

Doctor Jean-Pierre Noël LLORED

Curriculum Vitae

(Updated: 24/02/2018)

1. PERSONAL INFORMATION

Nationality: French.

Address at the Linacre College:

Linacre College

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2. LANGUAGES

- English: Reading, speaking, and writing.
- Spanish: Reading, speaking, and writing.
- Italian: Reading.
- French: Native speaker.

3. CURRENT APPOINTMENTS

- Visiting Scholar at the Linacre College (Oxford University, UK, Oct 2014-present).
- Visiting Scholar at the Department of History and Philosophy of Sciences (Cambridge University, UK): Michaelmas Term (Michaelmas term 2017-2018).
- Associate Researcher at the University Paris 7 [Laboratory SPHERE dedicated to historical and philosophical studies about science and technology (2015-present); and Laboratory LIED dedicated to interdisciplinary studies both of alternative forms of energy and environmental issues (from October 2017 onwards)].
- Professor ‘Agrégé’ of Chemistry (Rectorat of Clermont-Ferrand, France, 1999-present).
- Part-time teacher in philosophy and metaphysics of science (graduate students) at the University of Paris 7. Supervisor of the Master thesis of graduate students in philosophy of science and technology, and in metaphysics.
- Part-time teacher in philosophy of chemistry (undergraduate students in chemistry and in philosophy) at the University of Pierre and Marie Curie in France (2017-2018).
- Invited lecturer in philosophy of science (graduate students) at the Free University of Brussels in Belgium (2015-present).
- Deputy Editor of the journal *Foundations of Chemistry* (USA, Springer, 2010-present).
- Member of the executive committee of the French Society for the History and Sciences and Technology (2016-present): Coordinator of the annual prize of the best French PhD thesis in history of sciences and technology in 2017 and in 2018.

4. AREAS OF SPECIALIZATION

- Philosophy of science (that is of chemistry first, and then of ecology, materials science, and environmental science).
- Philosophy of technology (chemical risk and hazards, nanotechnology and, recently, AI and big data; I am influenced by the philosophy of G. Simondon).
- Metaphysics (relations and *relata*; intrinsic and relational properties; relational approach of the concepts of emergence and structure; dispositions, affordances, substance, ex-stance, and process; *Ceteris paribus* clause; *Umwelt*), and metametaphysics (and especially the study of the roles played by metaphysical assumptions in natural and social sciences).
- Epistemology: (1) Study of chemical knowledge; (2) study of the stabilization of the knowledge produced within *interdisciplinary projects* involving chemistry, biology, (eco)toxicology, metrology and computer science; and (3) role and status of thermodynamics in quantum calculations.
- ‘Hinge epistemology’ in collaboration with the Prof. Rom Harré (Oxford).
- Mereology (parts-wholes strategies in chemistry, biochemistry, ecology, (eco)toxicology, and environmental science).
- Modelling and Simulation in Quantum Chemistry.
- Intersection between metaphysics, ethics, and Law: Impacts of the definitions of the words ‘substance’, ‘risk’, and ‘hazard’ on the REACH regulation implementation.
- Environmental ethics: (1) study of the role played by ethical values in ‘green and/or sustainable sciences and technology’; and (2) study of the role played by the Precautionary Principle in shaping European Chemical Regulations.
- Philosophy and Anthropology of Nature: Relational ontologies of chemicals, plants, organisms, ecosystems.
- ‘Mesology’ (Study of human ‘milieux’): Mutual dependence between an organism and its environment (Merleau-Ponty, Uexküll, Watsuji, Berque).
- Chemistry.

5. AREAS OF PUBLICATION

- Philosophy of Science and Technology.
- Metaphysics.
- Logic and mereology.
- Philosophy of Nature.
- Philosophy of mind.
- Epistemology.
- Environmental ethics: Consequentialism, ethics of care, pragmatic ethics, intrinsic value.
- History of Philosophy: Emergentism, holism and reductionism.
- Psychology and reflection upon the origins of culture (with Rom Harré).

6. EDUCATION

6.1 PHILOSOPHY

- February 2014: ‘Qualification’ for applying for associate professor academic positions in two domains, *i.e.*: (1) in philosophy, and (2) in history and epistemology of sciences and technology.

Section CNU n°17 (Philosophy): Qualification awarded by the CNU (National Council of Universities) in February 2014 (number 14217262647).

Section CNU n°72 (Epistemology, History of Science and Technology): Qualification awarded by the CNU (National Council of Universities) in February 2014 (number 14272262647).

- November 2007-November 2013: PhD thesis in co-supervision with the Ecole Polytechnique (France) and the Free University of Brussels (Belgium) passed *summa cum laude* with the congratulations of the Board of Examiners.

Thesis title: “Chemistry, quantum chemistry and the concept of emergence: Study of a connection” (in French).

Main thesis advisor: Michel Bitbol (Ecole Polytechnique). Co-advisor: Isabelle Stengers (Free University of Brussels).

This work gave rise to a Ph. D. of Epistemology, History of Science and Technology from the Ecole Polytechnique, and to a Ph. D. of Philosophy from the Free University of Brussels.

The thesis was defended in November 22th, 2013.

The jury was composed by: Rom Harré (President of the Jury and examiner, Oxford University and Georgetown University); Bernadette Bensaude-Vincent (thesis referee and examiner, University of Paris 1 Sorbonne); Michel Bitbol (advisor and examiner, Ecole Normale Supérieure de la rue d’Ulm); Gilles Frison (examiner, Ecole Polytechnique); Alain Leplege (thesis referee, University Paris Diderot); Isabelle Stengers (co-advisor and examiner, Free University of Brussels); Benoît Timmermans (examiner, Free University of Brussels).

- 2005-2007: M.A. in Philosophy, option modern philosophy and history of modern philosophy. Thesis title: "The emergence of the molecular orbital approximation" (in French). Thesis advisor: Bernadette Bensaude-Vincent. Distinction: *Highest honors*, University Paris X-Nanterre, Paris.

6.2 SCIENCE

- 2004: ‘Agrégation’ of chemistry (highest French competitive examination for teaching chemistry in high-schools and university). Successful candidate.
- 1994-97: Chemical Engineer Degree from the ‘Ecole Nationale Supérieure de chimie de Mulhouse’– ENSCMu, France –. Thesis title: "Study of some acidic dissolutions of MgO" (in French).
- 1996-97: M.A. in Analytical Chemistry. Thesis title: "Quantum Calculations of Electron Transfer Rates in Oxidases systems" (in French). Thesis advisor: Professor Jacques (ENSCMu, University of Haute-Alsace). Distinction: Highest honors.

- 1991-1993: Preparatory class for admission to ‘Grandes Ecoles’: ‘Mathématiques supérieures’ and ‘mathématiques spéciales’, France.
- 1991: ‘Baccalauréat’ (highest honors).

7. TEACHING EXPERIENCE IN SCIENCE AND TECHNOLOGY (1999-2017)

7.1 RECTORAT OF CLERMONT-FERRAND (from 2004 onwards): Professor ‘agrégé’ of chemistry (BTS of chemistry: French equivalent to an institute of technology).

➤ **Undergraduate students**

- Organic and inorganic chemistry (Courses).
- Health, Safety, and Environment (HSE).
- Quality control.
- Thermodynamics and thermochemistry.
- Experiments in analytical chemistry (atomic absorption, gas chromatography, bipotentiometry, biamperometry, ionic chromatography, complexometry, methods of titration, spectroscopies).
- Organic chemistry (optimization of synthesis and purification).
- Chemical engineering.
- Chemical formulation.
- Scientific communication.

➤ **High Schools (1999-2004): Professor ‘certifié’ of physics and chemistry.**

7.2 UNIVERSITY OF CLERMONT 1 (2001-2002 and 2008-2017): Part-time teacher

➤ **Undergraduate students (courses and experiments)**

- Captors of pollution.
- Environmental chemistry.
- Chromatographic methods and Physical chemistry.
- Chemistry of water.
- Fluid mechanics and heat transfer.

➤ **Graduate students (courses and experiments)**

- Designing of new experiments: titrating of pollutants in gas or liquid phases.
- Green chemistry.
- Waste recycling.

7.3 ECOLE NORMALE SUPERIEURE OF CACHAN (2004-2006): Part-time teacher

➤ **Graduate students (experiments):** Students training for preparing the “agrégation” of chemistry and second year of M.A. degree in analytical chemistry.

- Organic experimental chemistry.
- Electrochemistry.
- Nuclear magnetic resonance.
- Infrared spectroscopy.

7.4 GRETA OF VELAY (1999-2001): Part-time teacher

- **Adult professional training**
 - Thermodynamics.
 - Analytical chemistry.

8. SERVICE IN SCIENCE AND TECHNOLOGY (1999-2017)

- **Rectorat of Clermont: BTS in chemistry**
 - Director in charge with students' work placements both in industry and research laboratory.
 - Supervisor of students' projects with industrialists.
 - Author of the experimental national exam (BTS of chemistry 2007): Inorganic chemistry.
 - Member of different assessment committees (BTS of chemistry).
 - Organization of students' exams.
 - Transversal collaborations with colleagues in physics, English, and communication.
 - Collaborations with industrialists (organizer both of factory visits and complementary lectures given by professionals especially in green chemistry, metallurgy, and organic catalysis).
- **University of Clermont 1**
 - Director in charge with students' work placements both in industry and research laboratory.
 - Supervisor of students' projects with industrialists.
 - Organization of students' exams.

9. TEACHING EXPERIENCE IN PHILOSOPHY (2011-present)

9.1 COURSES TAUGHT

- **Free University of Brussels: Part-time teacher**

1st year graduate students in Philosophy (2015-2017)

- Theory of Knowledge: Consistencies, inconsistencies and inference in natural sciences.
- Philosophy of quantum physics and chemistry.

- **University Paris 7-Diderot (2015-present): Part-time teacher**

1st and 2nd years graduate students in history and philosophy of science (Master LOPHISS: Logic, Philosophy and History of Science)

- Atomism from Pre-Socratic philosophy to current science and metaphysics.
- Intertheory relations between physics, chemistry, and biochemistry.
- Philosophy of chemistry.

- **University Pierre and Marie Curie (2017-2018): Part-time teacher**

Undergraduate students in both chemistry and history and philosophy of science

- Philosophy of chemistry.
- Metaphysics of sciences: Properties and Substances.

- **University Paris 1 Sorbonne: Winter school Modes of Scientific Knowledge, Genesis and Ontology of Technoscientific Object Project (2014): Guest teacher**

PhD students in various areas domains of philosophy (philosophy of sciences, philosophy of technology, philosophy of art, phenomenology, philosophy of language, and philosophy of logic)

- Epistemology and philosophy of chemistry.
- Ontologies for chemistry.
- Philosophy of technology (Simondon).

- **Rectorat of Lille in collaboration with the University Lille 1 (France) (2016-present): Part-time teacher**

High school teachers of philosophy and PhD students in philosophy

- Leroi Gourhan's anthropology of technology.
- Philosophy and anthropology of Nature.

9.2 TEACHING LECTURES IN GRADUATE AND PhD SEMINARS

- **Forthcoming teaching lectures in graduate and research seminars (2018)**

“Sustainability, Eco-conception, and Chemistry”, Seminar History and Foundations of Sustainable Development (Master Ethics, Ecology, and Sustainable Development, Philosophy department, University Lyon 3, France), to be defined from October to December 2018.

“Measurement in Chemistry: Epistemology of Chemical Metrology”, Seminar Measurement in Natural Sciences (Master LOPHISS, University Paris 7-Diderot, France), 17 May.

“Epistemology of Chemical Risks and Hazards”, Seminar History and Philosophy of Chemistry (Master LOPHISS, University Paris 7-Diderot, France), 03 May.

“Connecting Anthropology and Philosophy of Chemistry: Instances taken from Chemical Regulation and Quantum Chemistry”, Seminar History and Philosophy of Chemistry (Master LOPHISS, University Paris 7-Diderot, France), 23 April.

“Materiology and the Philosophy of Chemistry”, Seminar History and Philosophy of Chemistry (Master LOPHISS, University Paris 7-Diderot, France), 04 April.

- **Teaching lectures in graduate and research seminars**

- **2017**

“About some concepts for making decisions in case of environmental controversies”, Seminar Environmental Controversies (Master Comparative research in anthropology, history, and sociology, EHESS, Ecole des Hautes Etudes en Sciences Sociales, Marseille, France), 08 December.

“How do chemists order their knowledge and know-how?”, AD HOC Seminar (Department of History and Philosophy of Science, **Cambridge University**, UK), 13 November.

“Investigating the Connections between Ecology, Toxicology, Computer Science, and Chemistry, Internal Seminar (Laboratory LIED, University Paris 7-Diderot, France), 10 October.

“Environment Ethics, Mesology, and Chemistry”, Seminar History and Philosophy of Chemistry (Master LOPHISS, University Paris 7-Diderot, France), 20 April.

“Modelling in Biochemistry: An Investigation”, Seminar History and Philosophy of Chemistry (Master LOPHISS, University Paris 7-Diderot, France), 19 January.

- **2016**

“The Constitutive Role of the ‘Milieux’ in Quantum Physics, Chemistry, and Biochemistry”, Workshop ‘Mesology and Sciences’ (Graduate and PhD Students in philosophy, sociology, and anthropology, Ecole des Hautes Etudes en Sciences Sociales, EHESS, Paris), 24 November.

“Leroi Gourhan’s Philosophy of Technology: Analysis and Perspectives”, Seminar Mesology, the Study of Human Milieux (Graduate and PhD Students in philosophy, sociology, and anthropology, Ecole des Hautes Etudes en Sciences Sociales, EHESS, Paris), 25 November.

“Perception, Transaction and Situation in Science: Peirce’s and Dewey’s Contributions”, Seminar Mesology, the Study of Human Milieux (Students in philosophy, anthropology, and sociology, Ecole des Hautes Etudes en Sciences Sociales, EHESS, Paris), 15 April 15.

“From Quantum Physics to Quantum Chemistry: Study of a Transformation”, Seminar of Philosophy of Physics (Philosophy Department, **Oxford University**, Oxford, invited by the Professor Harvey Brown), 18 February.

“Scrutinizing Chemical Explanation from a Philosophical Standpoint (2): Mechanisms, Causes and Microstructuralism”, Lectures of the Chemistry Chemical Laboratory (Students and researchers in chemistry, invited by the Professor Chris Schofield, Head of the Chemistry Chemical Laboratory, **Oxford University**, UK), 17 February.

“Nanochemistry: Historical and Philosophical Insights”, Lectures of the Chemistry Chemical Laboratory (Students and researchers in chemistry, invited by the Professor Chris Schofield, Head of the Chemistry Chemical Laboratory, **Oxford University**, UK), 16 February.

“Chemical Regulation: Advantages and Drawbacks of REACH”, seminar Industrial factories and environment (Students in history, sociology, and environmental science, invited by the Professor Geneviève Massard-Guilbaud; Ecole des Hautes Etudes en Sciences Sociales, EHESS, Paris, France), 1 February.

- **2015**

“Scrutinizing Chemical Explanation from a Philosophical Standpoint (1): Modelling of Chemical Bonds and Reasoning used in Quantum Chemistry”, Lectures of the Chemistry Chemical Laboratory (Undergraduate and graduate students and researchers in chemistry, invited by the Professor Chris Schofield, Head of the Chemistry Chemical Laboratory, **Oxford University**, UK), 30 October.

“The Emergence of Green Chemistry: Historical and Philosophical Insights”, Lectures of the Chemistry Chemical Laboratory (Undergraduate and graduate students and researchers in chemistry, invited by the Professor Chris Schofield, Head of the Chemistry Chemical Laboratory, **Oxford University**, UK), 28 October.

“Connecting Epistemology, Moral Philosophy, and Green Chemistry: Reflections upon the Relationships between Chemistry, Society and Environment”, **Linacre College seminar** (Linacre College, **Oxford**, UK), 27 October.

“Is Intertheoretic Reduction between Physics and Chemistry Possible? The examples of thermochemistry and quantum chemistry”, Seminar of history and philosophy of physics (Students in philosophy of science, Master LOPHISS, invited by the Associate Professor Nadine de Courtenay, University Paris 7-Diderot, Paris, France), 6 October.

“Chemistry and Affordances”, Seminar Mesology, the Study of Human Milieux (Graduate students in philosophy, invited by the Professor Augustin Berque, Ecole des Hautes Etudes en Sciences Sociales, EHESS, Paris, France), 5 June.

“REACH Regulation and Chemical Risks for Human Health and the Environment”, seminar ‘Contemporary Worlds’ (Students in economics, philosophy, and sociology of science, invited by the Professor Geneviève Massard-Guilbaud, University Lyon 2, France), 4 March.

“Philosophy and Anthropology of Chemistry; An Introduction”, Seminar Modes of Rationality (Philosophy Department, invited by the Professor Sébastien Gandon, University Clermont 2, France), 27 February 27.

- **2014**

“Chemistry and Ecotoxicology: An Epistemological Investigation”, Seminar Chemistry and Medicine (Students in philosophy, medicine, and chemistry, invited by the doctor François Pépin, Centre Cavaillès, Ecole Normale Supérieure de la rue d’Ulm, Paris, France), 13 March.

- **2013**

“Chemistry, Quantum Chemistry and the Concept of Emergence: Study of a Connection”, Seminar Philosophy of Science (Students in philosophy and in chemistry, invited by the Professor Isabelle Stengers, Free University of Brussels, Faculty of Philosophy and Letters, Belgium), 5 November.

- **2012**

“Energy and Chemistry: Quantifying the Relationships between Chemical Bodies”, Seminar “The diffusion of the concept of energy in sciences” (Students and researchers in philosophy, physics and economics, invited by the associate professors Muriel Guedj and Manuel Bächtold, University of Montpellier 2, France), 14 May.

“Chemists and the Metaphysics of Heterogeneity”, Seminar “Chemistry as the science of interfaces” (Students and researchers in philosophy, invited by the doctor François Pépin, Centre Cavaillès, Ecole Normale Supérieure de la rue d’Ulm, Paris, France), 8 February.

“The Role of the Agent in Chemistry”, Seminar “The Agent Standpoint” (PhD students in philosophy, invited by the director of research at the CNRS Michel Bitbol, CREA/Ecole Polytechnique, Paris, France), 17 February.

- **2011**

“Thinking Agentivity from the Philosophy of Chemistry”, Seminar “The Agent Standpoint”, (PhD students in philosophy, invited by the director of research at the CNRS Michel Bitbol, CREA/Ecole Polytechnique, Paris, France), 24-25 March.

9.3 SUPERVISION OF MASTER THESIS IN PHILOSOPHY, HISTORY OF SCIENCE AND TECHNOLOGY, and METAPHYSICS (UNIVERSITY PARIS 7-DIDEROT, MASTER LOPHISS)

➤ 1st year students' minor thesis:

- 2018

Mélanie Ephrème, "Holbach's Contribution to the 18th Century Chemistry: Historical and Philosophical Insights".

- 2017

Julien Thareau, "From *Sub-stance* to *Ex-stance*: The case of Gaston Bachelard's philosophy of Chemistry".

Clarisse Pinchon, "Investigating the Origins of Ecology in the 18th Century Botany: Buffon, Linné, and Bernardin de Saint-Pierre".

- 2016

Sarah Hijmans, "Chemical Elements Definitions and their Metaphysical Underpinnings".

➤ 2rd students' major thesis (master thesis):

- 2018 (in preparation)

Fadila Ezzat, "Investigating Modes of Thought: Law of Excluded Middle, Tetralemma, and their Metaphysical Underpinnings".

Clarisse Pinchon, "Bernardin de Saint Pierre and the Conceptual Origins of Ecology".

Antoine Rostagnat, "On Knowledge Acquired Using Deep Learning Algorithms: An Epistemological Investigation".

- 2017

Sarah Hijmans, "What are Elements? Pragmatic Approach to the Meaning of a Chemical Concept".

Astrid de Mestier, "Species Conservation: From Environmental Movements and Philosophy to the Philosophy of Law".

- 2016

Emilien Jolly, "Emergence of an Ethical Discourse in Green Chemistry (1970-present): Historical and Philosophical Insights".

10. SERVICE IN PHILOSOPHY (UNIVERSITY PARIS 7-DIDEROT)

- 2018

Supervisor and appraiser of Mélanie Ephrème's reading work on the book "The Matter of Factory. A History of the Chemistry Laboratory" by Peter J. T. Morris (1st year graduate student, Master LOPHISS).

- 2017

Member of the committee (2nd year graduate student, Master LOPHISS) of the master thesis of Pauline Agator, “Epistemic Aesthetic: Relativity and Invariance of Mental Representations. A Formal Approach of Interpretative Structures in the light of Robert Nozick’s Notion of Intersubjective Objectivity”.

- 2015

Member of the committee (1st year graduate students, Master LOPHISS) of the small thesis of Alexia Coudert, “Chemical Atomism in the 19th century: A Historical Introduction”.

11. RESEARCH SEMINAR ORGANIZED (LABORATORY SPHERE-DEPARTMENT OF HISTORY AND PHILOSOPHY OF SCIENCES-UNIVERSITY PARIS 7-DIDEROT, FROM 2016 ONWARDS)

Seminar of history and philosophy of chemistry: <http://www.sphere.univ-paris-diderot.fr/spip.php?article1799&lang=fr>

Open to graduate and PhD students in history and philosophy of sciences, and in natural sciences, and to the researchers of those domains.

12. BOOK

The Analysis of Practices, co-authored with the Professor Rom Harré, in preparation. For submission to Oxford University Press.

13. EDITORIAL ACTIVITIES

13.1 Refereed Edited volumes

➤ **Published volume**

- Editor of the volume, *Philosophy of chemistry: Practices, Methodologies and Concepts* (Newcastle upon Tyne: Cambridge Scholars Publishing, 2013).

➤ **Forthcoming Volumes (2018)**

- Editor of the volume *La chimie, cette inconnue?* (Paris: Hermann, in press). Topics: History, philosophy, sociology and anthropology of current chemistry (academic and industry, chemical regulation, relationships between chemistry, computer science, ecology, and biology).
- Co-editor with Marie Augendre (associate professor in geography) and Yann Nussaume (professor in architecture) of the volume *La mésologie, un autre paradigme pour l’Anthropocène? Autour d’Augustin Berque* (in French) – Mesology: A New Paradigm for the Anthropocene. Contributions to Augustin Berque’s Ontology – (Paris: Hermann, Collection Colloques de Cerisy, to be available in March 2018). Topics: Environmental Ethics. Sustainability. Anthropocene. Phenomenology. Mesology. Biohermeneutics. Permaculture. Philosophy of Nature. Metaphysics (relational properties, interrelated objects, concept of ‘milieu’).

➤ **Volumes in progress**

- Editor of the volume, *Ethics and Chemistry: A Multidisciplinary Investigation* (London: World Scientific, in preparation, to be published in 2020).
- *Editor of the volume, Chemistry: A Philosophical Investigation* (Proceedings of the Annual Conference of the International Society for the Philosophy of Chemistry in Paris in 2017) (Springer, Synthese Library Collection, in preparation, to be published in 2019).

13.2 Refereed edited issues of *Foundations of Chemistry* (Springer)

➤ **My status in *Foundations of chemistry***

- Deputy Editor from 2010 onwards.

➤ **Published special issue (2015)**

- Editor of the special issue of *Foundations of Chemistry* dedicated to nanochemistry and nanotechnology: 'Investigating Contemporary Chemistry: The Case of Nanosubstances', *Foundations of Chemistry*, Llored, J.-P. (Ed.), vol 17, n°3, October 2015.

➤ **Special issue in progress (forthcoming July 2018)**

- Special issue including 7 papers originated from the Annual Conference of the International Society for the Philosophy of Chemistry that I organised in Paris in July 2017.

14. REVIEW ACTIVITIES

Reviewing for:

- *Studies in History and Philosophy of Science*, Part A.
- *Synthese*.
- *Foundations of Chemistry*.
- *Study Philosophy*.
- *HYLE* (International Journal for the Philosophy of Chemistry).
- *Science and Education*.
- *Springer books*.

15. ORGANIZATION OF CONFERENCES AND SYMPOSIA

- Organizer of the 21st annual conference of the International Society for the Philosophy of Chemistry (Laboratory SPHERE and University Paris 7-Diderot, Paris, 3-6 July 2017): <http://www.sphere.univ-paris-diderot.fr/spip.php?article1823>
- Co-organizer of the International Conference 'Mesology: A New Paradigm for the Anthropocene?', (Château de Cerisy, France, 29 August-5 September 2017): <https://www.google.fr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=5&cad=rja&uact=8&ved=0ahUKEwjPhruEvJbRAhUFvBQKHWF9DKwQFggxMAQ&url=http%3A%2F%2Fwww.ccic-cerisy.asso.fr%2Fmesologie17.html&usg=AFQjCNGyoWe8AndomS1ouRhw273No9q2Qw>

- Organizer of the special symposium ‘sustainable and green chemistry’, Annual Conference of the International Society for the Philosophy of Chemistry (University of Leuven, Belgium, 7-10 August 2012).
- Organizer of the International Conference in Philosophy of Chemistry at the Ecole Polytechnique (CREA, France, 3-4 September 2010).

16. SCIENTIFIC COMMITTEE ACTIVITIES

- Member of the scientific committee of the annual symposium of the International Society for the Philosophy of Chemistry:
 - Bristol University, UK, July 2018.
 - The Catholic University of Leuven, Belgium, August 2012.
- Member of the scientific committee of the seminar Mesology, study of human ‘milieux’ (Ecole des Hautes Etudes en Sciences Sociales, 2015-2017): graduate students in philosophy, sociology, and anthropology.

17. REFEREED PAPERS, CHAPTERS, AND REVIEWS

17.1 Works in progress

“From sub-stances to ex-stances: A Contribution from the Philosophy of Chemistry”, for submission to *Studies in History and Philosophy of Science, Part A*.

“Chemical risks and hazards: Historical Insights”, for submission to *Ambix*.

“Intrinsic values in Environmental Ethics: An Insight from the Philosophy of Chemistry”, for submission to *Hyle (International Journal for the Philosophy of Chemistry)*.

“Ontological Pluralism: Beyond the Dichotomy between Continental and Analytic Philosophy”, with Lombardi Olimpia, for submission to *The Philosophical Quarterly*.

“Peirce’s Precept for Lithium: A Linguistic and Epistemological Analysis”, with Elena Ghibaudi and Luigi Cerruti, for submission to *Hyle (International Journal for the Philosophy of Chemistry)*.

17.2 Works under review

“Reflecting Sustainability: A Contribution from the Philosophy of Science”, with Martine Benoît and Franck Dumeignil, Special issue ‘Sustainability and Ethics: Reflections on the UN Sustainable Development Goals’, *Journal Sustainability*.

“Modelling Molecules in Quantum Chemistry: A Philosophical Investigation”, *Advances in Chemistry Research*, Nova Science Publishers.

17.3 Works already published or in press

- **2018**

“Products, Procedures, and Pictures”, with Rom Harré, *Philosophy*, The Royal Institute of Philosophy, Cambridge University Press, 93, 167-186, doi:10.1017/S0031819117000535.

“Investigating the Assumptions of Artificial Intelligence: A Metaphysical Contribution” (in French), with Antoine Rostagnat, *Le monde de la technologie*, Revue des ingénieurs et des techniciens supérieurs, Paris, n°181, 1-5.

“Contingent Universals as the Expression of a Culture”, with Rom Harré, in *Challenges of Cultural Psychology*, Gordana Javenović (Ed.) (London: Routledge, in press).

“Commucating Green Chemistry” (in French), in *Communiquer les sciences*, Muriel Le Roux (Ed.) (Brussels: P.I.E. Peter Lang, Éditions scientifiques internationales, in press).

“Chemistry: An unknown Science?” (in French), in *La chimie, cette inconnue?*, Llored, J.-P. (Ed.) (Paris: Hermann, in press).

“Chemistry and the concept of ecumene” (in French), in *La chimie, cette inconnue?*, Llored, J.-P. (Ed.) (Paris: Hermann, in press).

“On the transformation of human and non-human milieux: Mesological Perspectives” (in French), in *La mésologie, nouveau paradigme pour l’Antrhopocène. Autour d’Augustin Berque*, Marie Augendre, Jean-Pierre Llored and Yann Nussaume (Eds.) (Paris: Hermann, in press).

- **2017**

“Ethics and Chemistry: The Case of REACH”, *HYLE, International for the Philosophy of Chemistry*, Vol. 23, 81-104.

“Investigating consistencies, inconsistencies and the Meaning of the *Ceteris Paribus* Clause in Chemistry”, *Humana Mente, Journal of Philosophical Studies*, Vol. 32, 53–74.

- **2016**

“How philosophy of nature needs philosophy of chemistry”, *Philosophica*, The peer-reviewed journal of the Department of Philosophy & The Centre of Philosophy of the University of Lisbon, special issue *Thinking Nature Today*, n°47, 97-108.

“Connecting the Philosophy of Chemistry, Green Chemistry and Moral Philosophy”, with Stéphane Sarrade, *Foundations of Chemistry*, volume 18, n°2, 125-152, published on line in October 2015 (DOI 10.1007/s10698-015-9242-z).

“Reality Without Reification: Philosophy of Chemistry’s Contribution to Philosophy of Mind”, with Marina Banchetti-Robino, in *Essays in the Philosophy of Chemistry*, Eric Scerri and Grant Fisher (Eds.), Oxford: Oxford University Press, 77-107.

“Neither Physics nor chemistry. A history of Quantum Chemistry, Kostas Gavroglu and Ana Simões, Cambridge, Massachusetts, London, England: The MIT Press, 351 pages”, review published in *Foundations of Chemistry*, volume 18, n°1, 81-84.

- **2015**

“Guest editorial”, *Foundations of Chemistry*, Llored, J.-P. (Ed.), vol 17, n°3, 183-185.

“Green Chemistry and Sustainable Development” (in French), *Le monde de la technologie*, Revue des ingénieurs et des techniciens supérieurs, Paris, 2-11.

“Investigating the meaning of the *ceteris paribus* clause in chemistry”, in *Philosophy of Chemistry: Synthesis of a New Discipline*, Second Edition, Scerri Eric and Lee McIntyre (Eds.), Boston Studies in the Philosophy and History of Sciences, Vol. 306, Springer, 219-233.

- **2014**

“Wholes and Parts in Quantum Chemistry: Some Mereological and Philosophical Consequences”, *HYLE, International Journal for the Philosophy of Chemistry*, Vol. 20, 141-163.

“Developing the mereology of chemistry”, with Rom Harré, in *Mereology and the Sciences*, Claudio Calosi and Pierluigi Graziani (Eds.), Springer, 260-284.

“Neither Physics nor chemistry. A history of Quantum Chemistry, recension du livre de Kostas Gavroglu et Ana Simões”, *L’Actualité Chimique*, n°391, 37-38.

- **2013**

“Mereologies and molecules”, with Rom Harré, *Foundations of Chemistry*, Vol. 15, n° 2, 127-144.

“Investigating the interplay between Chemistry, Chemical Practice and Philosophy”, in *The Philosophy of Chemistry: Practices, Methodologies and Concepts*, J.-P Llored (Ed.), Newcastle: Cambridge Scholars Publishing, 745-755.

“Introduction”, in *The Philosophy of Chemistry: Practices, Methodologies and Concepts*, J.-P Llored (Ed.), Newcastle: Cambridge Scholars Publishing, 1-12.

“Chemistry and interfaces”, with Aimable A., Brayner R., Sarrade S., and Rozé M, in *The Philosophy of Chemistry: Practices, Methodologies and Concepts*, J.-P Llored (Ed.), Newcastle: Cambridge Scholars Publishing, 172-201.

“From Chemical Practices to relational philosophy”, with Michel Bitbol, in *The Philosophy of Chemistry: Practices, methodologies and concepts*, J.-P Llored (Ed.), Newcastle: Cambridge Scholars Publishing, 385-415.

- **2012**

“Emergence and quantum chemistry”, *Foundations of Chemistry*, Vol. 4, n° 3, 245-274.

“Towards a practical form of epistemology: the example of sustainable chemistry”, in *Practical realism towards a realistic account of science*, Endla Lohkivi (Ed.), *Studia Philosophica Estonica*, 36-60.

“Chemists and the Plurality of Substances (in French)”, in *Les matérialismes et la chimie*, François Pépin (Dir.), Paris: Editions Matériologiques, 111-138.

- **2011**

“Mereologies as the Grammars of Chemical Discourses”, with Rom Harré, *Foundations of Chemistry*, Vol. 13, n° 1, 63-76.

“The Role and the Status of Thermodynamics in Quantum Chemistry Calculations”, in *Thermodynamics - Interaction Studies - Solids, Liquids and Gases*, Juan Carlos Moreno (Ed.), INTECH, chapter 18, 469-490.

“Epistemology of Green Chemistry (in French)”, in *La chimie durable: Au-delà des promesses*, Laura Maxim (Ed.), Paris: CNRS Editions, 111-126.

- **2010**

“Mereology and quantum chemistry: the approximation of molecular orbital”, *Foundations of Chemistry*, Vol. 12, n°3, 203-221.

“Molecular Orbitals: Dispositions or Predictive Structures?”, with Michel Bitbol, in *Quantum Biochemistry*, Chérif F. Matta (Ed.), Wiley-VCH, Weinheim, 873-896.

18. TRANSLATIONS OF REFEREED WORKS

“Matérialité et abstraction en chimie moderne”, in *La chimie, cette inconnue?*, J.-P Llored (Ed.), Paris: Hermann, in press, translation of the paper “Materiality and abstraction in modern chemistry”, written by Prof Ursula Klein, in *The Philosophy of Chemistry: Practices, Methodologies, and Concepts*, J.-P (Ed.), Newcastle upon Tyne: Cambridge Scholars Publishing, 2013, 342-362.

“La chimie comme source de trois nouvelles perspectives métaphysiques”, in *La chimie, cette inconnue?*, J.-P Llored (Ed.), Paris: Hermann, in press, translation of the paper “Three metaphysical Issues in Chemistry”, written by Prof Robin Finlay Hendry, in *The Philosophy of Chemistry: Practices, Methodologies, and Concepts*, J.-P (Ed.), Newcastle upon Tyne: Cambridge Scholars Publishing, 2013, 510-526.

“Affordances et Gonds: Concepts prometteurs en philosophie de la chimie”, in *La chimie, cette inconnue?*, J.-P Llored (Ed.), Paris: Hermann, in press, translation of the paper “Affordances and hinges: New tools in the Philosophy of Chemistry”, written by Prof Rom Harré, in *The Philosophy of Chemistry: Practices, Methodologies, and Concepts*, J.-P (Ed.), Newcastle upon Tyne: Cambridge Scholars Publishing, 2013, 580-596.

“Le pluralisme méthodologique de la chimie”, in *La chimie, cette inconnue?*, J.-P. Llored (Ed.), Paris: Hermann, in press, translation of the paper “*The Methodological Pluralism of Chemistry and its Philosophical Implications*”, written by Joachim Schummer, in *Philosophy of Chemistry: Synthesis of a New Discipline*, Second Edition, Scerri Eric and Lee McIntyre (Eds.), Boston Studies in the Philosophy and History of Sciences, Vol. 306, Springer, 2014.

19. REFEREED CONFERENCE PRESENTATIONS

19.1 Abstracts under review

“Are we witnessing the rise of a kind of unity between biology and chemistry? A Historical Investigation”, *Biannual Conference of the European Society for the History of Science in conjunction with the British Society for the History of Science*, General theme of the conference: “Unity and Desunity”, University College, London, UK, 14-17 September 2018.

“The Question of Life and the Relationships between Contemporary Chemistry and Biology: Some Epistemological and Philosophical Insights”, *Annual Conference of the French Chemical Society*, University of Montpellier and University of Toulouse, France, 30 June-4 July 2018.

“Investigating Measurement: The Case of Chemical Metrology”, *Conference Measurement at the Crossroads. History, Philosophy and Sociology of Measurement*, University Paris Diderot, France, 27-29 June 2018.

19.2 Forthcoming conference presentation

- 2018

“Pure or Polluted? Uncertainty Quantification and Criteria of Identity in Chemistry”, *Annual conference of the International Society for the Philosophy of Chemistry*, University of Bristol, UK, 16-18 July, (invited speaker).

19.3 Past conferences presentations

- 2017

“Reflecting Contemporary Chemistry: Philosophical Insights” (in French), Seminar *Ilya Prigogine, Colloque Penser la chimie aujourd’hui (Conference Thinking Chemistry today)*, Free University of Brussels, Departments of Philosophy and Chemistry, Belgium, 20 October, (invited speaker).

“Chemical Regulation in Europe (1970-2017): A Historical Survey of the Interrelations between Ethics, Politics, and Chemistry in the European Union”, *Workshop Chemistry in Europe*, organized by Dr. Simon Werret on behalf of *the Society for the History of Alchemy and Chemistry*, Maison française d’Oxford, Oxford, 30 September.

“Products, Procedures, and Pictures”, with Rom Harré, *Annual conference of the International Society for the Philosophy of Chemistry*, University of Paris 7-Diderot, France, 3-6 July.

“Ecology, Chemistry, and their Mutual Influences: A Historical and Philosophical Contribution” (in French), *Conference of the French Society for the History of Science and Technology*, Symposium SHESVIE (*French Society of History and Epistemology of Biology*), University of Strasbourg, 19-21 April.

“Chemistry, Environment, and Environmental Science” (in French), *Conference of the French Society for the History of Science and Technology*, University of Strasbourg, France, 19-21 April.

- 2016

“From Quantum Physics to Quantum Chemistry: Study of a Transformation and Its Consequences against Intertheoretic Reduction”, *25th Conference of the Philosophy of Science Association*, Université d’Atlanta, USA, 3-5 November.

“Epistemology of risks, Workshop of Environmental Policy”, *French Minister of Ecology*, Paris, 11 October.

“Connecting the Philosophy of Chemistry and Biology: Implications for Philosophers and Ethicists”, *Annual conference of the International Society for the Philosophy of Chemistry*, Florida Atlantic University, USA, 4 August 4.

“Chemistry and Environmental Principles”, *Annual conference of the International Society for the Philosophy of Chemistry*, Florida Atlantic University, USA, 1 August.

“Thinking chemistry today”, Conference organized by the *National Scientific Committee of the CNRS*, Institute of Chemistry, CNRS Grand Auditorium, Paris, 19 May (invited by the President of the National Scientific Committee of the CNRS the Professor Jean-Pierre Djukic).

- 2015

“Philosophy of Chemistry: Perspectives in Philosophy of Science, Moral Philosophy, Philosophy of Mind, and Metaphysics”, *Laboratory SPHERE (CNRS)*, *University Paris 7-Diderot*, 2 October (invited by the Professor Pascal Crozet, Head of the laboratory SPHERE).

“Environment and Green Chemistry: An Historical Survey”, *European Society for Environmental History, 8th Biannual Symposium*, University of Versailles Saint-Quentin-en-Yvelines, Versailles, France, 30 June-3 July 2015.

“What can the philosophy of chemistry bring to analytic philosophy?”, *International conference of the International Society of Analytic Philosophy SOPHA*, University of Montreal, Quebec, 17-20 June.

“Emergence in Chemical Materials: From Epistemology to Applied Ethics and Metaphysics”, *International Workshop about emergence*, Institute of History and Philosophie of Science and Technology (IHPST), Paris 1 Sorbonne University, Paris, 27-29 May 27-29.

“Connecting Green Chemistry, Ethics, and the Philosophy of Chemistry”, with Sylvain Caillol (Doctor in chemistry, Chaire Européenne de Chimie Nouvelle pour un Développement Durable, France), *3rd International Conference on Green Chemistry, Renewable carbon and Eco-Efficient Processes*, University of La Rochelle, France, 3-7 May.

“Ethics and Environment” (in French), *Coordination des associations du technique*, University of Clermont-Ferrand 2, IUT of Montluçon, France, 28 January.

- **2014**

“Reconceptualizing Emergence from Chemistry: Connecting Continental and Analytic Philosophy”, Symposium ‘On what chemistry has brought to philosophy’, organized by the Doctor Brigitte Van Tiggelen, *History of Science Society Annual Meeting*, Chicago, Illinois, USA, 6-9 November 6-9.

“Pre-emption and Over-determination Puzzles in Chemistry”, with the Professor Rom Harré, *Annual Symposium of the International Society for the Philosophy of Chemistry*, London School of Economics and Political Science, London, UK, 6-9 July 6-9.

“Connecting the Philosophy of Chemistry and Moral Philosophy: Sustainable Chemistry, Consequentialism, and the Ethics of Care, *Annual Symposium of the International Society for the Philosophy of Chemistry*, London School of Economics and Political Science, London, UK, July 6-9, 2014.

“Historicized Epistemology of Sustainable Chemistry: Some Lessons”, Symposium La chimie utile organized by Jonathan Simon, *Conference of the French Society for the History of Science and Technology*, University Lyon 1, France, 28-30 April.

“Chemistry and Sustainable Development” (in French), *Coordination des associations du technique*, University Clermont-Ferrand 2, Institute of Technology of Montluçon, France, 6 February.

“Investigating Ontology and Metaphysics for Chemistry”, *Winterschool Modes of Scientific Knowledge*, Genesis and Ontology of Technoscientific Object Project, Chalet Giersch, Manigod, France, 18-25 January.

- **2013**

“Investigating the Concept of Affordances from Chemistry”, *Conference “What Affordances afford?”*, Genesis and Ontology of Technoscientific Object Project, Institute of Philosophy, Darmstadt, Germany, 24-27 November.

“Epistemological Shift in Chemistry and the Exploration of Sites: The example of Nanochemistry”, *Conference on the sites of chemistry in the 20th Century*, organized by Prof John Perkins, University of Uppsala, Sweden, 21st August.

“Emergence and Chemistry” (in French), *23th Festival of Astronomy of Fleurance, Conference “Marathon des sciences”*, Fleurance, France, 3rd August.

“From Nanochemistry to Affordances and Metachemistry”, *Annual Conference of the International Society for the Philosophy of Chemistry summer symposium*, University of Montevideo, Paraguay, 27-29 July.

“Connecting Ontology and Practices: The Case of Nanochemistry”, *The Society for Philosophy of Science in Practice (SPSP), Fourth Biennial Conference*, Institute for the History and Philosophy of Science and Technology (IHPST), Victoria College, University of Toronto, Canada, 26-29 June.

“Green Chemistry, its Eco-concepts and its Practices: An Epistemological Enquiry”, *Conference ESEE 2013: Ecological Economics and Institutional Dynamics, 10th biannual conference of the European Society for Ecological Economics*, University of Lille, France, 18-21 June.

“Green Chemistry: A Dialogue between Science and Philosophy”, *2nd International Symposium on Green Chemistry, Renewable carbon and Eco-Efficient Processes*, University of La Rochelle, France, 21-24 May.

- **2012**

“Ontological Pluralism”, with Prof Olimpia Lombardi (CONICET, University of Buenos Aires), *Annual Conference of the International Society for the Philosophy of Chemistry summer symposium*, University of Leuven, Belgium, 7-10 August 7-10.

“Wholes and Parts in Quantum Chemistry”, *Annual Conference of the International Society for the Philosophy of Chemistry summer symposium*, University of Leuven, Belgium, 7-10 August.

“Do Paradigmatic Revolutions Fit Chemical Changes? Kuhn and Sustainable Chemistry”, Symposium on sustainable chemistry, organized by J.-P Llored, *Annual Conference of the International Society for the Philosophy of Chemistry summer symposium*, University of Leuven, Belgium, 7-10 August.

“Structure in Nanochemistry”, *Conference Structure in chemistry*, invited by Prof Robin Finlay Hendry, University of Durham, Department of philosophy, UK, 4-5 July 4-5.

“Comments about the lecture ‘The impact of the philosophy of mathematical practice on the philosophy of mathematics’ proposed by Jean Paul Van Bendegem”, with Doctor Caroline Jullien, *Conference Rethinking Science after the Practice Turn*, invited by Léna Soler and the group PratiSciens, Archives Poincaré, University of Nancy 2, France, 19-20 June.

“Epistemological Approach of Nanochemical Practices” (in French), *Conference Les Nanotechnologies: des craintes irraisonnées, des attentes réalistes*, University Paris Diderot, France, 4-5 June.

“Round table about nanotechnologies: Michel Boissière, José Cambou, Thibaud Coradin, Thierry Hoquet, Jean-Pierre Llored and Sylvie Rousset”, *Conference Les Nanotechnologies: des craintes irraisonnées, des attentes réalistes*, University Paris Diderot, France, 4-5 June 4-5.

“Levels of Organization and Quantum Chemistry”, *International Congress SOPHA* (French Society of Analytical Philosophy), Paris, France, 4-6 May.

- **2011**

“The Philosophy of Chemistry: An introduction” (in French), *Coordination des associations du technique*, University of Clermont-Ferrand 2, Institute of Technology of Montluçon, France, 14 March.

“Diffusion of the Concept of Energy in the Domain of Chemistry” (in French), *11th Congress of the French Society of History of Sciences and Technology*, University of Nantes, France, 18-20 May.

“Towards a Practical Epistemology of Chemistry”, *International workshop ‘Practical realism – towards a realistic account of science’*, University of Tartu, Estonia, 15-17 June.

“Philosophy of Relations as Root for the Epistemology of Chemistry”, *14th Congress of Logic, Methodology and Philosophy of Sciences*, University of Nancy, France, 19-26 July.

“Emergence and Quantum Chemistry”, *Annual Conference of the International Society for the Philosophy of Chemistry summer symposium*, The College University of Oxford, Oxford, UK, 9-11 August.

- **2010**

“From Chemical Practices to a Philosophy of Relations” (in French), *International conference of Philosophy of Chemistry*, organised by J.-P Llored, Ecole Polytechnique/CREA, France, 3-4 September.

20. GRANTS

- Fellowship young researcher awarded by The French Society for the History of Science and Technology (SFHST) in 2014.
- Fellowship young researcher awarded by the American Society for the History of Sciences (HSS) in 2014.
- Fellowship young researcher awarded by the Commission on the History of Modern Chemistry (CHMC) in 2014.

21. MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- ESEH: European Society for Environmental History.
- GHC: (French) Group of History of Chemistry (member of the executive committee from November 2012 onwards, second mandate for three years).
- Member as a “special visitor” of the research group “PratiSciens” supervised by Léna Soler, Archives Poincaré, University of Lorraine, France.
- ISPC: International Society for the Philosophy of Chemistry.
- SCF: French Chemical Society.
- SFHST: French Society of History of Sciences and Technology (member of the executive committee from November 2016 onwards and for 3 years, primary mandate).
- SOPHA: French Society of Analytical Philosophy.
- SPSP: The Society for Philosophy of Sciences in Practices.
- UCIET: Union Confédérale d’Ingénieurs et de Techniciens [Confederal Union of Engineers and Technicians].