

Personal Information:

Born: 12 May 1963 (Amsterdam)

Married, 3 grown-up children

Address: Asterkade 14, 2106BA Heemstede

Email: gert-jan.gruter@avantium.com

**Education:**

1985 – 1990 Chemistry, VU Amsterdam (major Organic Chemistry; minor Neutron Activation, UvA)

1990 – 1994 PhD Chemistry, VU Amsterdam

Professional Experience:***Avantium Holding BV, Amsterdam, NL***

Period: November 2004 – now
Position: Chief Technology Officer

Period: August 2000 – November 2004
Position: VP Technology

Responsibility: Leadership of Avantium's technology development (long term strategy, execution) with focus on renewables.
Intellectual property
Member of management team

Eindhoven University of Technology

Extraordinary Professor Polymer Catalysis 1999-2006

DSM Research BV

Position: Group Leader DSM Polyolefins Catalyst Development

Period: March 1994 – August 2000

In October 2014, Gert-Jan was elected "European CTO of the year"

(<http://www.spinverse.com/cto-year-europe-2014-awarded/>)

Nobel Peace Prize 1987 (United Nations Interim Force in Lebanon (UNIFIL))

Some selected activities:

- (Co)author of 30 scientific papers (see Appendix).
- (Co)inventor on more than 200 patents and patent applications http://worldwide.espacenet.com/searchResults?submitted=true&locale=en_EP&DB=EPODOC&ST=advanced&TI=&AB=&PN=&AP=&PR=&PD=&PA=&IN=gruter&CPC=&IC (see Appendix for a selection).
- 10+ Years member of the VIRAN board (www.viran.eu), the Industrial advisory council of NIOK (www.NIOK.eu), the Netherlands Institute for Catalysis Research, currently in the role of treasurer.
- 5+ Years member of the platform APC, which is an industrial group of companies from the Agro-food, Paper and Chemical industries. 3+ Years member of core-team (<http://www.dutchbiorefinerycluster.nl/over-dbc--apc/apc>).
- 5+ Years member of the Innovation policy group of the VNCI (www.vnci.nl), The Association of the Dutch Chemical Industry (3rd in Europe with 60Bn€ turn-over (2012) and >1 Bn€ yearly R&D investment). The group reports to the VNCI board and advises on strategic direction.
- 3+ Years member of the TKI-NCI program committee (www.tki-nci.nl/bestuur+en+programmaraad). This committee decides on Dutch government subsidy spending (approx 20M€/yr) on innovative chemical research. The committee plays a prominent role in the creation, development and management of the TKI program. The committee has representatives from industry, research institutions and universities.
- Member of multidisciplinary strategy team advising Dutch government on R&D strategy in relation to **the circular economy**
- Frequently invited speaker at (international) conferences such as
 - 04/14 Zoetermeer: American Institute of Chemical Engineers
 - 09/14 & 11/15 San Francisco: 5th & 6th Biobased Chemicals: Commercialization & Partnering Conference (<https://www.gtcbio.com/conferences/biobased-chemicals-commercialization-partnering-speakers>)
 - 10/14 TU Delft: KIVI symposium 'Materials: re(d)use and construct'
 - 11/14 Leiden: Congres Industrial Research: Past and Future
 - 12/15 London: The 2015 European Biopolymer Summit
- Several company awards for YXY technology e.g.:
 - Amsterdam Invention of the year award (2010)
 - 2012-3 top 30 hottest companies in renewable chemicals – Biofuels Digest
 - 2013 Innovation in Bioplastics Award – SPI Bioplastics Council (award lecture by GJ Gruter)
 - Avantium is the only European company to have been in the top 10 European companies within the Global Cleantech 100 for the past six years
 - European Cleantech company of the decade (2005-14) – European Cleantech Forum.
- Member of various conference advisory boards e.g. ISHHC17. (<http://www.ishhc17.org/advisoryboard.html>)

APPENDIX. Publication list – List of (selected) patents

- Andreia F. Sousa, Carla Vilela, Ana Clotilde Fonseca, Marina Matos, Carmen S. R. Freire, Gert-Jan M. Gruter, Jorge Jordão Coelho, Armando J. D. Silvestre: *Biobased polyesters and other polymers from 2,5-furandicarboxylic acid: A tribute to furan excellency*. *Polymer Chemistry* 2015, 33(6), 5961-5983.
- Ed de Jong, Matheus A. Dam, Laszlo Sipos, Gert-Jan. M. Gruter *Furandicarboxylic acid (FDCA), a versatile building block for a very interesting class of polyesters*. *ACS Symp. S. 1105 "Biobased Monomers, Polymers and Materials"* (eds. P.B. Smith and R. Gross) 2012, 1-13.
- Ed de Jong, Thomas Vijlbrief, Rene Hijkoop, Gert-Jan M. Gruter, Jan C. van der Waal: *Promising results with YXY Diesel components in an ESC test cycle using a PACCAR Diesel engine*. *Biomass and Bioenergy* 2012, 36, 151-159.
- Gert-Jan M Gruter, Laszlo Sipos, Matheus Adrianus Dam: *Accelerating Research into Bio-Based FDCA-Polyesters by Using Small Scale Parallel Film Reactors*. *Combinatorial chemistry & high throughput screening* 2011, 15(2), 180-188.
- Camille Descour, Rob Duchateau, Mamoeletsi R. Mosia, Gert-Jan M. Gruter, John R. Severn, Sanjay Rastogi: *Catalyst behaviour for 1-pentene and 4-methyl-1-pentene polymerisation for C2-, Cs- and C1-symmetric zirconocenes*. *Polymer Chemistry*, 2011, 2, 2261-2272.
- Jan C. Van der Waal, Robert-Jan. van Putten, Erik-Jan. Ras, Martin Lok, Gert-Jan M. Gruter, Marjolein Brasz, Ed. De Jong: *The High-Throughput Research Approach to Biorefineries – A powerful tool for studying the complexity of catalytic processes*. *Cellulose Chemistry and Technology* 2011, 45(7), 461-466.
- Gert-Jan M. Gruter, Otto S. Akkerman, Friedrich Bickelhaupt, Wilbert J. J. Smeets, Anthony L. Spek: *A remarkable halogen-zinc exchange reaction; X-ray crystal structure of (2-iodozincio-1,3-xylylene)-15-crown-4*. *Recueil des Travaux Chimiques des Pays-Bas* 1993, 112(6), 425-426.
- Edwin G. IJpeij, Felix H. Beijer, Henricus J. Arts, Claire Newton, Johannes G. de Vries, Gert-Jan M. Gruter: *A Suzuki Coupling Based Route to 2,2'Bis(2-indenyl)biphenyl Derivatives* *Journal of Organic Chemistry* 2002, 67(1), 169-176
- Erik-Jan Ras, Sergio Maisuls, Paul Haesackers, Gert-Jan M. Gruter, Gadi Rothenberg: *Selective Hydrogenation of 5-Ethoxymethylfurfural over Alumina-Supported Heterogeneous Catalysts*. *Advanced Synthesis & Catalysis* 2009, 351(18), 3175-3185.
- E. De Jong, G.-J. Gruter: *Furanics: A novel diesel fuel with superior characteristics*. *SAE Technical Paper* 2009-01-2767. 2009.
- G.-J. Gruter, E. de Jong: *Furanics: Novel fuel options from carbohydrates*. *Biofuels Technology* 2009, 1, 11-17.

- Robbert Duchateau, Wouter J. van Meerendonk, Latifa Yajjou, Bastiaan B. P. Staal, Cor E. Koning, Gert-Jan M. Gruter: *Ester-Functionalized Polycarbonates Obtained by Copolymerization of Ester-Substituted Oxiranes and Carbon Dioxide: A MALDI-ToF-MS Analysis Study*. *Macromolecules* 2006, 39(23), 7900-7908.
- Edwin G. Ijpeij, Gert-Jan M. Gruter: *2-Lithioindenyllithium: An Easy Accessible Intermediate for the One-Pot Synthesis of Single- and Double-Functionalized 2-Indene Derivatives*. *Synthesis* 2006, 1408-1414.
- Wouter J. van Meerendonk, Robbert Duchateau, Cor E. Koning, Gert-Jan M. Gruter: *Unexpected Side Reactions and Chain Transfer for Zinc-Catalyzed Copolymerization of Cyclohexene Oxide and Carbon Dioxide*. *Macromolecules* 2005, 38(17), 7306-7313.
- Wouter J. van Meerendonk, Robbert Duchateau, Cor E. Koning, Gert-Jan M. Gruter: *High-Throughput Automated Parallel Evaluation of Zinc-Based Catalysts for the Copolymerization of CHO and CO₂ to Polycarbonates*. *Macromolecular Rapid Communications* 2004, 25(1), 382-386.
- Pieter Imhof, Ana S Dias, Ed De Jong, Gert-Jan M. Gruter: *Furanics: Versatile Molecules for Biofuels and Bulk Chemicals Applications*. 21 NAM, 2009, San Francisco. Nacatsoc Paper 2970.
- Gert-Jan M. Gruter, Alasdair Graham, Ben McKay, François Gilardoni: *R&D Intensification in Polymer Catalyst and Product Development by Using High-Throughput Experimentation and Simulation*. *Macromolecular Rapid Communications* 2003, 24(1), 73-80.
- Edwin G Ijpeij, Felix H Beijer, Henricus J Arts, Claire Newton, Johannes G de Vries, Gert-Jan M Gruter: *A Suzuki Coupling Based Route to 2,2'-Bis(2-indenyl)biphenyl Derivatives*. *The Journal of Organic Chemistry* 2002, 67(1), 169-176.
- Claudio Pellecchia, Daniela Pappalardo, Leone Oliva, Mina Mazzeo, Gert-Jan M. Gruter: *Selective Co-oligomerization of Ethylene and Styrenes by Half-Titanocene Catalysts and Synthesis of Polyethylenes with 4-Aryl-1-butyl Branches*. *Macromolecules* 2000, 33(8), 2807-2814.
- Claudio Pellecchia, Daniela Pappalardo, Gert-Jan M. Gruter: *Branched Polyethylene Produced by a Half-Titanocene Catalyst*. *Macromolecules* 1999, 32(13), 4491-4493.
- Claudio Pellecchia, Mina Mazzeo, Gert-Jan M. Gruter: *Synthesis of 4-phenylbutyl-branched polyethylene from an ethylene-styrene feed by a half-titanocene catalyst*. *Macromolecular Rapid Communications* 1999, 20(6), 337-340.
- Ioannis D. Kostas, Gert-Jan M. Gruter, Otto S. Akkerman, Friedrich Bickelhaupt, Huub Kooijman, Wilberth J. J. Smeets, Anthony L. Spek: *Functionalization of 1,3-Phenylene-16-crown-5 via Direct Lithiation*. *Organometallics* 1996, 15(21), 4450-4458.
- Gert-Jan M. Gruter, Ben L. M. van Baar, Tom J. Gerrits, Otto S. Akkerman, Friedrich Bickelhaupt, Anja Barkow, Dietmar Kuck: *The remarkable electron impact mass spectrum of (2-benzyl-1,3-xylylene)-15-crown-4: Expulsion of triethylene glycol by double hydrogen transfer*. *Journal of the Chemical Society Perkin Transactions 2* 1996, 925-932.

- Gert-Jan M. Gruter, Otto S. Akkerman, Friedrich Bickelhaupt: *The formation of catenanes. The Möbius strip approach revisited*. Tetrahedron 1996, 52(7), 2565-2572.
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- Gert-Jan M. Gruter, Otto S. Akkerman, Friedrich Bickelhaupt: *Nuclear versus Side-Chain Bromination of Methyl-Substituted Anisoles by N-Bromosuccinimide*. J. Org. Chem. 1994, 59, 4473-4481.
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- Gert-Jan M. Gruter, Gerard P. M. van Klink, Otto S. Akkerman, Friedrich Bickelhaupt: *Mechanism of the unusual ether cleavage of (2-methoxy-1,3-xylylene)-15-crown-4 by organomagnesium reagents*. Organometallics 1993, 12(4), 1180-1188.
- Gert-Jan M. Gruter, Gerard P. M. Van Klink, Georgios A. Heropoulos, Otto S. Akkerman, Friedrich Bickelhaupt: *Activation of organomagnesium reagents by crown ethers: unusual ether cleavage of (2-methoxy-1,3-xylylene)-15-crown-4*. Organometallics 1991, 10(8), 2535-2536.
- J. T. Van Elteren, G. J. M. Gruter, H. A. Das, U. A. Th. Brinkman: *SolidPhase Extraction of As(III) from Aqueous Samples Using On-Column Formation of As(III)-Trispyrrolidinedithiocarbamate*. International Journal of Environmental Analytical Chemistry 1991, 43(1) 41-54.

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