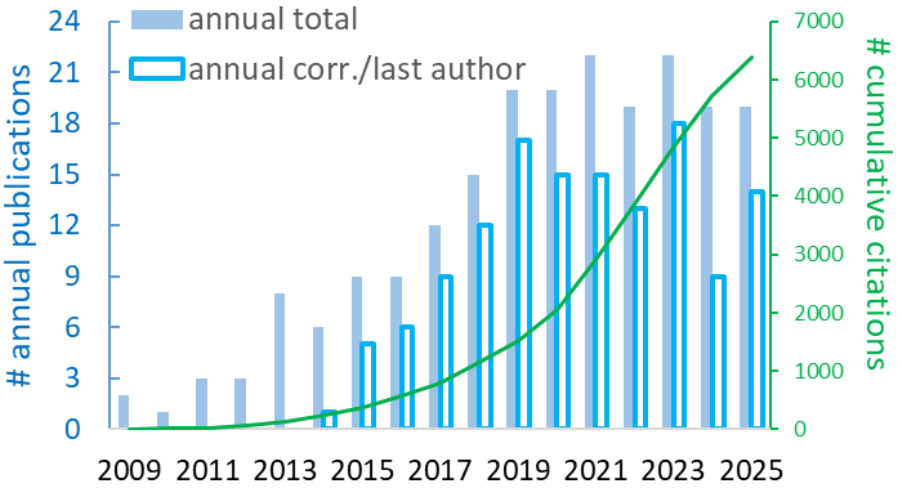
Dagmar R. D'hooge, PhD, Senior Full Professor; Last update September 2025

Short CV

- **full length peer-reviewed articles**: 208 (134 as corresponding/last author)
- ***h*-index** (Web of Science / Google Scholar): 43 / 50



- book chapters: 7; and books: 2 (1 edited); 250 international conferences (30 invited lectures)
- 3 granted patents; editorial board member of Polym. Chem., Polymers, and Scientific Reports
- **19.5 M€** of research grants (13.7 M€: PI, 3.6 M€: co-PI; 2.2 M€: partner)
- PI of infrastructure for **8 M€**.
- invited member of the International Union of Applied Chemistry (IUPAC); task leader
- European consortium projects (*e.g.* H2020): 3 times PI, 3 times co-PI and 1 time coordinator.
- Awards:
    - the **Solvay Chemistry award** in 2006 (Master thesis)
    - the Jozef. Plateau award (promotor Master thesis) in 2016, 2018 and 2021
    - the DTU-IRIS climate technology leading researcher recognition in 2023
    - the **Trophées Innovation Team award** by Sorbonne University in 2024
    - the International Olympic Committee **Climate Action Award** in 2024 together with FIH
    - 6 reviewer awards.

Five key publications

2021: **Nature Materials** 20, 1422 (IF: **43.8**); last and corresponding author (cover article)
Leading *k*MC platform for 3D positioning of functional groups for structure-property relationships in polymer network synthesis; the in my PhD developed diffusion models are essential; times cited: 130.

2024: **Additive Manufacturing** 86, 104191 (IF: **11.6**); last and corresponding author
3D melt flow simulation for material extrusion of basic and complex shapes, times cited: 11.

2025: **Nano Energy** 135, 110629 (IF: **16.8**); last and corresponding author
A high performing scalable self-powered sensor based on material extrusion and polymer material design for artificial intelligence (AI) driven accurate motion recognition; times cited: 1

2025: **Chemical Engineering Journal** 521, 166229 (IF: **13.2**); last and corresponding author
A paradigm shift in simulation time for polymer averages with kinetic Monte Carlo; e.g. for free radical polymerization 2 s instead of conventionally 1 minute; times cited: 1.

2025: **Chemical Engineering Journal** 507, 160744 (IF: **13.2**); last and corresponding author
A novel protocol to characterize polymeric systems with strong crosslinking, connecting the molecular and material level, and bridging both leading experimental and modeling tools; times cited: 1.

Other scientific output and impact

2020: **formulation patent** in construction sector commercialized by SME for large scale floors
Novel synthesis technology for acrylic mixtures with oxygen control for sustainable pot-life regulated curing, with reduced odor formation in line with European regulations and viscosity control

2021: **co-founder spin-off Polinivo**: polymer synthesis, modification and recycling software
The chemical engineering tools developed in 2012-2021 allow for industrial quality & process control, making a unique link to molecular-distribution-based material (*e.g.* rheological) properties; 10 clients.

2023: **commercialized case covered in book on chemical recycling**; leading editor
Roadmap for depolymerization technology ofor the high TRL H2020 SPIRE as only academic PI.

2023: **co-founder spin-off MakinH**: patented self-wetting ball for sustainable hockey
From irrigating fields (6.8 10^9 L per year) only few L needed. Selected for World Cup Hockey5s by International hockey federation (FIH); and part of IOC (Paris 2024 Olympics) Climate action award.

2025: **2 cover socio-economic articles** on the balance for PET mechanical and chemical recycling

These contributions address the available technologies as well as a new method for LCA analysis.
2025: Invited advisory board member for **competence center** CHASE from June onwards
Expertise in virtualizing processes, making them more flexible and transforming them circular.