Curriculum Vitae

Personal Details

Name: Dr. Faigl Ferenc György

Title: Professor Emeritus, DSc

Institution: Budapest University of Technology and Economics (BME), Faculty of Chemical Technology and Biotechnology, Department of Organic Chemistry and Technology

Research Group: Innovative Pharmaceutical and Chirotechnological Research Group

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MTMT: https://vm.mtmt.hu/search/slist.php?lang=0&AuthorID=10008354

Current Position

2023 – present Professor Emeritus, Budapest University of Technology and Economics (BME), Faculty of Chemical Technology and Biotechnology, Department of Organic Chemistry and Technology

Previous Positions

2013 – 2017 Dean, BME Faculty of Chemical Technology and Biotechnology; Member of BME Senate

2002 – 2017 Head of Research Group, MTA Research Group at the Department of Organic Chemical Technology, BME

1999 – 2011 Vice-Dean for Economic Affairs, BME Faculty of Chemical Technology and Biotechnology

1997 – 2023 Full Professor, BME Department of Organic Chemistry and Technology: research on separation of racemic and non-racemic enantiomeric mixtures, supramolecular self-assembling structures of chiral compounds, regio- and stereoselective reactions of polar organometallic compounds, preparation of chiral ligands

1997 – 2013 Vice-Head of Department, BME Department of Organic Chemical Technology

1996 – 1997 Associate Professor, BME Department of Organic Chemical Technology: research on optical isomer separation methods, selective synthesis of organolithium compounds

1984 – 1996 Research Associate, MTA Research Group: development of pH-controlled salt-forming resolution, derivative-derivative resolution, new methods for separation of chiral

amines, carboxylic acids, and amino acid derivatives; research on regioselective metalation methods

1980 – 1984 Junior Research Associate, MTA Research Group: investigation of structure-efficiency relationships in chiral recognition, development of new enantiomeric enrichment methods

1977 – 1980 MTA Doctoral Fellow (Supervisor: Prof. Elemér Fogassy): investigation of parameters influencing diastereomeric salt resolution and second-order asymmetric transformations; thermodynamic equilibrium model of resolution

Education

- MSc in Chemical Engineering (1977, BME Faculty of Chemical Technology and Biotechnology, Department of Organic Chemical Technology)
- Doctor of Technology, dr. techn. (1981, Preparation of optically active phenylglycine derivatives)
- PhD, Habilitation (1996, BME – Chemistry of polar organometallic compounds)
- Doctor of Chemical Sciences, D.Sc. (1996, Hungarian Academy of Sciences – Separation of optical isomers by diastereomeric salt formation)

Research Experience

Dr. Faigl Ferenc has over 45 years of experience in synthetic organic chemistry, stereochemistry, and the chemistry of polar organometallic compounds. His research has focused on the preparation of optically active compounds, the development of enantiomer separation methods (resolution by diastereomeric salt formation, derivative-derivative resolution, supramolecular methods), and the application of organolithium and organomagnesium compounds in stereoselective synthesis.

He has developed novel atropisomeric amino alcohol ligands as highly efficient chiral catalysts for the enantioselective addition of diethylzinc to aldehydes, and contributed to the synthesis and enantioselective rearrangement of epoxy ether enantiomers. His work on the application of basic research results in the development of environmentally friendly fine chemical and pharmaceutical processes has resulted in numerous patents and industrial collaborations.

Publication record: 229 publications (MTMT; cumulative IF ~200, H-index: 23, independent citations: ~1280); Google Scholar: H-index: 26, i10-index: 72, total citations: 2247. 56 patents and patent applications (including international). ~170 conference oral presentations and posters.

Guest Researcher Visits

- 1990 – 1992: University of Lausanne, Institute of Organic Chemistry, Research Group of Prof. Manfred Schlosser, Switzerland (26 months)
- 1994: University of Lausanne, Switzerland (3 months)
- 1996: University of Lausanne, Switzerland (2 months)
- 1996 – 2015: University of Florence, Italy (annual short visits)
- 2001: University of Lausanne (invited lecturer); Lonza, Brig, Switzerland (invited lecturer); University of Dijon, France (invited lecturer)
- 2013: Zentiva, Prague (lecturer and expert)

Teaching

1977 – present: Laboratory practice supervision; lecturer in various BSc, MSc and postgraduate courses.

- BSc: "Industrial Organic Chemistry" (1984–1987); "Basic Processes in Pharmaceutical Chemistry" (from 1995); "Pharmaceuticals" (from 1998)
- MSc: "Chemistry and Technology of Polar Organometallic Compounds" (founder and lecturer, from 1995); "Topic Laboratory" (responsible, from 2000); "Pharmaceutical Chemistry" (from 2003)
- PhD: "Technology of Optically Active Compounds" (until 2010); "Basic Processes and Technologies in the Pharmaceutical Industry" (from 2002)

Textbooks (selection): Faigl F. (co-author): "Szerves vegyipari alapfolyamatok gyakorlat", Tankönyvkiadó, Budapest, 1990; Faigl F. (ed.): "Gyógyszerkémiai alapfolyamatok", e-textbook, Typotex, Budapest, 2011, ISBN 978-963-279-477-8; Faigl F. (ed.): "Gyógyszerek", e-textbook, Typotex, Budapest, 2011 (revised ed. 2014), ISBN 978-963-279-476-1.

Scientific and Professional Activities

- Full Member of the Hungarian Academy of Sciences (MTA, from 1997)
- Member of the Hungarian Academy of Engineering (from 2004)
- MTA Committee on Heterocyclic and Organometallic Chemistry (from 2009)
- MTA Committee on Organic and Biomolecular Chemistry (from 2014)
- COST D40 Action Management Committee member (2006–2010)
- Co-Director, NATO ASI Summer School NeMeTOC, Siena, Italy (2005)
- Editorial Board Member: The Open Organic Chemistry Journal; Guest Editor: NATO Science Series II, Vol. 246, Springer, Berlin, 2008

- Regular referee for international scientific journals since 1996; reviewer/committee member for PhD theses, habilitation and MTA doctoral procedures since 1998

Fellowships and Awards

- 2024 – Eötvös József Award (KIM)
- 2021 – Orbán István Memorial Medal (MAGYOSZ)
- 2018 – Bruckner Győző Award (Richter Nyrt.–MTA)
- 2017 – József Nádor Memorial Medal (BME Senate)
- 2012 – "For the Ch-Building" Certificate (BME VBK)
- 2010 – Knight's Cross of the Order of Merit of the Republic of Hungary (President of the Republic)
- 2007 – Zemplén Géza Grand Award (MTA, Richter, BME, MKE, 2007)
- 2007 – Jedlik Ányos Award (Hungarian Patent Office + Minister of Industry)
- 2007 – BME VBK Csűrös Zoltán Award
- 2002 – BME VBK Fodor Lajos Award
- 1999 – 2002: Széchenyi Professorial Fellowship
- 1990 – Award of the Supported Research Groups of MTA
- 1989 – Excellent Inventor Gold Grade
- 1987 – Excellent Inventor Gold Grade
- 1986 – Prize of the President of MTA

Selected Publications

Books and book chapters:

1. Faigl F., Kozma D.: Optical Resolution via Complex Formation with O,O'-Dibenzoyltartaric Acid, in *Enantiomer Separation: Fundamentals and Practical Methods*, Chapter 3 (Ed.: Toda F.), Kluwer Academic Publishers, Dordrecht, 2004, pp. 73–102.
2. Faigl F., Schindler J., Fogassy E.: Advantages of structural similarities of the reactants in optical resolution processes, in *Topics in Current Chemistry*, Vol. 269, Springer, Berlin, Heidelberg, 2007, pp. 133–158. (IF: 4.163)
3. Faigl F., Mátravölgyi B., Thurner A.: Novel Methods for the Separation of Optical Isomers, in *New Methodologies and Techniques for a Sustainable Organic Chemistry* (Eds.: Mordini A., Faigl F.), NATO Science Series II, Vol. 246, Springer, Berlin, 2008, pp. 295–315.

4. Pálovics E., Faigl F., Fogassy E.: Separation of the Mixtures of Chiral Compounds by Crystallization, in *Advances in Crystallization Processes* (Ed.: Mastai Y.), InTech, 2012, pp. 1–36.

Selected journal articles:

1. Faigl F., Marzi E., Schlosser M.: Enhancement of Benzylic Basicity by a Fluorine Substituent at the para Position. *Chem. Eur. J.* 6(5), 771 (2000).
2. Faigl F., Fogassy E., Nógrádi M., Pálovics E., Schindler J.: Strategies in optical resolution: a practical guide (review). *Tetrahedron: Asymmetry* 19, 519–536 (2008).
3. Pálovics E., Szeleczky Zs., Fődi B., Faigl F., Fogassy E.: Prediction of the efficiency of diastereoisomer separation on the basis of the behaviour of enantiomeric mixtures. *RSC Advances* 4, 21254–21261 (2014).
4. Faigl F., Erdélyi Zs., Deák Sz., Nyerges M., Mátravölgyi B.: A new pyrrolidine-derived atropisomeric amino alcohol as a highly efficient chiral ligand for the asymmetric addition of diethylzinc to aldehydes. *Tetrahedron Letters* 55(50), 6891–6894 (2014).
5. Faigl F., Deák Sz., Erdélyi Zs., Holzbauer T., Czugler M., Nyerges M., Mátravölgyi B.: New Atropisomeric Amino Alcohol Ligands for Enantioselective Addition of Diethylzinc to Aldehydes. *Chirality* 27(3), 216–222 (2015).
6. Mátravölgyi B., Hergert T., Bálint E., Bagi P., Faigl F.: Access to Fluorazones by Intramolecular Dehydrative Cyclization of Aromatic Tertiary Amides. *J. Org. Chem.* 83, 2282–2292 (2018). IF: 4.745.