Hansjörg Grützmacher

Prof. Dr. Hansjörg Grützmacher,
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Date of Birth: March 24, 1959, Nationality: German

Education:

1987 - 1992: Habilitation at the University of Heidelberg (topic: Low coordinated tin and phosphorus compounds).
1986 -1987: Chargé de recherche at the C.N.R.S. Toulouse, Laboratoire de Chimie de Coordination (with Dir. Dr. G. Bertrand).
1978 - 1986: Studies, Master, and PhD in chemistry in Göttingen, Germany (with Prof.Dr. H.W. Roesky).

Professional Career:

2001 - present: Full-professor at the Department of Chemistry and Applied Biosciences of the ETH Zürich.
1995 - 2001: Extra-ordinary professor of Inorganic Chemistry at the ETH Zürich.
1992 - 1995: Professor of Inorganic and Analytical Chemistry at the University of Freiburg.

Visiting professorships:

2002- 2006: Professeur chargé de cours at the Ecole Polytechnique, Paris-Palaiseau.
2004, 2005: Visiting professor at the Université des Antilles et de la Guyane.
2010: Visiting professor at the ICCOM-CNR, Florence, Italy
2012-2017: Visiting professor at the Sun Yat-Sen University, China

Research interests:
(i) phosphorus radicals (potentially interesting as "super"-spin-labels); (ii) structures and reactivity of low coordinated phosphorus compounds and metal phosphides; (iii) main group element based photo-initiators; iv) transition metal olefin and amine/amido complexes; v) redox chemistry of organometallics; (iv) catalytic hydrogenation and dehydrogenation reactions promoted by transition metal complexes.

Major Publications:

1. A first stable aminyl radical metal complex, T. Büttner, J. Geier, G. Frison, J. Harmer, C. Calle, A. Schweiger, H. Grützmacher, *Science*, **2005**, *307*, 235 - 238.
2. A Biologically Inspired Organometallic Fuel Cell (OMFC) that Converts Renewable Alcohols into Energy and Chemicals**,** S. P. Annen, V. Bambagioni, M. Bevilacqua, J. Filippi, A. Marchionni, W. Oberhauser, H. Schönberg, F. Vizza, C. Bianchini, H. Grützmacher**,** *Angew. Chem.* **2010**, 7387–7391; *Angew. Chem. Int. Ed. Engl.* **2010**, 7229–7233.
3. Phosphination of Carbon Monoxide: A Simple Synthesis of Sodium Phosphaethynolate (NaOCP), *Angew. Chem., Int. Ed*., **2011**, *50*, 8420-8423.
4. A Homogeneous Transition Metal Complex for the Clean Hydrogen Production from Methanol / Water Mixtures, R. E. Rodríguez-Lugo, M. Trincado, M. Vogt, F. Tewes, G. Santiso-Quinones, H. Grützmacher, *Nature Chemistry*, **2013**, *5*, 342-347
5. Homogeneously Catalysed Conversion of Aqueous Formaldehyde to H_2 and Carbonate, M. Trincado, V. Sinha, R. Rodriguez-Lugo, B. Pribanic, B. de Bruin, H. Grützmacher, *Nat. Commun*., **2017**, NCOMMS-16-22952C.
6. N-Heterocyclic Carbene Stabilized Dicarbondiphosphides: Strong Neutral Four-Membered Heterocyclic 6 π-Electron Donors, Z. Li, X. Chen, L. Liu, M. Scharnhölz, H. Grützmacher, *Angew. Chem. Int. Ed.*, **2020**, *59*, 4288-4293.
7. In vitro Implementation of Photopolymerizable Hydrogels as a Potential Treatment of Intracranial Aneurysms, O. Poupart, A. Schmocker, R. Conti, C. Moser, K. M. Nuss, H. Grützmacher, P. J. Mosimann, D. P. Pioletti, *Frontiers in Bioengineering and Biotechnology*, **2020**, *8*, https://doi.org/10.3389/fbioe.2020.00261.
8. A Room-Temperature Stable Distonic Radical Cation, X. Chen, L. L. Liu, S. Liu, H. Grützmacher, Z. Li, *Angew. Chem. Int. Ed.*, **2020**, *59*, 23830-23835.

Selected Awards and Honors:
1993: Carl Duisberg Medal of the German Chemical Society; **2006**: Kohler Lecturer at the University of California, Riverside; **2007**: Sandmeyer Award of the Swiss Chemical Society; **2009:** Xerox lecture at the University of British Columbia**, 2011:** Egon Wiberg lecture at the Ludwig-Maximilian-University in Munich, **2012**: R. J. P. Williams lecture, Oxford. **2013**: Hofmann Distinguished Lecture, Imperial College London. **2014**: Curator of the Angewandte Chemie. **2017**: Wilhelm Klemm Award of the German Chemical Society. **2021**: Honoray doctoral degree of Budapest University of Technology and Economics.