

Michel Herman

July, 28, 1951, Brussels
Belgian



Diplomas (« Université libre de Bruxelles » ULB)

- « Agrégé de l'enseignement supérieur » (Habilitation thesis) (1985)
- « Docteur en Sciences » (PhD) (1977)
- « Agrégé de l'enseignement secondaire supérieur » (1973)

Career

- Research Associate of the National Research Council of Canada – Herzberg Institute of Astrophysics, Ottawa (1977-1978)
- Fellow (up to top position of Research Director) of the “Fonds National de la Recherche Scientifique”- Brussels (1979-1997)
- Full professor at ULB (1997-2016); Emeritus professor (2017-2022)

Major awards

- Francqui chair holder (Belgian title) at the « Universiteit Antwerpen » (2008)
- Visiting Lecturer of the Chemistry Research Promotion Center, Taiwan (2005)
- « Directeur de Recherches honoraire » of the « Fonds National de la Recherche Scientifique » (1998)
- Invited professor at the « Università degli Studi » of Bologna (1996)
- Fellow of the “Japanese Society for the Promotion of Sciences” (1993)
- Invited professor at the « Université de Paris-Sud » (1989-1990)
- Award Louis D'OR from the « Société Royale des Sciences de Liège » (1986)
- Award STAS from the “Académie des Sciences” of Belgium (1977)

Main academic responsibilities

- Co-director of the « Laboratoire de Chimie Quantique et Photophysique » at ULB (2003 - 2016)
- Member of the « Comité National de Chimie » (from the « Académie des Sciences de Belgique » (2003- 2016)
- President founder of the thematic doctoral school « METAMORPHOSE » of the “Communauté française de Belgique” (2006 - 2009)
- Person in charge of the international evaluation procedure (audit) for teaching activities at the Department of Chemistry at ULB (2003).
- Person in charge of the « Bologna » harmonisation procedure (teaching program) at the Department of Chemistry at ULB (2002-2004).
- Head of the Department of Chemistry at ULB (1993 and 1994)

Main scientific activities

Publications

231 peer reviewed publications in international scientific journals.

Invited talks

12 plenaries invited talks at international conferences since 2010 (and 6 similar invitations turned down).

Major international meeting organization since 2010

Chair (2015-2017) of the executive and scientific committees of the “High Resolution Molecular Spectroscopy” European conference series; PI for three workshops of the International Solvay Institutes

Scientific expertise

- Field: Molecular chemical physics
 - High resolution molecular infrared spectroscopy, fundamental aspects, and atmospheric applications
 - Experimental based activities (ultra-sensitive lasers detection, Fourier transform spectrometers and supersonic expansions)
 - Theoretical activities (vibration-rotation Hamiltonians)

- Highlights (long range investments)
 - Unravelling intramolecular complexity at high vibrational excitation, with acetylene as a prototypical target
 - Investigating hydrocarbons and nitrogen oxides by coupling Fourier transform and supersonic jet techniques, now including a femto/opo laser as absorption source and high finesse cavity absorption
 - Ultra-sensitive cavity ring down laser investigation of van der Waals species in the overtone spectral range

- Research projects towards the application of these fields to atmospheric sciences, astrophysics, and intramolecular dynamics

As such, member of several national and international committees.

Languages

- **French:** mother tongue
- **English:** fluent
- **Dutch:** good knowledge

Address

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For more details, see pdf files available from
<https://www2.ulb.ac.be//cpm/people/mherman/main.html>



high resolution

ULB

H*i*ReS spectroscopy

infrared

2012-2016



Collage of team members and scientific publications:

- Keevin DIDRICHE
- Thomas VANFLETEREN
- Atina RIZOPOULOS
- Patrick VAN POUCKE
- Tomas FÖLDES
- Clément LAUZIN
- Xavier de GHELLINCK
- Badr AMYAY
- Dariusz GOLEBIOWSKI
- Solvay Workshop on "Molecular Complexes in our Atmosphere and Beyond"
- Workshop on Femto-, Astro-, Spectro-Ethyne
- Atomic and molecular Collision MEchanisms
- The Journal of Chemical Physics
- Molecular Physics
- PCCP
- CHEMICAL PHYSICS LETTERS
- Molecular Physics
- Molecular Physics

Editor's Choice

Analysis of a remarkable perpendicular band in $\text{Kr}\text{---}\text{H}_2\text{O}$ with origin close to the $\nu_1 + \nu_3$ $R(0)$ line in H_2O Original Research Article
 Pages 119–122
 Vanfleteren, T., Földes, J., Vander Auwers, M., Herman

Abstract | Close graphical abstract | Research highlights | PDF (532 K) | Supplementary content

