Dr. Josiane P. Lafleur

CEO & Co-founder — Invisible-Light Labs GmbH (TU Wien spin-off)

josiane.lafleur@invisible-light-labs.com · Vienna, Austria · Canadian & Swiss · Languages: EN/FR (bilingual), DA B2, DE B2 · ORCID 0000-0003-4459-8801 · b. 28 Jan 1980 · two children (parental leave 2015, 2017)



I am a deep-tech CEO and analytical scientist working at the interface of chemistry, nanotechnology, and sensing. As founder and Managing Director of Invisible-Light Labs, I turned groundbreaking nanomechanical sensing research into a commercial company with a team of more than ten, a product selling globally, a strategic partnership with Bruker, and secured non-dilutive grants and venture capital. My focus is building spectroscopic tools that solve real societal challenges in environmental and bio-analytical sensing, air and water quality, and pharmaceutical development and quality control.

ENTREPRENEURIAL LEADERSHIP & COMMERCIAL ACHIEVEMENTS

- **Founded Invisible-Light Labs (TU Wien spin-off, 2018), growing it into a >10-person deep-tech company with a product on the international market.**
- **Brought EMILIE to market in 2024: The world's first commercial NEMS-FTIR nanoparticle analyzer, named #1 Analytical Innovation of the Year by The Analytical Scientist.**
- **Negotiated and closed a co-branding & distribution partnership with Bruker Optics (2025), giving EMILIE reach across ~50 countries.**
- **Closed a €1.5M pre-seed venture round (2026; aws Gründungsfonds II, xista science ventures II, Fund F) and secured >€3M in competitive non-dilutive funding (EIC Transition, aws) as founder.**
- **Executive MBA (TU Wien, 2023); Optics & Photonics News "Entrepreneur to Watch" (2025).**

SCIENTIFIC OUTPUT

22 peer-reviewed journal articles · 9 refereed conference proceedings · 1 book chapter · >50 international presentations · h-index 17 · two first-author articles featured on the cover of Lab on a Chip.

EDUCATION

2021–2023	Executive MBA — Innovation, Digitalization & Entrepreneurship, TU Wien Thesis: "Beyond ambidexterity — the multidextrous deep-tech startup."
2004–2009	PhD, Analytical Chemistry — McGill University (Prof. E. D. Salin) Thesis: hybrid microscale analytical methods for environmental analysis.
2001–2004	BSc, Honours Chemistry (Environmental) — McGill University First Class Honours.

POSITIONS & RESEARCH EXPERIENCE

2018–now	Founder & Managing Director — Invisible-Light Labs GmbH, Vienna (Austria) Nanomechanical infrared sensing for nanomaterial characterization; leading a team of >10.
2013–2016	Assistant Professor (tenure track) — Dept. of Pharmacy, University of Copenhagen (Denmark) Novel microscale methods for pharmaceutical analysis. (Relocated to Austria 2016; parental leave 2017.)
2009–2013	Postdoctoral Researcher — DTU Nanotech (Denmark) ; H.C. Ørsted / FQRNT Fellow Microscale analytical methods for environmental and life science analysis.
2004–2009	Doctoral Researcher — McGill University (Canada); NSERC/FQRNT Fellow Hybrid microscale methods for environmental analysis. Research stay at UC Irvine (Prof. M. Madou, 2006).

MANAGEMENT & SUPERVISION

2018–now	Founder & Managing Director, Invisible-Light Labs — lead a multidisciplinary team of >10 (nanomechanics × IR spectroscopy).
2014–2017	Principal Investigator — DFF project "Thiol-ene protein biochips"; supervised 1 PhD, 1 MSc and 2 visiting researchers.
2011–2013	Work-package lead — EU FP7 "NaDiNe" (16 partners) and HTF "ARiM" (4 partners) at DTU.

SELECTED GRANTS & FUNDING SECURED

2025-27	aws Green.IP IP-valorisation grant, P2508473 — €150,000
2025-26	EIC Booster (European Commission), EMILIE, GA 101202787 — €50,000
2024-26	aws Seed / Deep Tech, EMILIE, P2422873 — €800,000
2022-24	EIC Transition (European Commission), NEMILIES, GA 101058011 — €2,223,128
2018–20	aws Pre-Seed (€185,000); IPA4SME and Patent.Scheck IP-valorisation grants
2019	Seal of Excellence, European Commission / H2020 (NEMS Detector, proposal 876791)
2014-17	Danish Independent Research Fund (DFF) PI grant, DFF-4005.00341 — DKK 2,548,800
2002–11	Competitive doctoral & postdoctoral fellowships (~€250,000 won, including declined grants and awards): Hans Christian Ørsted Postdoctoral fellowship (Denmark), NSERC & FQRNT graduate fellowships (Quebec & Canada), and McGill graduate fellowships.

SELECTED AWARDS & RECOGNITIONS

2025	Optics & Photonics News — “Entrepreneur to Watch” (biennial top-10 list)
2025	EMILIE — Scientists' Choice Award nominee
2024	EMILIE — #1 Analytical Innovation of the Year (The Analytical Scientist)
2021	Invisible-Light Labs — FORBES DACH “Start-up to Watch”

SELECTED SCIENTIFIC PUBLICATIONS

Surdu, M.; Luhmann, N.; ...; Lafleur, J. P.; Takahama, S.; Schmale, J. **Quantifying Submicrometer Atmospheric Aerosol Chemical Composition Using NEMS-FTIR**. Science Advances 2026, 12(17), eaeb2254.

Timarac-Popović, J.; ...; Lafleur, J. P.; Schmid, S. **Picogram-Level Nanoplastic Analysis with NEMS-FTIR**. ACS Nano 2026, 20 (14), 11193–11208.

Luhmann, N.; West, R. G.; Lafleur, J. P.; Schmid, S. **NEMS Infrared Spectroscopy with in-situ Separation by Thermal Desorption (NEMS-IR-TD)**. ACS Sensors 2023, 8, 1462–1470.