Angewandte 50 Years International Edition Chemie

Jürgen O. Metzger

Date of birth: November 9, 1940
Position: Professor of Organic Chemistry (retired), University of Oldenburg (Germany)
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Education: 1960–1967 Undergraduate university education at the University of Tübingen, University of Erlangen, Freie Universität Berlin, University of Hamburg (Germany)
1971 PhD with H. Sinn, University of Hamburg
1983 Habilitation in Organic Chemistry, University of Oldenburg

Awards: **1981** Océ-van der Grinten Award for the Promotion of Science in the Area of Environmental Protection; **1994** August-Claas Award "Renewable Raw Materials"; **2007** Wöhler Prize for Resource-Saving Processes of the German Chemical Society (GDCh); **2009** Normann Medal of the German Society for Fat Science (DGF)

Current research interests: Since my retirement in 2006 I have focused my research interests on renewable substances as chemical feedstock in general, and oils and fats in particular. On the one hand, modern organic, in particular catalytic reactions are being applied to renewable substances to make available compounds with interesting properties. On the other hand, new reactions for desired transformations of renewable compounds that are not available from the toolbox of synthetic organic chemistry are being studied.

Hobbies: Opera and hiking

J. O. Metzger

*The author presented on this page has recently published his **10th article** since 2000 in Angewandte Chemie*: "Oils and Fats as Renewable Raw Materials in Chemistry": U. Biermann, U. Bornscheuer, M. A. R. Meier, J. O. Metzger, H. J. Schäfer, *Angew. Chem.* **2011**, *123*, 3938–3956; *Angew. Chem. Int. Ed.* **2011**, *50*, 3854–3871.

I like refereeing because … it gives me a more original picture of the paper.

The greatest scientific advance in the next decade will be … the transition to sustainable and biobased chemistry.

If I won the lottery, I would … build an organic chemistry lab dedicated to renewable feedstocks.

My best investment was … to write an application for funding of my first studies on renewable feedstocks in the seventies of the last century.

The best stage in a scientist's career is … the last ten years.

I can never resist … delicious oysters.

My top three films of all time are … 1) Children of Paradise (Les enfants du paradis; Marcel Carné), 2) Casablanca (Michael Curtiz), 3) Breathless (À bout de souffle; Jean-Luc Godard).

My 5 top papers:

1. "New Syntheses with Oils and Fats as Renewable Raw Materials for the Chemical Industry": U. Biermann, W. Friedt, S. Lang, W. Lühs, G. Machmüller, J. O. Metzger, M. Rüsch gen. Klaas, H. J. Schäfer, M. P. Schneider, *Angew. Chem.* **2000**, *112*, 2292–2310; *Angew. Chem. Int. Ed.* **2000**, *39*, 2206–2224. (In the 1980s, basic and applied research was intensified to use renewable substances in general, and oils and fats in particular as chemical feedstock; the results obtained until 2000 were reviewed.)
2. "10 Years after Rio – Concepts on the Contribution of Chemistry to a Sustainable Development": M. Eissen, J. O. Metzger, E. Schmidt, U. Schneidewind, *Angew. Chem.* **2002**, *114*, 402–425; *Angew. Chem. Int. Ed.* **2002**, *41*, 414–436. (In this paper we investigated necessary innovations in chemistry exemplarily for a sustainable development with regard to their ecological, economical, and social dimensions from a transdisciplinary perspective.)
3. "Investigation of Reactive Intermediates of Chemical Reactions in Solution by Electrospray Ionization Mass Spectrometry: Radical Chain Reactions": J. Grieb-Raming, S. Meyer, T. Bruhn, J. O. Metzger, *Angew. Chem.* **2002**, *114*, 2863–2866; *Angew. Chem. Int. Ed.* **2002**, *41*, 2738–2742. (In this paper a method for the direct observation of radicals in radical chain reactions was reported.)
4. "Alkylation of Alkenes: Ethylaluminum Sesquichloride-Mediated Hydro-Alkyl Additions with Alkyl Chloroformates and Di-*tert*-butylpyrocarbonate": U. Biermann, J. O. Metzger, *J. Am. Chem. Soc.* **2004**, *126*, 10319–10330. (Established a generally applicable reaction for the alkylation of the non-activated double bond.)
5. "Sustainable global energy supply based on lignocellulosic biomass from afforestation of degraded areas": J. O. Metzger, A. Hüttermann, *Naturwissenschaften* **2009**, *96*, 279–288. (We showed that the global energy demand projected for the year 2030 could be provided sustainably and economically primarily from lignocellulosic biomass grown on areas that have been degraded by human activities in historical times.)

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