



ROGER GUILARD

PROFESSOR OF CHEMISTRY AT UNIVERSITÉ BOURGOGNE EUROPE

Résumé

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PROFESSOR OF CHEMISTRY AT UNIVERSITÉ BOURGOGNE EUROPE

Curriculum Vitae

Laboratory address

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Roger Guilard is a Professor of Chemistry at the University of Burgundy in France. He received the « Agrégation de Sciences Physiques » Degree in 1966 and his Ph.D. in heterocyclic chemistry in 1971 from the University of Dijon. He was a Visiting Professor of Chemistry at the University of Houston in 1985 and again in 1987. He was also a Visiting Scientist in China and Japan. He has received the Coordination Chemistry Award from the French Chemical Society (1978) and two Awards (1991, 1997) from the French Academy of Sciences. He received the “**Grand Prix de l'Académie des Sciences, Prix Gaz de France**” in 2001 and the “**Robert Burns Woodward Career Award in Porphyrin Chemistry**” in 2010. He was elected as a fellow of the **European Academy of Sciences in 2011** and as a fellow of the **Academia Europaea in 2015**. He received the “**Grand Prix Emile Yungfleisch de l'Académie des Sciences**” in 2013. He co-edited two series of 10 volumes published in 1999 and 2003 (Handbook of Porphyrins). **He is the co-editor of nine sets of 5 volumes (Handbook of Porphyrin Science), and he is currently co-editing a series of five volumes. He is also currently co-editor-in-chief of two new series of five volumes entitled « Chemistry, Energy and Environment » and « From Materials towards Biomaterial Devices ».** He was a JSPS Fellow in 2008. He was an Associate Editor of Dalton Transactions, and he is a member of the Editorial Board of the Journal of Porphyrins and Phthalocyanines. **He is the author of 489 papers and reviews and has been awarded 23 patents in the areas of heterocyclic chemistry, organometallic chemistry, coordination chemistry, and materials.** His significant contributions span both basic research and applications.

In addition to the synthesis and structural characterization of metalloporphyrins and the biomimetic modelling of metalloenzymes, the second line of research focuses on the preparation and physico-chemical characterization both in solution and in the solid state of transition, post-transition, lanthanide, and actinide metal complexes formed with saturated and unsaturated polyazamacrocycles. Grafted and sol-gel immobilised complexes are used as specific adsorbents to detect (CO, H₂) and purify (O₂/N₂) gases. Similar functionalised materials (silica-gels, polymer fibers) are also implemented in heavy metals' solid/liquid extraction processes (Pb, Cd, actinides). Molecular organic frameworks are studied as adsorbents of CO₂ and molecular interfacial catalysts are synthesized for CO₂ reduction.

His current interest is in the use of porphyrin-based fluorophores for PDI (photodynamic inactivation) applications.

EDUCATION

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| 1966 | "Agrégation de Sciences Physiques" |
| 1971 | Ph.D. Organic Chemistry |

PROFESSIONAL EXPERIENCE

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| 1972-73 | Post-doctoral fellow, University of Basel (Switzerland), Darmstadt (Germany) |
| 1978-1979 | Associate Professor of Chemistry, Dijon (France) |
| since 1979 | Professor of Chemistry, Dijon (France) |

CREATIVE WORKS

23 patents, 489 publications, 88 books, 183 lectures

MAIN FIELD OF RESEARCH

Bio-inspired systems

Syntheses of porphyrinic and corrollic models

Syntheses of polyazamacrocyclic ligands (cyclam, cyclen)

Syntheses of nanomaterial molecular precursors - Optimization of synthetic procedures

Ultrapurification and detection of gases. Organic-inorganic materials and modified silica

Sol-gel materials - Carrier/separation of gases (O₂, N₂, CO, CO₂ ...)

Molecular catalysts for CO₂ reduction

Polyazamacrocyclic sequestering agents

Treatment of wastewater (saturnism). Solid/liquid extraction process for the ultimate decontamination of wastewater containing heavy metals (uranium, plutonium, americium, ...)

Crystallography. Molecular modelling.

X-ray studies - Molecular modelling - Electron density analyses

Syntheses of Photosensitizers

CAREER-RELATED ACTIVITIES

1980-1982	Director of the Chemistry Department (Dijon)
1989-1991	Director of the Chemistry Department (Dijon)
1982-2003	Director of the Center of Molecular Spectrometry
1992-1998	Director of the "Ecole Doctorale Louis Pasteur des Universités de Bourgogne et de Franche-Comté"
1992-1999	Director of the "Laboratoire de Synthèse et d'Electrosynthèse Organométalliques" LSEO (UMR 5632)
1993-2006	Director of the "Laboratoire d'Ingénierie Moléculaire pour la Séparation et les Applications des Gaz" LIMSAG (UMR 5633)

AWARDS AND HONORS

1978	Prize from the French Chemical Society, Coordination Chemistry Division
1984	Visiting Professor, University of Houston (USA), 3 months
1986, '87, '90	Visiting Professor, University of Houston (USA), 1 month
1991	Prize from the "Académie des Sciences" (Marguerite de la Charlonie Prize)
1991	Visiting Research Scientist in China (Beijing, Shanghai, Changchun), 1 month

1993, 1994	Visiting Research Scientist in China (Changchun), 1 month
1995	Visiting Research Scientist in Japan (Kyoto, Tokyo, Hiroshima), 2 weeks
1997	Prize from the “Académie des Sciences” (Paul Langevin Prize)
1999	Prize presented by the Association of American Publishers “Awarded for Excellence in Professional/Scholarly Publishing for 1999, Professional and Scholarly Division, in the Chemistry Category” on the occasion of the publication of the 10 volumes series entitled “ <i>Handbook of Porphyrins and Related Macrocycles: Biomaterials for Material Scientists, Chemists, and Physicists</i> ”
1999	“Commandeur de l’Ordre des Palmes Académiques”
2001	“Chevalier de l’Ordre National du Mérite”
2001	“Grand Prix de l’Académie des Sciences” (“Gaz de France” applications Prize)
2001	Honoris Causa Doctor of the University of Sherbrooke (Canada)
2008	Japan Society for the Promotion of Science (JSPS) fellow
2010	Robert Burns Woodward Career Award in Porphyrin Chemistry , International Conference on Porphyrins and Phthalocyanines (ICPP-6)
2011	Fellow of the European Academy of Sciences
2013	“Grand Prix Emile Jungfleish” from the Académie des Sciences
2015	Fellow of the Europaea Academy

INVOLVEMENT IN INNOVATIVE COMPANIES

- Founding and consulting of two innovative companies:
in 2005: Creation of **CheMatech** based on the know-how of LIMSAG-UMR CNRS 5633.
in 2013: Creation of **PorphyChem** built up around the know-how of LIMSAG-UMR CNRS 5633 and then after ICMUB-UMR CNRS 6302.
- President of the Advisory Board of LARS Company (Ligament Advanced Reinforcement Systems (2012 - 2021).
- President of the Incubator of the Burgundy Region (from 2007 - 2016).

EXPERTISE ACTIVITIES

1996-1997	Member of the Groupe d'expert n° GP 222 de la Mission Scientifique et Technique du Ministère de l'Education Nationale, de l'Enseignement Supérieur et de la Recherche
1994-1998	Member of the “Conseil National des Universités (32 ^{ème} Section)”
1996-1998	Rapporteur Général Adjoint auprès du Comité Consultatif Régional de la Recherche et du Développement Technologique (CCRDT)
1999-2001	Rapporteur Général auprès du Comité Consultatif Régional de la Recherche et du Développement Technologique (CCRDT)
1997-1998	Assistant director of the “Département de Chimie, Ministère de l’Enseignement Supérieur, de la Technologie et de la Recherche”

- 1999-2006** Scientific Director of the Département de Chimie, Ministère de l'Enseignement Supérieur, de la Technologie et de la Recherche
- 2006-2009** Directeur délégué pour le partenariat avec les collectivités territoriales, Centre National de la Recherche Scientifique, Direction des partenariats
- 2010-2012** Conseiller après de la Direction du CNRS pour le Grand Emprunt

MEMBERSHIPS

- American Chemical Society
- French Chemical Society
- Royal Chemical Society
- Society of Porphyrins and Phthalocyanines
- 1996-2020 Member of the “Editorial Board of the Journal of Porphyrins and Phthalocyanines”
- 1996-2002 Member of the “Editorial Board of the Journal of the Royal Chemical Society, Dalton Transactions”
- 1996-2002 Associate Editor of the “Journal of the Royal Chemical Society, Dalton Transactions”
- 1997-2002 Member of the “Editorial Board of the New Journal of Chemistry”

SCIENTIFIC EDITOR

- **“Handbook of Porphyrins and Related Macrocycles: Biomaterials for Material Scientists, Chemists, and Physicists”**

Academic Press, Karl M. Kadish, Kevin M. Smith and Roger Guilard, co-editor of a series of 10 volumes, December 1999

- **“Porphyrin Handbook, Part II”**

Academic Press, Karl M. Kadish, Kevin M. Smith and Roger Guilard, co-editor of a series of 10 volumes, March 2003

- **Dalton Transactions, web theme issue “Carbon Dioxide at Metal Centres”**

Guest editor, July 2007

- **Comptes Rendus Chimie, special issue “Nuclear Energy and Radiochemistry”**

Guest editor, October-November 2007, Volume 10

- **“Handbook of Porphyrin Science with Applications to Chemistry, Physics, Materials Science, Engineering, Biology and Medicine” (50 volumes)**

Imperial College/World Scientific, Karl M. Kadish, Kevin M. Smith and Roger Guilard, co-editor of ten sets of five volumes:

- 2 first sets were published in 2010,
- third set published in 2011,
- fourth and fifth sets published in 2012
- sixth set published in 2013
- seventh set published in 2014
- eighth and ninth sets published in 2016 and 2019
- the tenth set published in 2022 and 2025

He is also currently co-editor-in-chief of two new series entitled « **Chemistry, Energy and Environment** » and « **From Materials towards Biomaterial Devices** »

ORGANIZATION OF NATIONAL AND INTERNATIONAL MEETINGS

- Concoord XIV, 1982
- Organization of "Les journées de l'Ecole Doctorale Louis Pasteur", 1992-1998 (annual)
- "Journées de la Division de Chimie de Coordination" of the French Chemical Society, 1995-1998 (annual)
- International Conference on Porphyrins and Phthalocyanines (ICPP-1), 2000 (650 participants)

RESEAU INTERNET

- Biography <http://www.icmub.com/en/members-en/guilard-roger.html>
- LinkedIn <https://www.linkedin.com/in/roger-guilard-15593725/>
- Wikipedia https://en.wikipedia.org/wiki/Roger_Guilard
- Research Gate <https://www.researchgate.net/profile/Roger-Guilard>
- Google Scholar <https://scholar.google.com/citations?user=HUoVyCYAAAAJ&hl>
- EURASC <https://www.eurasc.eu/members/roger-guilardu-bourgogne-fr/member/>
- Academia Europae https://www.ae-info.org/ae/Member/Guilard_Roger
- ORCID <https://orcid.org/0000-0001-7328-3695>
- Scopus <https://www.scopus.com/authid/detail.uri?authorId=7005221303>
- Who's Who in France https://www.whoswho.fr/bio/roger-guilard_74313
- CheMatech <https://www.chematech-mdt.com>
- PorphyChem <https://www.porphychem.com/en/about-us/scientific-advisory-board/4>