Mikhail Filatov

Contact Information
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HIGHER EDUCATION QUALIFICATIONS

2020 Postgraduate Certificate in University Learning and Teaching
Learning, Teaching and Technology Centre (LTTC), TU Dublin, Ireland

2005 – 2008 PhD in Organic Chemistry
Department of Chemistry, Moscow State University, Moscow, Russia
Thesis title: "General synthetic approach to porphyrins and dipyrrins with a π-extended system". Supervisors: I.P. Beletskaya and A.V. Cheprakov

2000 – 2005 Diploma of Chemist with a Red Diploma (distinction) (NFQ equivalent: Level 9)
Department of Chemistry, Moscow State University, Moscow, Russia

CURRENT POSITION

2017 – Lecturer in Organic Chemistry (permanent wholetime)
School of Chemical and Biopharmaceutical Sciences, Technological University Dublin, Ireland

PREVIOUS POSITIONS

2015 – 2017 Marie Curie Research Fellow (MSCA-IF)
School of Chemistry, Trinity College Dublin, Ireland

2014 – 2015 Researcher in EU project POLINNOVA
Institute of Polymers, Bulgarian Academy of Sciences, Sofia, Bulgaria

2010 – 2014 Postdoctoral Researcher
Max Planck Institute for Polymer Research, Mainz, Germany

2008 – 2009 CNRS Postdoctoral Researcher
Institute of Molecular Chemistry, University of Burgundy, Dijon, France

2008 Visiting Researcher
Department of Biochemistry and Biophysics, University of Pennsylvania, Philadelphia, USA

2005 – 2008 Managing Director
Esterkem Ltd., startup chemical company, Moscow, Russia

FELLOWSHIPS AND AWARDS (INCLUDING MAJOR GRANTS)

2022 – Research Ireland **Frontiers for the Future Award** (Principal Investigator)
Project: Dyes with Switchable Intersystem Crossing for Photonics (DyeSICPhoto, 21/FFP-A/9214)

2020 – 2024 **TU Dublin Research Scholarship** (Principal Investigator)
Project: Heavy-Atom-Free Photosensitizing Materials

2015 – 2017 **Marie Curie Intra-European Fellowship** (Principal Investigator)
"Controlled Singlet Oxygen Release Sensitizer in Photodynamic Therapy"

2010 – 2014 **Max Planck Society Scholarship** (individual postdoc grant - stipend for outstanding scientists from abroad)
Project: New Functional Dyes for NIR to Visible Light Upconversion

2005 – 2006 **Russian Foundation for Assistance to Small Innovative Enterprises** (grant for establishing a startup company)
Project: Development of Technology of 24-Epibrassinolide Production

TEACHING EXPERIENCE

- Extensive experience delivering lectures, tutorials, and lab-based instruction in pharmaceutical, medicinal, organic, and analytical chemistry
- Proficient in curriculum design, module coordination, and assessment strategy development
- Experienced in synchronous and asynchronous online teaching, using digital platforms such as Brightspace and Blackboard
- Apply research-led teaching approaches by integrating recent scientific developments into advanced-level modules
- Committed to fostering student engagement through interactive methods and interdisciplinary content

Currently taught modules

CHEM1007 – Introduction to Chemistry
CHEM2008 – Organic Chemistry
CHEM2022 – Spectroscopy
CHEM2024 – Pharmaceutical & Bioorganic Chemistry
CHEM2025 – Medicinal Chemistry & Pharmchem Processes
CHEM3011 – Organic Chemistry & Stereochemistry
CHEM4008 – Topics in Medicinal Chemistry

Previously taught modules:

CHEM1002 – Introduction to Chemistry
CHEM2009 – Principles of Drug Action
CHEM2023 – Organic Chemistry
CHEM3003 – Organic Chemistry & Stereochemistry
CHEM4004 – Advanced Organic Chemistry

DEPARTMENTAL ADMIN ROLES

Phys2Life Research Hub Executive Committee member

Year coordinator for DT261-2 group (2nd year BSc in Medicinal Chemistry & Pharmaceutical Sciences)

Module coordinator for CHEM3011 - Organic Chemistry & Stereochemistry

REVIEWER ACTIVITIES

Journal articles reviewed (279)

Served as a referee and adjudicative referee for 42 academic journals.

Chem. Commun. (71), J. Org. Chem. (30), ChemistrySelect (25), Phys. Chem. Chem. Phys. (19), Chem. Eur. J. (17), Angew. Chem. Int. Ed. (15), J. Mater. Chem. C (11), Dyes Pigm. (10), Photochem. Photobiol. Sci. (9), J. Phys. Chem. (8), Chem. Sci. (8), J. Am. Chem. Soc. (7), ACS Mater. Lett. (5), RSC Adv. (4), New J. Chem. (3), Org. Lett. (3), J. Phys. Chem. Lett. (3), JACS Au (3), Chem. Biodiversity (2), Eur. J. Inorg. Chem. (2), Nanoscale (2), Nat. Commun. (2), Adv. Opt. Mater. (2), Asian J. Org. Chem. (2), Jpn. J. Appl. Phys. (2), Acc. Chem. Res. (1), Electroanalysis (1), Chem. Asian J. (1), ChemPhotoChem (1), ChemPhysChem (1), ACS Cent. Sci. (1), Photochem. Photobiol. (1), Appl. Organomet. Chem. (1), Sustain. Food Technol. (1), Small (1), RSC Med. Chem. (1), Appl. Res. (1), ACS Catal. (1), ACS Omega (1), Dalton Trans. (1), Chem. Rev. (1).

Reviewer Identifier: https://www.webofscience.com/wos/author/record/A-2266-2013

Funding applications reviewed (29)

Served as a referee for the following funding agencies: European Commission H2020 – Marie Curie IEFs, ANR (Agence nationale de la recherché), Polish National Science Centre.

PATENTED INNOVATIONS

1. Long-term stable composition, such as phosphorescent composition or TTA-photon upconversion composition, EP 2 851 407 A1, US 2016/0222286 A1, WO 2015/044129 A1, 2015.

2. Method of Synthesis of 5,5'-Disubstituted π-extended Dipyrromethenes and Their Use as Analytical Reagents for Metal Ions and Fluorescent Imaging Probes, US 2011/0144351 A1, 2009.

3. Method of Reduction of Unsaturated Ketones into Saturated Ketones, RU 2 293 720 C1, 2007.

4. Method of Synthesis of 24-Epibrassinolide, RU 2 272 044 C1, 2006.

PUBLICATIONS

Summary: 47 scientific papers published (25 as a corresponding author), 1 book chapter.
h index = 27, > 2400 citations (Google Scholar)

Key publications

(* corresponding author)

M.A. Filatov,* T. Mikulchyk, M. Hodée, M. Dvoracek, V.N.K. Mamillapalli, A. Sheehan, C. Newman, S.M. Borisov, D. Escudero, I. Naydenova, Enhancement of Intersystem Crossing in Asymmetrically Substituted BODIPY Photosensitizers. *J. Mater. Chem. C*, **2025**, *13*, 6993-7003. **Highlighted on the front cover.**

A. Sheehan, I.A. Okkelman, G. Groslambert, C. Bucher, R.I. Dmitriev, M.A. Filatov*, Optoelectronic Properties and Fluorescence Lifetime Imaging Application of Donor-Acceptor Dyads Derived From 2,6-DicarboxyBODIPY. *Chem. Eur. J.*, **2025**, *31*, e202404188. **Highlighted on the front cover.**

T. Mikulchyk, S. Karuthedath, C. De Castro, A.A. Buglak, A. Sheehan, A. Wieder, F. Laquai, I. Naydenova, M.A. Filatov*, Charge Transfer Mediated Triplet Excited State Formation in Donor-Acceptor-Donor BODIPY: Application for Recording of Holographic Structures in Photopolymerizable Glass, *J. Mater. Chem. C*, **2022**, *10*, 11588-11597. **Highlighted on the back cover.**

M.A. Filatov* Heavy-atom-free BODIPY Photosensitizers with Intersystem Crossing Mediated by Intramolecular Photoinduced Electron Transfer. *Org. Biomol. Chem.*, **2020**, *18*, 10-27. **Highly cited paper (>200 citations).**

M.A. Filatov*, S. Karuthedath, P.M. Polestshuk, S. Callaghan, K. Flanagan, M. Telitchko, T. Wiesner, F. Laquai, M.O. Senge, Control of triplet state generation in heavy atom-free BODIPY–anthracene dyads by media polarity and structural factors. *Phys. Chem. Chem. Phys.*, **2018**, *20,* 8016-8031. **PCCP 2018 Hot Articles Collection.**

M.A. Filatov*, S. Karuthedath, P.M. Polestshuk, H.Savoie, K.J. Flanagan, C. Sy, E. Sitte, M. Telitchko, F. Laquai, R.W. Boyle, M.O. Senge, Generation of Triplet Excited States via Photoinduced Electron Transfer in *meso*-anthra-BODIPY: Fluorogenic Response toward Singlet Oxygen in Solution and *in Vitro*. *J. Am. Chem. Soc.*, **2017**, *139*, 6282−6285. **Highly cited paper (>300 citations).**

M.A. Filatov, A. Y. Lebedev, S.N. Mukhin, S. A. Vinogradov and A. V. Cheprakov, π-Extended Dipyrrins Capable of Highly Fluorogenic Complexation with Metal Ions. *J. Am. Chem. Soc.*, **2010**, *132*, 9552-9554. **Highly cited paper (>100 citations).**