

Yves QUENEAU

PhD, Research Director at CNRS (National Center for Scientific Research)
 Institut de Chimie et Biochimie Moléculaires et Supramoléculaires
 (ICBMS), Lyon, France
 & Honorary Professor at the University of Hull, UK
 Address : Université Claude Bernard Lyon 1, ICBMS
 Bat Edgar Lederer 1 rue Victor grignard, 69622 Villeurbanne, France
yves.queneau@insa-lyon.fr tel 0033 4 81 92 99 00– 0033 6 37 52 42 68

**Education and career:**

2007 Promoted Directeur de Recherche 1st Class
 1995 Promoted to Directeur de Recherche au CNRS (full professor level)
 1991 Research fellow: Memorial Sloan Kettering Cancer Center, New York, Prof S.J. Danishefsky
 1988 Appointed at CNRS as Chargé de Recherche, Orsay (assistant professor level)
 1988 PhD in Organic Chemistry at University of Paris Orsay (supervision Prof A. Lubineau)

Main positions and duties:

Since 2021 Facilitator, Chemistry & Environment, ICBMS
 Since 2014 Invited professor at the university HUST, Wuhan, China
 Since 2014 Editor, Carbohydrate Chemistry book series, SPR, Royal Society of Chemistry
 Since 2014 Chair of FC2GChem network, French China Network on Green Chemistry
 Since 2009 Honorary professor at the University of Hull, UK, Department of Chemistry.
 Since 2004 Chair of the Scientific committee for chemistry, Normandie region.
 2012-2013 Chair, Funding agency ANR, international & sustainable chemistry committees
 2004-2022 Head of the Organic and Bioorganic team of ICBMS at University of Lyon
 2004-2015 Deputy-director, Institut de Chimie et Biochimie Moléculaires et Supramoléculaires, ICBMS
 (175 persons) University of Lyon,
 1999-2003 Chair, industrial / academic mixed research unit, Glycochemistry, UMR 143, Villeurbanne.

Recognition and Awards:

2022 International talent, Huazhong University of Science and Technology, Wuhan, Chine
 2021 3 years renewal of Honorary professorship at the University of Hull, UK
 2018 3 years renewal of Honorary professorship at the University of Hull, UK
 2015 Lu Jiayi Lecture Award, University of Xiamen, College of Chemistry and Chemical Engineering
 2015 3 years renewal of Honorary professorship at the University of Hull, UK
 2014 CNRS reward for research and doctoral supervision
 2012 3 years renewal of Honorary professorship at the University of Hull, UK
 2010 CNRS reward for excellence in science
 2009 3 years Honorary professorship at the University of Hull, UK
 1998 Prize for Scientific Innovation, Europol'Agro (Alternative uses of renewable carbohydrates)
 1994 Bronze Medal of the CNRS

Research interests: Carbohydrate chemistry: applications in sustainable chemistry and in biological chemistry. Bioorganic chemistry, design and multistep synthesis of signalling molecules, inhibitors of the quorum sensing. Glycoamphiphiles: from ecodesigned surfactants to membrane components. Direct conversion of carbohydrates to platform molecules. Chemistry in water.

International collaborations: China: Joint ANR NSFC project with HUST, Wuhan, Joint PhD project with Xiamen university, Co-chair of the conference FC2GChem 2014 in Wuhan and Shanghai, FC2GChem 2016 in Lyon and FC2GChem 2018, Shanghai. Member of the Scientific Committee of the 2019 CS Green Chemistry Conference (China Green 2019), Beijing, Oct 2019. Several courses and lectures given since 2005 in Xiamen, Guangzhou (SCUT, SYS, GIBH CAS), Beijing (Peking Univ, ICCAS), Shanghai (ECNU, ECUST, SIOC), Wuhan (HUST, WIT), Nanchang. Chili (Santiago). With Prof M. Urzua, materials with biomolecules. With Prof Guiliani, Biorganic chemistry. University of Hull. Chili (Santiago). Portugal (Lisbon). India (Pune).

Publications, conferences and communications: 166 articles, 18 book chapters, 9 book co-editions, 10 editorials and popularization articles, 8 patents with 12 extensions, 1 governmental report. Conferences: 229, among which 55 as invited speaker in national and international meetings, and 174 other conferences and seminars. Other communications: 295.

Supervision and co-supervision: PhD: total : 36. Other co-workers in whole career: 17 Post docs and 50 undergraduate students.

Teaching: *Present:* Master Pro Chimie et Environnement, University of Savoie, Chambéry. Department of Chemistry, University of Hull, UK. E-learnig course on carbohydrate chemistry, University of Lisbon, Portugal. ECUST, Shanghai, HUST, Wuhan. *Past:* University of Paris Orsay. Biorefinery post master programme, INP Grenoble. Département Biosciences, INSA Lyon.

Editorial duties:

Editor of the RSC book series “Carbohydrate Chemistry”, Specialist periodical reports. Review Editor for Organic Chemistry, part of Frontiers in Chemistry. Editorial board for “The Innovation”, cell press. Advisory board of the Journal of Carbohydrate

Chemistry. Advisory board of Mediterranean Journal of Chemistry, Advisory Board of Molecules. Referee for many journals (53 titles).

Expertise and Boards memberships, Chair of the Ecochem China network, Univ Lyon; Member of the board of the Sustainable Chemistry group of the French Chemical Society (2018). Member of the Regional board of the French Chemical Society (2017-2019). Member of the scientific board of the Pole of Competitiveness Axelera (since 2015). Evaluation committees for the ANR (National Research Agency) since 2010. Chair of the committee for sustainable chemistry ANR programme (2013) vice-chair (2012) and Chair for the international blank programme for chemistry, 2012. Président du Comité d'Evaluation du programme ANR CD2I, 2013. Président du Comité d'Evaluation du programme ANR Blanc International SIMI7 et SIMI8, 2012. Co chair working group on bioresources, Axelera (2010). Member of the committees for regional funding, 2010, 2014, Member of regional committees in other regions (Champagne-Ardenne, Normandie, Picardie). Member of recruitment committees (Lyon, Grenoble). Member of the National Committee for Scientific Research (Section 16) 2000-2004.

Invited lectures in international meetings:

Green China 2019: International Green and Sustainable Chemistry Conference, Beijing, 15-20 Octobre 2019. Plant-based summit, Lyon, may 2019. 29th International Carbohydrate Symposium, Lisbon, 15-19 July 2018. International Conference on Green Chemistry and Sustainable Catalysis-2018, HUST, Wuhan, 25 November 2018. Liquid crystal glycolipids: the delicate contribution of carbohydrates to self-organization. A life in Liquid Crystals. International meeting in Honour of John W. Goodby, York, 22 septembre 2016. 5th Lingnan Organic Chemistry Conference, SCUT, Guangzhou, 2015. 2nd International conference on bioinspired and biobased chemistry and materials. 2014, Nice. 25^{emes} Journées du Groupe Français des glycosciences, Paris, 2014. L'Oréal R&I Workshop on Glycobiology and Glycochemistry, Paris, 2013. Meeting of the National Tunisian Chemical Society, Monastir, 2012. Bioinspired materials, Nice, 2012. Green Chemistry for Industry 2011, Lille. Bilateral Sino-French Conference on Green Chemistry, Guangzhou, 2011. Iberian Carbohydrate Meeting, 2011. Biovision 2011, Lyon. Annual seminar of the Belgium Royal Society of Chemistry, Gembloux, 14 oct 2010. 6th GERLI meeting, Rennes, 2 juillet 2009, 2nd Bioresources summit, NEPIC, Sedgefield, Durham, 25th nov 2008, XVth symposium AVH, "Utilisation of sugars as raw materials for chemical and biotechnological applications and eco-compatible processing", Reims, March 2008. From black to green gold: tomorrow towards a selected chemistry, Lyon, France, 2007. Université de l'Environnement, Lyon, France 2007. 14th European Carbohydrate Symposium, Lübeck, Germany, Septembre 2007. Glupor 6 and 3rd Iberian Carbohydrate Symposium, Coimbra, Portugal, 2005. International Workshop on Carbohydrates in Natural Products Chemistry, Cracow, Poland, 2005. International Symposium on Green Chemistry. Use of renewable resources. Poitiers, France, 2003. COST Meeting "Towards New Processes for Chemistry", Carry le Rouet, France, 2001. XIth European Carbohydrate Symposium. Lisbonne, Portugal, 2001. COST Workshop on Preparative Aspects of Sonochemistry, Chambéry, France, 2000. International Seminar on Specialty Chemicals for the 21st Century, Valbonne, France, 1999. Conference COST D10 "Towards Environmentally benign processes using sonochemistry", Chambéry, France, 1999. Workshop Lyon-Lodz, Ruciane-Nida, Pologne, 1999. Young Chemist Workshop on Extreme and non classic conditions, Gottingen, Germany, 1995. Young Organic Chemist workshop, Rocamadour, France, 1994.

Selected Recent Publications at the interface with sustainable chemistry and with biology

- 1 A highly conserved ligand-binding site for AccA, S. Moréra et al, *Biochemical J.* **2024**, accepted
- 2 Machine learning approaches for the identification of ligands of the autophagy marker LC3, L. Soullère et al, *AI Chemistry*, **2023**, *1*, 100022
- 3 In silico identification of potential inhibitors of the SARS-CoV-2 Main protease, T. Barbier et al, *Biomolecules*, **2023**, *13*, 956
- 4 Towards more practical methods for the chemical synthesis of thioamides using sulfuration agents: Q. Zhang et al. *Molecules* **2023**, *28*, 3527
- 5 Catalytic conversion of concentrated feed of carbohydrates to 5-hydroxymethylfurfural. W. Ramdani et al. *ChemCatChem*, **2023**, *15*, e202300044
- 6 Synthesis and Structural Characterisation of Some Carbohydrate Steroid Hybrids. F. Ali-Rachedi et al. *Chemistry Africa* **2023**, *6*, 2419–2428
- 7 Ammonium acetate cat formation of 1,5-benzodiazepines involving HMF. J. Jiang et al. *Eur. J. Org. Chem.* **2023**, e202300144
- 8 Importance of the 2,6-difluorobenzamide motif for FtsZ allosteric inhibition. T. Barbier et al. *Molecules* **2023**, *28*, 2055
- 9 Dipolar Modification in Heterogeneous Catalysts under Electron Beam Irradiation for the Conversion of Biomass, Z. Chen et al. *ACS Catal.* **2022**, *12*, 15618
- 10 HMF and furfural chemistry toward biobased surfactants. X. Yue and Y. Queneau, *ChemSusChem*, **2022**, *15*, e202102660.
- 11 Biomass: Renewable carbon resource for chemical and energy industry, Y. Queneau, B. Han, *The innovation*, **2022**, 3,100184.
- 12 Design and properties of a novel family of nonionic biobased surfactants. J. F. Ontiveros et al., *ACS Sustainable Chem. Eng.* **2021** *9*, 16977-16988.
- 13 Heterocyclic chemistry applied to the design of bacterial quorum sensing signals mimics. Q. Zhang et al. *Molecules*, **2021**, *26*, 5135
- 14 Dipolar Cycloadditions of HMF-based nitrones: stepwise and multicomponent reactions, L. Wang et al. *Green Chem.* **2020**, *22*, 7907-7912.
- 15 Furfural and 5-(hydroxymethyl)furfural (HMF): two pivotal intermediates, G. Shen et al. *Curr. Opin. Green Sustain. Chem.* **2020**, *26*, 100384.
- 16 (2R)- and (2S)- 2-hydroxy Hexanoyl and Octanoyl-L-Homoserine Lactones: Q. Zhang et al. *Bioorg Chem*, **2020**, *104*, 104307.
- 17 Sporopollenin exine capsules (SpECs) provide antioxidant properties M. J. Thomasson et al. *Ind. Crop. Prod.* **2020**, *154*, 112714.
- 18 Esters of glucose-2-phosphate: occurrence and chemistry, Q. Zhang, S. Z. Li, M. Ahmar, L. Soullère, Y. Queneau, *Molecules*, **2020**, *25*, 2829.
- 19 Synthesis, biological evaluation and docking studies of carbamate, thiocarbamate quorum sensing modulators, Q. Zhang, et al. *Biomolecules*. **2020** *10*, 455
- 20 Novel non-toxic and non-hazardous solvent systems for the chemistry of indoles, A. El-Hairry et al. *ChemCatChem*, **2019**, *11*, 4403-4410.
- 21 Surfaces based on amino acid functionalized polyelectrolyte films, for enzyme immobilization, X. Briones et al., *Mater. Sci. Eng. C*, **2019**, *104*, 109938.
- 22 5-Hydroxymethylfurfural (HMF) in organic synthesis: a review of its applications towards fine chemicals, W. Fan et al, *Curr. Org. Synt.* **2019**, *16*, 583.
- 23 4-Aminoindoles as 1,4-Bisnucleophiles for Diversity-Oriented Synthesis of Tricyclic Indoles, S. Chen, et al, *Org. Biomol. Chem.* **2019**, *17*, 5982-5989.
- 24 Utilization of bio-based glycolaldehyde aqueous solution in synthesis: application to 2,3-dihydrofurans, J. Xu et al. *Green Chem.* **2019**, *21*, 2061.
- 25 Amino Acid Functionalized Polyelectrolyte Films as Bioactive Surfaces for Cell Adhesion, M. Leal et al, M. *ACS Appl. Mater. Interfaces*. **2019**, *11*, 19751.
- 26 Synthesis of a non-natural glucose-2-phosphate ester able to dupe the acc system of *Agrobacterium fabrum*, S.Z. Li et al. *Org. Biomol. Chem.* **2019**, *17*, 1090.
- 27 Unveiling the role of choline chloride on furfural synthesis from highly concentrated feeds of xylose, S. Jiang et al. *Green Chem.* **2018**, *20*, 5104.
- 28 Inhibiting pathogen surface adherence by films functionalized with glucofuranose, V. Villalobos et al. *ACS Appl. Mater. Interfaces*. **2018**, *10*, 28147.
- 29 Lifestyle of the biotroph *Agrobacterium tumefaciens* in the ecological niche, A. Gonzalez-Mula et al., *New Phytologist*, **2018**, *219*, 350.
- 30 Oxidation of aldoses contained in softwood hemicellulose, E. Derrien et al. *Ind. Eng. Chem. Res.* **2018**, *57*, 4543.
- 31 HMF in multicomponent reactions: the first utilization of 5-hydroxymethylfurfural (HMF) in the Biginelli reaction. W. Fan et al. *Green Chem.*, **2018**, *20*, 485.
- 32 The Pincatelli Reaction and its Variants: Recent Application and Biomass Valorization, C. Verrier et al., *Org. Biomol. Chem.* **2018**, *16*, 676.
- 33 Influence of the D/L configuration of N-acyl-homoserine lactones (AHLs) on Lux-R dependent quorum sensing, S.Z. Li et al. *Bioorg. Chem.* **2018**, *77*, 215.