

Curriculum Vitae Prof. Filip Du Prez



PERSONAL INFORMATION

Family name, First name: Du Prez, Filip

Date of birth: October 30, 1970 (Born in Zottegem, Belgium)

URL for group website: www.PCR.UGent.be

ORCID: <https://orcid.org/0000-0001-7727-4155>

UGent Biblio ID: <https://biblio.ugent.be/person/801000886393>

• EDUCATION

- 1996 **PhD** in Chemistry (funded by Fund of Scientific Research (FWO) – Belgium)
Faculty of Sciences/ Department of Organic and Macromolecular Chemistry, Ghent University/ Belgium and partially in Lehigh University, USA (Prof. Sperling)
- 1992 **Master** in Chemistry with greatest Distinction, Faculty of Sciences/ Department of Organic and Macromolecular Chemistry, Ghent University/ Belgium

• CURRENT POSITIONS

- 2019: Promotor of doctor honoris causa degree for Prof. Ludwik Leibler (ESPCI, France), inventor of vitrimers (one of main research themes PCR, see below)
- 2016 - now Representative of the Belgian Polymer Group (BPG) in the European Polymer Federation (EPF).
- 2018 - now Associate Editor of [Polymer Chemistry](#) (RSC journal)
- 1999 - now Professor (full Professor since 2010) and research leader Polymer Chemistry Research Group (PCR, 25 researchers), Faculty of Sciences/ Department of Organic and Macromolecular Chemistry, Ghent University. [Prometheus award 2014 for best researcher of Ghent University](#)
- 2008 - now Promotor-Coordinator of [valorization consortium Chemtech](#) dealing with the research valorization of 20 UGent research groups
- Since 2015 Founder of Centre of Macromolecular Chemistry at UGent (80 researchers), see www.CMaC.ugent.be
- 2008 Visiting professor, University of New South Wales/ Sydney, Australia

• PREVIOUS POSITIONS

- 2008 -2018 **Associate Editor** of *European Polymer Journal*
- 2008 **Visiting professor** (5 months), Centre for Advanced Macromolecular Design/ University of New South Wales/ Australia (hosted by Prof. C. Barner-Kowollik)
- 1996 – 1999 **Postdoctoral position** (funded by FWO), University of Montpellier, France (10 months) and Department of Organic and Macromolecular Chemistry, Ghent University/ Belgium (26 months)

• FELLOWSHIPS AND AWARDS

- 2014 [Prometheus award 2014 for best researcher of Ghent University](#)
- 1996 – 1999 Postdoctoral fellowship FWO and mobility grant (National Science Foundation)
- 1995 Chemistry and Technology Award (1st laureate) from DSM chemical company

• SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- 2000 – now Supervision of [36 Postdocs](#) (actually 6 postdocs)/ [54 PhD's](#) (39 graduated, actual supervision of 15 PhD researchers) in Department of Organic and Macromolecular Chemistry, Ghent University

*Seven former postdocs and one PhD have taken **academic positions** (France, UK, NL, India, Argentina, Vietnam, China) while 7 postdocs/20 PhD's have taken important **industrial positions** in chemical/material/life science companies such as 3M,*

Agfa, Allnex, Arkema, Bayer, BASF, Dow, DSM, Huntsman, Janssen Pharmaceutica, Lanxess, Recticel, Solutia and Umicore.

TEACHING ACTIVITIES

Since 1999 Courses in Organic Chemistry, Introduction to Polymer Science, Polymer Materials, Advanced Polymer Chemistry in Ghent University (both for Chemistry and Chemical Engineers)/ Belgium (around 115 hours / year)

ORGANISATION OF SCIENTIFIC MEETINGS since 2007 (N = national, I = international)

- 2019 (I) Summer School European Polymer Federation on “Dynamic and Reversible Polymer Networks” in Italy (125 participants)
- 2017 (I) Chairman International Conference ‘Advanced Polymers via Macromolecular Engineering’ (APME) in Ghent (500 participants)
- 2014 (N) Chairman Belgian Polymer Group Annual Meeting (220 participants) / Belgium
- 2013 (I) Chairman ESF networking conference “Precision Polymeric Materials” (95 p) / Belgium
- 2012 (I) Chairman 2nd Belgian-German Macromolecular meeting “Advanced Materials by Modular Strategies: From Synthesis to Industrial Applications” (145p) / Belgium
- 2009 (I) Chairman 1st Belgian-German Macromolecular meeting “Controlled/Living Radical Polymerizations” (140p) / Belgium
- 2007 (I) Chairman International Workshop “Functional polymer materials based on tailor-made macromolecules: synthesis, characterization and membrane applications” (80p) / Belgium
- 2007 (I) Co-organizer 1st Symposium “Baekeland 2007: Thermosets – 100 years after Bakelite” (200p) / Belgium

Publication analysis and scientific impact (December 2019)

The research activities in the areas of 1) polymer functionalization, 2) dynamic and self-healing polymers and 3) polymers from renewable resources resulted in more than 300 refereed publications including 12 reviews (h-index 54; > 10.000 citations overall), 15 book chapters, (co-)editor of a Wiley-book, editor of two special issues and inventor on 13 patents or patent applications.

Selection of recent, representative publications (papers in 2014 – 2019)

1. Internal Catalysis in Covalent Adaptable Networks: Phthalate Monoester Transesterification as a Versatile Dynamic Cross-Linking Chemistry, M. Delahaye, J.M. Winne, F.E. Du Prez, **J. Am. Chem. Soc.**, DOI: 10.1021/jacs.9b07269, 2019
2. Fast processing of highly crosslinked, low-viscosity vitrimers, C. Taplan, M. Guerre, J.M. Winne, F.E. Du Prez, **Mater. Horiz.**, DOI: 10.1039/C9MH01062A, 2019
3. Light-Stabilised Dynamic Materials, H.A. Houck, E. Blasco, F.E. Du Prez, C. Barner-Kowollik, **J. Am. Chem. Soc.**, 141, 12329-12337, 2019
4. Multifunctional sequence-defined macromolecules for chemical data storage, S. Martens, A. Landuyt, P. Espeel, B. Devreese, P. Dawyndt, F.E. Du Prez, **Nat. Comm.**, 9, 4451, 2018
5. Fluorinated vitrimer elastomers with a dual temperature response, M. Guerre, C. Taplan, R. Nicolay, J. Winne, F.E. Du Prez, **J. Am. Chem. Soc.**, 140, 13272-13284, 2018
6. Thiol-ene chemistry for polymer coatings and surface modification – building in sustainability and performance, C. Resetco, B. Hendriks, N. Badi, F.E. Du Prez, **Mat. Horizons**, 4, 1041-1053, 2017

7. Hannes A. Houck, Filip E. Du Prez and Christopher Barner-Kowollik, Controlling Thermal Reactivity with Different Colors of Light, **Nat. Comm.**, 8, 1869, 2017
8. Wim Denissen, Martijn Droesbeke, Renaud Nicolaÿ, Ludwik Leibler, Johan Winne, Filip E. Du Prez, Chemical control of the viscoelastic properties of vinylogous urethane vitrimers, **Nat. Comm.**, 8, 14857-14863 (2017)
9. Steven Martens, Jos Van den Begin, Annemieke Madder, Filip E. Du Prez, Pieter Espeel, Automated synthesis of monodisperse oligomers, featuring sequence control and tailored functionalization, **J. Am. Chem. Soc.**, 138, 14182–14185 (2016).
10. Stijn Billiet, Kevin De Bruycker, Frank Driessen, Hannelore Goossens, Veronique Van Speybroeck, Johan M. Winne and Filip E. Du Prez*, Triazolinediones enabling click and transclick reactions, **Nat. Chem.**, 6(9), 815-821 (2014)

• **Most important reviews/book contributions (selected from period 2011-2019)**

1. Dynamic Covalent Chemistry in Polymer Networks: A Mechanistic Perspective, J.M. Winne, L. Leibler, F.E. Du Prez, **Polym. Chem.**, DOI: 10.1039/C9PY01260E, 2019
2. Thermoplastic polyacetals: Chemistry from the past for a sustainable future?, A. Hufendiek, S. Lingier, F.E. Du Prez, **Polym. Chem.**, 10(1), 9-33, 2019
3. Anthracene-containing polymers toward high-end applications, J. Van Damme, F.E. Du Prez, **Prog. Polym. Sci.**, 82, 92–119, 2018
4. Fabienne Goethals, Daniel Frank, Filip Du Prez, Protected Thiol Strategies in Macromolecular Design, **Prog. Polym. Sci.** 64, 76–113, 2017
5. Kevin De Bruycker, Stijn Billiet, Hannes A. Houck, Subrata Chattopadhyay, Johan M. Winne and Filip E. Du Prez, Triazolinediones as highly enabling synthetic tools, **Chem. Rev.**, 116, 3919–3974, 2016)
6. Wim Denissen, Johan M. Winne and Filip E. Du Prez, Vitrimers: permanent organic networks with glass-like fluidity, **Chem. Sci.**, 7, 30-38, 2016
7. Xander Hillewaere, Filip Du Prez, Fifteen Chemistries for Autonomous Extrinsic Self-Healing Polymers and Composites, **Prog. Polym. Sci.** 49–50, 121–153, 2015
8. Christopher Barner-Kowollik, Filip E. Du Prez, Pieter Espeel, Craig J. Hawker, Thomas Junkers, Helmut Schlaad, Wim Van Camp, “Clicking Polymers or Just Efficient Linking: What Makes the Difference?” **Angew. Chem. Int. Ed.**, 50, 60-62, 2011
9. Talha Gokmen, Filip Du Prez, Porous Polymer Particles – A Comprehensive Guide to Synthesis, Characterization, Functionalization and Applications, **Prog. Polym. Sci.** 37, 365-405, 2012
10. Bart Dervaux, Filip Du Prez, Heterogeneous azide-alkyne click chemistry: towards metal-free end products, **Chem. Sci.**, 3, 959-966, 2012
11. Co-editor of Wiley-book “Complex macromolecular Architectures: Synthesis, characterization and self-assembly”, Ed. Filip Du Prez, Nikos Hadjichristidis, Akira Hirao and Yasuyuki Tezuka Wiley-VCH, Weinheim Germany, ISBN 978-0-470-82513-6 (2011).