



Thomas Vidil

37 years old
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Ph.D. – CNRS researcher



Personal web page



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CNRS, Bordeaux INP & University of Bordeaux

TEAM: *Biopolymers & Bio-sourced Polymers*

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PERSONAL STATEMENT

Since my establishment as a permanent junior researcher of the « *Laboratory of Organic Polymer Chemistry* » (LCPO) in Bordeaux (France, University of Bordeaux), my research activities have been focused on fostering biosourced chemistry in the field of thermosetting polymers. I firmly believe that bio-based polymers hold immense potential for addressing the demands of various high-value applications in the forthcoming decades. In this context, my research endeavors aim to blend fundamental exploration with practical applications tailored to industry needs. I recently secured a public funding from the French Research Agency to develop new methodologies for the photo-induced polyaddition of biosourced monomers. Ultimately, I want to introduce these new systems in the field of additive manufacturing. This part of my work will draw upon the 3D-printing platform I have been developing at LCPO over the past few years. Additionally, I have the privilege of collaborating with several private companies such as Ariane Group and Aeroprotec, all of whom share a keen interest in advancing the utilization of biosourced polymers in industry. Thus far, I have (co-)supervised over ten Ph.Ds and Post-Docs, and I eagerly anticipate continuing to disseminate the latest findings stemming from our research efforts.

RESEARCH EXPERIENCES

2018-Present Bordeaux, France	Junior Researcher – « Chargé de Recherche » CNRS – University of Bordeaux, Bordeaux INP <i>Non-Isocyanate Polyurethanes, Bio-sourced Polyhydroxyurethanes, Poly-Ionic Liquids, Foams, 3D-printing</i>	LCPO
2017-2018 Bordeaux, France	Postdoctoral Researcher – University of Bordeaux <i>Ionic liquids and polymers of ionic liquids obtained from biobased precursors,</i> Advisors: Prof. Henri Cramail, Prof. Daniel Taton	LCPO
2015-2017 Minneapolis, MN	Postdoctoral Researcher – University of Minnesota <i>Block co-polymers crosslinked in the vicinity of their order-disorder transition,</i> Advisor: Prof. Marc Hillmyer	Department of Chemistry, Hillmyer Group
2011-2015 Paris, France	Ph.D. – ESPCI ParisTech <i>Control of the cationic polymerization of epoxy monomers via supramolecular chemistry,</i> Advisors: Dr. François Tournilhac, Prof. Ludwik Leibler,	Soft Matter and Chemistry Lab
Fall 2013 Cambridge, MA	Collaborative research in industry (Ph.D.) <i>Synthesis of rubbery epoxy network via cationic polymerization and their reinforcement with fillers.</i> Advisors: Dr. Agathe Robisson and Dr. Simone Musso.	Schlumberger Doll Research Center

EDUCATION

2011-2015	Ph.D. in Polymer Chemistry – ESPCI ParisTech	ESPCI ParisTech, Paris
2011	Master of Science – Chemistry and Physical-Chemistry of Materials, Major: Physical-Chemistry of Polymers	Université Pierre et Marie Curie, Paris
2007-2011	Graduate Engineer – Major: Chemistry	ESPCI ParisTech, Paris

TEACHING and MENTORING

2023-2024	Polymer Courses and Practical Works for students from the Graduate School ENSMAC – Institut National Polytechnique de Bordeaux
2016-2017	Chemistry Tutoring for undergraduate students from the University of Minnesota

AWARDS and GRANTS

2023	ANR Junior Grant – Agence National de la Recherche « French Research Agency » – 220 000 € for 3 years
2019	LCPO Junior Grant – Grant awarded to a young researcher from LCPO – 100 000 € for 1 year

- 2017 **University of Bordeaux Junior Chair Grant** – In the frame of the cluster of excellence AMADEus (Advanced Materials by Design) – 30 000 € for two years [↗](#)
- 2014 **Best Ph.D project presentation** – Awarded by the *Doctoral School of physics and chemistry of materials* (Pierre et Marie Curie University)

SELECTED PEER-REVIEWED PUBLICATIONS

- [1] | **Vidil, T.; Tournilhac, F.; Supramolecular control of propagation in cationic polymerization of room temperature curable epoxy composition**, *Macromolecules*, **2013**, 46, 9240-9248.
- [2] | **Vidil, T.; Tournilhac, F.; Musso, S.; Robisson, A.; Leibler, L.; Control of reactions and network structures of epoxy thermosets**, *Progress in Polymer Science*, **2016**, 62, 126-179
- [3] | **Vidil, T.; Hampu, N.; Hillmyer, M.; Nanoporous Thermosets with Percolating Pores from Block Polymers Chemically Fixed above the Order-Disorder Transition**, *ACS Central Science*, **2017**, 3, 1114-1120
- [4] | **Vidil, T.; Cloitre, M.; Tournilhac, F.; Control of Gelation and Network Properties of Cationically Copolymerized Mono- and Diglycidyl Ethers**, *Macromolecules*, **2018**, 51, 5121-5137
- [5] | **Hampu, N.; Bates, M.W.; Vidil, T.; Hillmyer, M.; Bicontinuous Porous Nanomaterials from Block Polymers Radically Cured in the Disordered State for Size-Selective Membrane Applications**, *ACS Applied Nano Materials*, **2019**, 2, 4567-4577
- [6] | **Monie, F.; Vidil, T.; Grignard, B.; Cramail, H.; Detrembleur, C.; Self-foaming polymers: Opportunities for the next generation of personal protective equipment**, *Materials Science & Engineering R-Reports*, **2021**, 145
- [7] | **del Rio, E.; Vidil, T.; Gati, W.; Grau, E.; Taton, D.; Cramail, H.; Ester-Containing Imidazolium-Type Ionic Liquid Crystals Derived from Bio-based Fatty Alcohols**, *ACS Sustainable Chemistry & Engineering*, **2021**, 9, 12687-12698
- [8] | **Vidil, T.; Llevot, A.; Fully Biobased Vitrimers: Future Direction toward Sustainable Cross-Linked Polymers**, *Macromolecular Chemistry And Physics*, **2022**, 223
- [9] | **Salvado, V.; Dolatkhani, M.; Grau, E.; Vidil, T.; Cramail, H.; Sequence-Controlled Polyhydroxyurethanes with Tunable Regioregularity Obtained from Sugar-Based Vicinal Bis-cyclic Carbonates**, *Macromolecules*, **2022**, 55, 7249-7264
- [10] | **Helbling, P.; Hermant, F.; Petit, M.; Tassaing, T.; Vidil, T.; Cramail, H.; Unveiling the reactivity of epoxides in carbonated epoxidized soybean oil and application in the stepwise synthesis of hybrid poly(hydroxyurethane) thermosets**, *Polymer Chemistry*, **2023**, 14, 500-513
- [11] | **Le Goupil, F.; Salvado, V.; Rothan, V.; Vidil, T.; Fleury, G; Grau, E.; Cramail, H.; Bio-Based Poly(hydroxy urethane)s for Efficient Organic High-Power Energy Storage**, *Journal of the American Chemical Society*, **2023**, 145, 4583-4588
- [12] | **Helbling, P.; Hermant, F.; Petit, M.; Vidil, T.; Cramail, H.; Design of Plurifunctional Cyclocarbonates and their Use as Precursors of Poly(hydroxyurethane) Thermosets: A Review**, *Macromolecular Chemistry And Physics*, **2023**, 224, 2300300

SELECTED CONFERENCES

- June 2023, Gothenburg, Sweden | **Frontiers in Polymer Science 2023**
Oral presentation: **Vidil, T.; Salvado, V.; Dolatkhani, M.; Grau, E.; Cramail, H.; Sequence-Controlled Polyhydroxyurethanes with Tunable Regioregularity Obtained from Sugar-Based Vicinal Bis-cyclic Carbonates**
- November 2022, Montpellier, France | **50^{ème} Édition du Colloque National du Groupe Français des Polymères**
Oral presentation: **Vidil, T.; Helbling, P.; Tassaing, T.; Hermant, F.; Cramail, H.; Crosslinking reaction of carbonated/epoxidized soybean oil with diamines: the role of the epoxides unveiled**
- June 2018, Palavas-les-Flots, France | **IUPAC Polymers and Organic Chemistry 2018 – POC 2018**
Oral presentation: **Vidil, T.; Hampu, N.; Hillmyer, M.; Nanoporous Thermosets with Percolating Pores from Block Polymers Chemically Fixed above the Order-Disorder Transition**
- October 2016, College Park, MD | **Society of Engineering Science, 53rd Annual Technical Meeting – Mechanics and Materials in the Oilfield**
Oral presentation: **Vidil, T.; Tournilhac, F.; Leibler, L.; Control of the curing reaction of epoxy thermosets: a major challenge to develop new high performance materials in the oilfield industry**

ADDITIONAL INFORMATION

- Affiliation | **Société Chimique de France (SCF)** [↗](#) – Sitting member of the local board office | Conferences and Workshops organizations, Ph.D. Awards, Communication...
Groupe Français des Polymères (GFP) [↗](#) – Active member
- Peer-Review | Macromolecules, Polymer, ACS Sustainable Chemistry and Engineering, ACS Applied Polymer Materials, Progress in Organic Coatings...
- Extracurricular | **Active member of the CNRS Theatre Company**