** the self-assembly of orthoester cryptands.

**The most important lesson I learned from my PhD supervisor is ...** "don't eat yellow snow" (from his *ACIE* author profile).

**If I could have dinner with any three people, it would be ...** Louis Pasteur, George R. R. Martin, Pope Francis.

**Something my students would be surprised to learn about me is that I ...** once was a (terrible) lead singer of a hardrock band.

**I would have liked to have discovered ...** the photovoltaic effect.

**A good day begins with ...** a smile from my wife or daughter.

**My most amusing chemistry experience thus far was ...** conspiring with friends to throw 100 g of sodium into a waterway.

**My favorite author or book is ...** Ian Rankin (*Detective Inspector Rebus* series).

**My favorite drink is ...** Frankonian beer.

**My favorite three films are ...** *Inglorious Basterds*, *The Big Lebowski*, and *The Lord of the Rings*.

**My favorite three songs are ...** *Sultans of Swing* (Dire Straits), *Heartbeats* (José González), *The Trooper* (Iron Maiden).

**My favorite food is ...** Coq au Vin.

### My 3 top papers:

1. "Self-assembly of dynamic orthoester cryptates," R.-C. Brachvogel, F. Hampel, M. von Delius, *Nature Commun.* **2015**, *6*, 7129 (We reported the first self-assembly of these tiny cage compounds and realized that they come with some very interesting properties. To be continued...).
2. "Orthoester exchange: a tripodal tool for dynamic covalent and systems chemistry," R.-C. Brachvogel, M. von Delius, *Chem. Sci.* **2015**, *6*, 1399–1402 (This paper describes physical organic studies on this reaction that was previously ignored by the field of DCC. In certain dynamic orthoester libraries, we observed unexpected behavior in the presence of metal ions, which we could explain by identifying agonistic relationships between subcomponents of the network).
3. "Increased short circuit current in an azafullerene-based organic solar cell," W. Cambarau, U. F. Fritze, A. Viterisi, E. Palomares, M. von Delius, *Chem. Commun.* **2015**, *51*, 1128–1130 (The key finding of this study was that azafullerenes, buckyballs with one nitrogen atom instead of carbon (C<sub>59</sub>N), can rival the benchmark electron acceptor PCBM in bulk heterojunction solar cells, due to their enhanced absorption of visible light and the resulting contribution to the photocurrent).