

## Dr. Marius REGLIER Ph. D.

CNRS Directeur de Recherche Emérite (DREM)

< <https://ism2.univ-amu.fr/fr/annuaire/biosciences/regliermarius> >

French citizen, date of birth and place: August 13, 1952, Marseille



### Current address:

iSm2 UMR CNRS 7313, Aix Marseille Université, Campus Scientifique de Saint Jérôme, Case 342, 56, avenue Escadrille Normandie-Niemen, 13397 Marseille Cedex 20

Tel.: int.+33 491 288 823; Fax: int.+33 491 983 208 - iPhone: +33 671 605 868 - E mail:

[marius.reglier@univ-amu.fr](mailto:marius.reglier@univ-amu.fr) (marius.reglier@icloud.com)

### Education:

- Master in Sciences, Paul Cézanne Univ. Aix-Marseille III, 1975.
- Chemical Engineer, Ecole Supérieure de Chimie de Marseille, 1976.
- First Ph. D., Aix-Marseille University, September 26, 1980: *Reactivity of non-conjugated dienes towards the catalytic system PdCl<sub>2</sub>/CuCl<sub>2</sub>: cyclisation and allylic oxidations* (Pr. B. Waegell and Dr. A. Heumann).
- Second Ph. D., Pierre and Marie Curie University (Paris VI), December 18, 1984: *Syntheses and Reactivity of Thia and 1-Aza-3-Cyclohexenes* (Dr. S. Julia).

### Awards:

- 2002, *Docteur et de Madame Henri Labbé* prize from the French Academy of Science.
- 2002, *Japan Society for Promotion of Science* fellowship.
- 2004, *France Berkeley Fund* with J. P. Klinman, Department of Chemistry UC Berkeley O<sub>2</sub> Activation in Metallobiochemistry: Probes for the Functional Cu-O Species in the Neuroactive Enzymes, DβM and PHM.
- 2011-2014, CNRS premium for scientific excellence (PES).
- 2014, “Chaire d’excellence” from FAPES (São Paulo Research Fondation) to spend 3 months (Aug.-Oct.) in University of São Paulo (USP).

### Experience:

- 1980-1984: CNRS Researcher (CR2), Ecole Normale Supérieure, Pierre and Marie Curie University (Paris VI), Dr. S. Julia
- 1985-1986: Research Fellow, University of Geneva, Switzerland, Pr. W. Oppolzer.
- 1986-1994: CNRS Researcher (CR1), Aix Marseille University, Pr. B. Waegell
- 1989-1990: Research Fellow, Laboratory of Cellular and Molecular Neurobiology, Gif/Yvette, Dr. J. Mallet.
- 1992: Visiting scientist, Johns Hopkins University, Baltimore, USA, Pr. K. D. Karlin.
- 1994-2018: CNRS Researcher (DR1), Aix-Marseille Université.

- 2018: DR Emeritus (DREM), Aix-Marseille Université.

### National positions:

- **1996-2004:** Member of the organising committee of *REncontres de Chimie Organique Biologique* (President for RECOB8, 2000)
- **2000-2004:** Appointed member of the CNRS *Comité National* section 20
- **2001-2006:** President of the GIS CNRS/Univ. Paul Cézanne *Club CNRS Métalloprotéines et Modèles*
- **2006-2017:** Creation and Head of the laboratory BiosCiencés (iSm2 UMR CNRS 7313)
- **2007-2009:** Member of the scientific committee of the ANR *program blanc*
- **2009-2012:** Vice-president of the ANR program *Retour Post-doctorant*
- **2012-2018:** Scientific officier at the Institut de Chimie du CNRS
- **2016-:** Scientific Committee Member of the **CEEBIOS** (Centre Européen d'Excellence en Biomimetisme de Senlis)
- **2017-:** Scientific Committee Member of the **COSMETHICS**, Cosmetics at the confluence of beauty and health (CDP 2017, Cross Disciplinary Program of Université Grenoble Alpes)

### International positions:

- 2001-2006: COST D21 member (chair, L. Casella), working group 3: *Molecular oxygen activation at biological and biomimetic Copper centres* (chair, L. Bubacco) and working group 7: *Biomimetic Catalytic Activation of Dioxygen Species ( $O_2$ ,  $H_2O_2$  and Superoxide Ion) by Metalloenzymes and Models* (chair, G. Speier)
- 2004-2007: Bilateral agreement JSPS/CNRS on  *$O_2$  Activation: study of the metal-oxo species involved in dioxygen activation catalyzed by iron and copper-containing metalloenzymes* with Prs. K. Kano, M. Kodera and T. Funabiki (Doshisha University, Japon)
- 2007-2012: French member of the scientific committee of the Indo French Center for the Promotion of Advanced Research (IFCPAR)
- 2009-2012: Member of the scientific committee of the European projet *Bio-inspired Solar Energy Utilization* (Biosolenuti FP7), Heraklion, Greece.
- 2011-2015: COST CM1003 (chair, E. Nordlander) management committee member *Biological oxidation reactions - mechanisms and design of new catalysts*
- 2013-2014: Bilateral agreement Moldavian Academy of Sciences/CNRS on *Proton Réduction catalyzed by functional models of hydrogenases* with K. Turta, Moldavian Academy of Sciences (Chişinău, Moldavia)

### French Teaching experience:

- *Chemistry of living organisms*, Bachelor courses in Physical and Chemical Sciences, Aix-Marseille University.

- *Chemical tools for the study of biomolecules*, Master courses in Chemistry, Aix-Marseille University.
- *Electron Paramagnetic Resonance Spectroscopy*, Bachelor courses in Chemistry, University of La Réunion.
- *Synthetic Biology*, Master courses in Chemistry, Aix-Marseille University (Since 2016)
- *Redox bio-inorganic chemistry*, International Master Frontiers in Chemistry, Université de Paris, Paris, France (Since 2016).
- *Epigenetic from the chemical point of view*, [Ecole de l'INSERM Liliane Bettencourt](#), Paris (Since 2018).

### International Teaching experience:

- *Copper-containing monooxygenases and related enzymes*, Erasmus Intensive Programme: *from chemistry to biology and medicine via metals*, University of Crete, Heraklion, Greece (July 2009-2011).
- *Production and activation of H<sub>2</sub> and O<sub>2</sub>*, Erasmus Intensive Programme: *Bioinspired Materials for Solar Energy Utilization*, University of Crete, Heraklion, Greece (July 2012-2014).
- *An Introduction to O<sub>2</sub> activation in biology*, Universidade Federal do Rio de Janeiro, Brésil, Ph. D. courses (Sept. 2014)
- *Type III Cu-containing proteins*, Universidade do São Paulo, Brésil, Ph. D. courses, (Aug.-Sept. 2014).
- *Cu-containing monooxygenases and cancer diseases*, Università degli Studi di Catania, Ph. D. courses (Jan. 2015).

### Research interests:

Activation of small molecules (O<sub>2</sub>, H<sub>2</sub>, H<sub>2</sub>O, CO<sub>2</sub> ...) catalyzed by metalloenzymes and their biomimetic/bioinspired models.

A) *Cu-containing monooxygenases*: Focused on Tyrosinase (Ty), Dopamine  $\beta$ -Hydroxylase (D $\beta$ H), Peptidylglycine  $\alpha$ -Amidating Monooxygenase (PAM), particulate Methane MonoOxygenase (pMMO) and Lytic Polysaccharide MonoOxygenase (LPMO):

- Functional and structural metalloenzyme models
- Inhibitors of D $\beta$ H, PAM and Ty
- Purification and genetic expression of copper-containing monooxygenases

B) *[NiFe]hydrogenase*: Biomimetic chemistry focused on functional models to perform the reversible transformation of 2H<sup>+</sup> into H<sub>2</sub>.

C) *Molybdenum-containing enzymes*: Biomimetic chemistry focused on functional models of Formate dehydrogenases (Fdh) that perform the reversible transformation of CO<sub>2</sub> into HCO<sub>2</sub>H.

## 2009-2021 selected publications (148 referenced papers):

- 1 *N*-Hydroxyguanidines oxidation by a N<sub>3</sub>S copper-complex mimicking the reactivity of Dopamine β-Hydroxylase. P. Slama, J.-L. Boucher and M. Réglier *J. Inorg. Biochem.* **2009**, *103*, 455-462.
- 2 Molecular structure and catechol oxidase activity of a new copper(I) complex with sterically crowded monodentate N-donor ligand. Á. Kupán, J. Kaizer, G. Speier, M. Giorgi, M. Réglier and F. Pollreisz *J. Inorg. Biochem.* **2009**, *103*, 389-395.
- 3 Synthesis and characterization of a binuclear iron(III) complex bridged by 1-aminocyclopropane-1-carboxylic acid. Ethylene production in the presence of hydrogen peroxide. W. Ghattas, Z. Serhan, N. El Bakkali-Taheri, M. Réglier, M. Kodera, Y. Hitomi and A. J. Simaan *Inorg. Chem.* **2009**, *48*, 3910-3912.
- 4 Binding of 2-Hydroxypyridine-N-oxide on Dicopper(II) Centers: Insights into Tyrosinase Inhibition Mechanism by Transition-State Analogs. E. Peyroux, W. Ghattas, R. Hardré, M. Giorgi, B. Faure, A. J. Simaan, C. Belle and M. Réglier *Inorg. Chem.* **2009**, *48*, 10874-10876.
- 5 Probing the Peptidylglycine α-Hydroxylating Monooxygenase Active Site with Novel 4-Phenyl-3-butenic Acid Based Inhibitors. E. Langella, S. Pierre, W. Ghattas, M. Giorgi, M. Réglier, M. Saviano, L. Esposito and R. Hardré *ChemMedChem* **2010**, *5*, 1568-1576.
- 6 Refinement of Arylthiosemicarbazone Pharmacophore in Inhibition of Mushroom Tyrosinase W. Yi, C. Dubois, S. Yahiaoui, R. Haudecoeur, C. Belle, H. Song, R. Hardré, M. Réglier and A. Boumendjel *Eur. J. Chem. Med.* **2011**, *46*, 4330-4335.
- 7 A promising fast energy transfer system via an easy synthesis: Bodipy-porphyrin dyads connected via a cyanuric chloride bridge, their synthesis, electrochemical and photophysical investigations. T. Lazarides, G. Charalambidis, A. Vuillamy, M. Reglier, E. Klontzas, G. Froudakis, S. Kuhri, D. M. Guldi and A. G. Coutsolelos *Inorg. Chem.* **2011**, *50*, 8926-8936.
- 8 Photoinduced Multi-Electron Transfer to a Multicopper Oxidase Resulting in Dioxygen Reduction into Water. A. J. Simaan, Y. Mekmouche, C. Herrero, P. Moreno, A. Aukauloo, J. A. Delaire, M. Réglier and T. Tron. *Chem. Eur. J.* **2011**, *17*, 11743-11746.
- 9 The versatile binding mode of transition-state analog inhibitors of tyrosinase towards dicopper(II) model complexes: experimental and theoretical investigations. M. Orio, C. Bochot, C. Dubois, G. Gellon, R. Hardré, H. Jamet, D. Luneau, C. Philouze, M. Réglier, G. Serratrice and C. Belle *Chem. Eur. J.* **2011**, *17*, 13482-13494.
- 10 Aurone as versatile structure for modulation of the mushroom Tyrosinase activity. C. Dubois, R. Haudecoeur, M. Orio, C. Belle, C. Bochot, A. Boumendjel, R. Hardré, H. Jamet and M. Réglier *ChemBioChem* **2012**, *13*, 559-565.

- 11** 1-Aminocyclopropane-1-carboxylic acid oxidase : insight into cofactors binding using kinetic and theoretical studies. L. Brisson, N. El Bakkali-Taheri, M. Giorgi, A. Fadel, József Kaizer, El H. Ajandouz M. Réglier, T. Tron, and A. J. Simaan *J. Biol. Inorg. Chem.* **2012**, *17*, 939-949.
- 12** Remarkable phosphatase-like activity promoted by a new binuclear copper(II) complex. O. Schicke, B. Faure, M. Giorgi, A. J. Simaan and M. Réglier *Inorg. Chim. Acta* **2012**, *391* (2012) 189-194.
- 13** Visible Light-Driven O<sub>2</sub> Reduction by a Porphyrin-Laccase System. T. Lazarides, I. Sazanovich, A. J. Simaan, M. Kafentzi, Y. Mekmouche, B. Faure, M. Réglier, J. Weinstein, A. G. Coutsolelos and T. Tron *J. Amer. Chem. Soc.* **2013**, *135*, 3095-3103.
- 14** Unsymmetrical binding modes of HOPNO inhibitor of tyrosinase: From model complexes to the enzyme. C. Bochot, E. Favre, C. Dubois, B. Baptiste, P.-A. Carrupt, G. Gellon, R. Hardré, D. Luneau, A. Nurisso, M. Réglier, G. Serratrice, C. Belle and H. Jamet *Chem. Eur. J.* **2013**, *19*, 3655-3664.
- 15** Structural and magnetic characterization of a tetranuclear Copper(II) cubane stabilized by unusual intramolecular metal cation- $\pi$  interactions. R. Papadakis, M. Giorgi, P. Rousselot-Pailley, E. Rivière, M. Réglier, A. J. Simaan and T. Tron *Inorg. Chem.* **2013**, *52*(10), 5824-5830.
- 16** Probing Kojic acid binding to Tyrosinase enzyme: insights from model complex and QM/MM calculations. C. Bochot, A. Gouron, L. Bubacco, A. Milet, C. Philouze, M. Réglier, G. Serratrice, H. Jamet and C. Belle *Chem. Commun.* **2014**, *50*, 308-3010.
- 17** 2,6-Bis(bromo-methyl)pyridine. O. Cuzan, T. Straistari, C. Turta and M. Réglier *Acta Cryst. Section E, Structure reports online* **2014**, *70*(Pt 1), o4.
- 18** Aurones as Effectors of Tyrosinase: Investigation of the Binding-Site Homology of Mushroom and Bacterial Tyrosinases. R. Haudecoeur, A. Gouron, C. Dubois, H. Jamet, M. Lightbody, R. Hardré, Anne Milet, E. Bergantino, L. Bubacco, C. Belle, M. Réglier and A. Boumendjel *ChemBioChem* **2014**, *15*(9), 1325-1333.
- 19** Exploring the interaction of N/S compounds to dicopper center: from model studies to tyrosinase inhibition. E. Buitrago, A. Vuillamy, A. Boumendjel, W. Yi, G. Gellon, R. Hardre, Renaud, G. Serratrice, M. Réglier and C. Belle *Inorg. Chem.* **2014**, *53*, 12848-12858.
- 20** Laccases as palladium oxidases. Y. Mekmouche, L. Schneider, P. Rousselot-Pailley, B. Faure, A. J. Simaan, C. Bochot, M. Réglier and T. Tron *Chem. Sci.* **2015**, 1247-1251.
- 21** Reactivity of dinuclear copper(II) complexes towards melanoma cells: correlation with its stability, tyrosinase mimicking and nuclease activity. C. Justino Nunes, B. Essenfelder Borges, L. Sumie Nakao, E. Peyroux, R. Hardré, B. Faure, M. Réglier, M. Giorgi, M. Pietro Bach, C. Columbano de Oliveira and A. M. Da Costa Ferreira *J. Inorg. Biochem.* **2015**, *149*, 49-58.
- 22** Synthesis and Characterization of a Binuclear Copper Complex Bearing a Hydrophobic Cavity as

- Model for Copper-containing Monooxygenases. O. Schicke, B. Faure, Y. Carissan, M. Giorgi, A. J. Simaan, M. Réglier *Eur. J. Inorg. Chem.* **2015**, 3512-3518.
- 23** A structural and functional model for the 1-aminocyclopropane-1-carboxylic acid Oxidase. M. Sallmann, F. Oldenburg, B. Braun, M. Réglier, A. J. Simaan and C. Limberg *Angew. Chem. Int. Ed. Engl.* **2015**, *54*, 12325-12328.
- 24** A Laccase To Steer Visible Light Driven Oxidation of Organic Substrates with Dioxide. L. Schneider, Y. Mekmouche, P. Rousselot-Pailley, A. J. Simaan, V. Robert, M. Réglier, A. Aukauloo and T. Tron *ChemSusChem* **2015**, *8(18)*, 3048-3051.
- 25** Recombinant Tyrosinase from *Polyporus arcularius*: Overproduction in *Escherichia coli*, Characterization and Use in a Study of Aurones as Tyrosinase Effectors. E. Marková, M. Kotik, A. Krenkova, P. Man, R. Haudecoeur, A. Boumendjel, R. Hardre, Y. Mekmouche, E. Courvoisier-Dezord, M. Réglier, L. Martinkova *J. Agr. Food Chem.* **2016**, *64*, 2925-2931.
- 26** Are Human Tyrosinase and related proteins suitable targets for melanoma therapy? E. Buitrago, R. Hardré, R. Haudecoeur, H. Jamet, C. Belle, A. Boumendjel, L. Bubacco and M. Réglier *Current Topics in Medicinal Chemistry* **2016**, *16(27)*, 3033-3047.
- 27** Room-temperature characterization of a mixed-valent  $\mu$ -hydroxo dicopper(II,III) complex. J. A. Isaac, F. Gennarini, I. López, A. Thibon-Pourret, R. David, G. Gellon, B. Gennaro, C. Philouze, F. Meyer, S. Demeshko, Y. Le Mest, M. Réglier, H. Jamet, N. Le Poul and C. Belle *Inorg. Chem.* **2016**, *55*, 8263-8266.
- 28** Changing the chemical and physical properties of high valent heterobimetallic bis-( $\mu$ -oxido) Cu- Ni complexes by ligand effects. M.-C. Kafentzi, M. Orío, M. Réglier, S. Yao, U. Kuhlmann, P. Hildebrandt, M. Driess, A. J. Simaan and K. Ray *Dalton trans.* **2016**, *45*, 15994-16000.
- 29** Formation, Characterization, and Reactivity of Nonheme Iron(IV)—Oxo Complex Derived from the Chiral Pentadentate Ligand as N4P. D. Lakk-Bogáth, R. Csonka, G. Speier, M. Réglier, A. J. Simaan, J.-V. Naubron, M. Giorgi, K. Lázár and J. Kaizer *Inorg. Chem.* **2016**, *55*, 10090-10093.
- 30** Oxydative DNA Cleavage Promoted by Phenoxyl-Radical Copper(II) Complex. O. Cuzan, A. Kochem, A. J. Simaan, S. Bertaina, B. Faure, V. Robert, S. Shova, M. Giorgi, M. Maffei, M. Réglier and M. Orío *Eur. J. Inorg. Chem.* **2016**, *56*, 5575-5584.
- 31** 2-Hydroxypyridine-*N*-oxide-Embedded Aurones as Potent Human Tyrosinase Inhibitors. R. Haudecoeur, M. Carotti, A. Gouron, M. Maresca, E. Buitrago, R. Hardré, E. Bergantino, H. Jamet, C. Belle, M. Réglier, L. Bubacco and A. Boumendjel *ACS Med. Chem. Lett.* **2017**, *8(1)*, 55-60.
- 32** Copper complexes as structural and functional models for Lytic Polysaccharide Monooxygenases. A. L. Concia, M. R. Beccia, F. Terra Ferre, M. Scarpellini, F. Biaso, B. Guigliarelli, M. Réglier and A. J. Simaan *Inorg. Chem.* **2017**, 1023-1026.



- 33** Characterization of a butterfly flapping dinuclear copper(II) complex and its fleeting mixed-valent Cu(II)Cu(III) counterpart. A. Kochem, F. Gennarini, M. Yemloul, E. Rivière, N. Le Poul, B. Faure, M. Giorgi, Y. Le Mest, M. Réglier and A. J. Simaan *ChemPlusChem* **2017**, *82*, 615-624.
- 34** Characterization of Cu(II)-reconstituted ACC Oxidase using experimental and theoretical approaches. N. El Bakkali-Taheri, S. Tachon, M. Orio, S. Bertaina, M. Martinho, V. Robert, M. Réglier, T. Tron, P. Dorlet and A. J. Simaan *Arch. Biochem. Biophys.* **2017**, *623-624*, 31-41.
- 35** A thiosemicarbazone-nickel(II) complex as efficient electrocatalyst for hydrogen evolution T. Straistari, J. Fize, S. Shova, M. Réglier, V. Artero and M. Orio *ChemCatChem* **2017**, *9*, 2262-2268.
- 36** Influence of Asymmetry on the Redox Properties of Phenoxo- and Hydroxo-Bridged Dicopper Complexes: Spectroelectrochemical and Theoretical Studies. F. Gennarini, R. David, I. López, Y. Le Mest, M. Réglier, C. Belle, A. Thibon-Pourret, H. Jamet and N. Le Poul *Inorg. Chem.* **2017**, *56(14)*, 7704-7719.
- 37** Effect of ligand exchange on the one-electron oxidation process of alkoxo or phenoxo bridged binuclear copper(II) complexes. F. Gennarini, A. Kochem, J. Isaac, A.-T. Mansour, I. López, Y. Le Mest, A. Thibon-Pourret, B. Faure, H. Jamet, N. Le Poul, C. Belle, A. J. Simaan and M. Réglier *Inorg. Chim. Acta* **2018**, *481*, 113-119.
- 38** An air stable molybdenum based pre-catalyst in oxygen-atom transfer reactions. E. Oheix, M. Orio, M. Giorgi, M. Réglier, O. Iranzo and R. Y. Hardré *Eur. J. Inorg. Chem.* **2018**, 1427-1434.
- 39** Electrochemical water oxidation and stereo-selective oxygen atom transfer mediated by a copper complex. M.-C. Kafentzi, R. Papadakis, F. Gennarini, A. Kochem, O. Iranzo, Y. Le Mest, N. Le Poul, T. Tron, B. Faure, A. J. Simaan and M. Réglier *Chem. Eur. J.* **2018**, *24*, 5213-5224.
- 40** Experimental and theoretical studies of thiosemicarbazone complexes: Influence of the metal for the electrocatalytic hydrogen production. T. Straistari, R. Hardré, J. Massin, M. Attolini, B. Faure, M. Giorgi, M. Réglier and M. Orio *Eur. J. Inorg. Chem.* **2018**, 2259-2266.
- 41** Hydrogen evolution reaction catalyzed by a bis(thiosemicarbazone) cobalt complex. T. Straistari, R. Hardré, J. Fize, S. Shova, M. Giorgi, M. Réglier, V. Artero and M. Orio *Chem. Eur. J.* **2018**, *24*, 8779-8786.
- 42** Tetranuclear and dinuclear phenoxido bridged copper complexes based on unsymmetrical thiosemicarbazone ligands. J. A. Isaac, A.-T. Mansour, R. David, A. Kochem, C. Philouze, S. Demeshko, F. Meyer, M. Réglier, A. J. Simaan, S. Caldarelli, M. Yemloul, H. Jamet, A. Thibon-Pourret and C. Belle *Dalton trans.* **2018**, *47*, 9665-9676.
- 43** Effect of monoelectronic oxidation of an unsymmetrical phenoxido-hydroxido bridged dicopper(II) complex. A. Thibon-Pourret, F. Gennarini, R. David, J. Isaac, I. Lopez, G. Gellon, F. Molton, L. Wojcik, C. Philouze, D. Flot, Y. Le Mest, M. Réglier, N. Le Poul, H. Jamet and C. Belle *Inorg. Chem.*

2018, 57, 12364-12375.

**44** Pacman-shaped tetranuclear copper complex displaying rare carbonyl- $\pi$  interactions: a magneto-structural and computational study. A. Kochem, B. Faure, S. Bertaina, E. Rivière, M. Giorgi, M. Réglier, M. Orio and A. J. Simaan *Eur. J. Inorg. Chem.* **2018**, 5039-5046.

**45** CuII-Containing 1-Aminocyclopropane Carboxylic Acid Oxidase Is an Efficient Stereospecific Diels-Alderase. W. Ghattas, V. Dubosclard, S. Tachon, M. Beaumet, R. Guillot, M. Réglier, A. J. Simaan and J.-P. Mahy *Angew. Chem. Int. Ed. Engl.* **2019**, 58, 14605-14609.

**46** Neutral Lipophilic Palladium(II) Complexes and their Applications in Electrocatalytic Hydrogen Production and C-C Coupling Reactions. O. Cuzan-Munteanu, D. Sirbu, M. Giorgi, S. Shova, E. A. Gibson, M. Réglier, M. Orio, L. M. D. R. S. Martins and A. C. Benniston *Eur. J. Inorg. Chem.* **2020**, 10, 813-822.

**47** Characterization of a bacterial copper-dependent lytic polysaccharide monooxygenase with an unusual second coordination sphere. A. Munzone, B. El Kerdi, M. Fanuel, H. Rogniaux, D. Ropartz, M. Réglier, A. Royant, A. J. Simaan and C. Decroos *FASEB J.* **2020**, 287, 3298-3314.

**48** Ligand-based electronic effects on the electrocatalytic hydrogen production by thiosemicarbazone nickel complexes. M. Papadakis, A. Barrozo, T. Straistari, N. Queyriaux, A. Putri, J. Fize, M. Giorgi, M. Réglier, J. Massin, R. Hardré and M. Orio *Dalton Trans.* **2020**, 49, 5064-5073.

**49** Hydrogen evolution reaction mediated by a trinuclear nickel complex with an all sulfured coordination sphere. C. Pieri, A. Barrozo, C. Bochet, M. Giorgi, J. Massin, M. Réglier, M. Field, M. Orio, V. Artero and R. Hardré. *ChemComm* **2020**, 56(75), 11106-11109.

**50** Artificial Enzymes for Diels-Alder Reactions. W. Ghattas, J.-P. Mahy, M. Réglier and A. J. Simaan. *ChemBioChem* **2021**, 22, 443-459.

**51** Ditopic Chelators of Dicopper Centers for Enhanced Tyrosinases Inhibition. E. Buitrago, C. Faure, L. Challali, E. Bergantino, A. Boumendjel, L. Bubacco, M. Carotti, R. Hardré, M. Maresca, C. Philouze, H. Jamet, M. Réglier and C. Belle. *Chem. Eur. J.* **2021**, 27, 4384-4393.

**52** Synthesis of Protected 3,4- and 2,3-Dimercaptophenylalanines as Building Blocks for Fmoc-Peptide Synthesis and Incorporation of the 3,4-Analogue in a Decapeptide Using Solid-Phase Synthesis. I. Banerjee, K. Ch Ghosh, E. Oheix, M. Jean, J.-V. Naubron, M. Réglier, O. Iranzo and S. Sinha. *J. Org. Chem.* **2021**, 86, 2210-2223.

## 2009-2021 books/book chapters

**49** Ethyl chlorodifluoroacetate. D. Desbouis, R. Hardré and M. Réglier in “e-EROS Encyclopedia of Reagents for Organic Synthesis”, John Wiley & Sons, Ltd, March 15, **2009** <DOI :10.1002/047084289X.rn00987>.



**50** Copper Mononuclear Monooxygenases. M. Réglie and C. Belle in “Encyclopedia of Metalloproteins”, eds. R. H. Kretsinger, V. N. Uversky and E. A. Permyakov, Springer, **2013**, pp. 723-729.

**51** 1-Aminocyclopropane-1-Carboxylic Acid Oxidase. A. J. Simaan and M. Réglie in "2-Oxoglutarate-Dependent Oxygenases", eds. C. Schofield and R. P. Hausinger. Royal Society of Chemistry, **2015**, RSC Metallobiology Series No. 3, pp. 423-437.

**52** Modeling the Mononuclear Copper Monooxygenase Active Site. A. L. Concia, A. Munzone, M.-C. Kafentzi, A. Kochem, M. Réglie, C. Decroos and A. J. Simaan. In “Series in Chemistry, Energy and Environment”, Eds. K. Kadish and R. Guilard, World Scientific. Vol. 5: “Bioinspired Chemistry: From Enzymes to Synthetic Models.”, Ed. M. Réglie, **2019**, pp. 185-263.

**53** “Bioinspired Chemistry: From Enzymes to Synthetic Models.”, Ed. M. Réglie, In “Series in Chemistry, Energy and Environment”, Eds. K. Kadish and R. Guilard, World Scientific. Vol. 5: **2019**.

### **2009-2021 Invited international conferences**

**1** Tyrosinase, the Key Enzyme in Melanin Synthesis. 28<sup>e</sup> Séminaires en Sciences Pharmaceutiques, *Innovation in medicinal chemistry: from biomass to safe and potent drug candidates* (Sept. 9-13/2013, Zermatt, Switzerland).

**2** General and applied aspects of Tyrosinase inhibition. The 2<sup>nd</sup> Japan-France Coordination Chemistry Symposium (Nov. 24-28/2013, Nara, Japan).

**3** Mechanism-based strategies in the inhibition of two human Cu-containing monooxygenases, Ty and PHM. Indo-French seminar on *Bio-inorganic Approaches towards Health Problems* (March 24-28/2014, Pudhucherry, India).

**4** General and applied aspects of Tyrosinase inhibition. The International Conference dedicated to the 55<sup>th</sup> anniversary from the foundation of the Institute of Chemistry of the Academy of Sciences of Moldova (May 28-30/2014, Chişinău, Moldavia).

**5** Inhibition of Tyrosinase: a coordination chemistry approach. 17<sup>th</sup> Brazilian meeting on Inorganic Chemistry, BMIC XVII (Aug. 10 -14/2014, Araxá, Minas Gerais, Brazil).

**6** Mononuclear Cu-containing monooxygenases: in the search of the Cu(II)-oxyl species. 2<sup>nd</sup> WG Meeting COST e-COSTBIO (Jan. 12-14/2015, Marseille, France).

**7** Inhibition of tyrosinase: a coordination chemistry approach. Meeting of the Cluster of Excellence UniCat (Apr. 11-14/2015, Berlin, Germany).

**8** Bioinorganic chemistry approach in the development of tyrosinase inhibitors. 18<sup>th</sup> International Conference in *Physical Methods in Coordination and Supramolecular Chemistry* (Oct. 8-9/2015, Chişinău, Moldavia).

**9** Copper-containing monooxygenases: the union of two coppers does the strength? ICC 2016, 42<sup>nd</sup> International conference in Coordination Chemistry (July 3-8/2016, Brest, France).

**10** Copper-containing monooxygenases: the union of two coppers does the strength? SABIC 2017, 5<sup>th</sup> Symposium on Advanced Biological Inorganic Chemistry (Jan. 7-11/2017, Kolkata, India).