

J. Terence Blaskovits

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Curriculum Vitae

October 2025

Academic Record

- 2025 – ongoing ■ **Assistant professor of chemistry and Alberta Machine Intelligence Institute fellow**, University of Alberta (Canada)
- 2023 – 2025 ■ **Postdoctoral fellow**, Max-Planck Institute for Polymer Research (Germany)
Supervisor: Dr. D. Andrienko
- 2019 – 2023 ■ **PhD in Computational Chemistry**, Swiss Federal Institute of Technology/École polytechnique fédérale de Lausanne [EPFL] (Switzerland)
Thesis title: *Data-driven design of organic electronic materials*.
Supervisor: Prof. Clémence Corminboeuf
- 2016 – 2018 ■ **MSc in Polymer Chemistry and Computational Chemistry**, Université Laval (Canada)
Thesis title: *A computational study of direct (hetero)arylation polymerization*.
Supervisors: Prof. Mario Leclerc, Prof. Paul Johnson
Canadian Institute for Advanced Research Bio-Inspired Solar Energy Program trainee
- 2012 – 2016 ■ **BSc in Chemistry with International Profile**, Université Laval (Canada)
International mobility: semester at Université de Strasbourg (France)
Research projects and supervisors: radioanalytical chemistry (Prof. D. Larivière), frustrated Lewis pair chemistry (Prof. F.-G. Fontaine), polymer chemistry (Prof. M. Leclerc)

Publications

25 peer-reviewed journal publications; 1 peer-reviewed book chapter; 13 first-authored publications

1 *Chemical Reviews* 1 *Advanced Materials*, 1 *Advanced Energy Materials*, 3 *Angewandte Chemie*, 2 *Journal of the American Chemical Society*, 1 *Nature Materials*, 3 *Chemistry of Materials*, 3 *Chemical Science*, 1 *Journal of Physical Chemistry Letters*, 2 *Chemical Communications*, 2 *Macromolecules*, 2 *Journal of Physical Chemistry A/B/C*, 1 *Chemistry - A European Journal*, 1 *Macromolecular Rapid Communications*, 1 *Organic Electronics*,

Please consult the attached publication list for full details

Presentations

28 oral presentations (of which 13 invited) and 4 posters across 9 countries; 2 presentation awards

Please consult the attached presentation list for full details. **Selected recent invited talks:**

- 2025 *Canadian Society for Chemistry conference*, Ottawa, Canada – Machine learning of excited states enables inverse molecular design for next-generation organic electronics
- 2024 *Technical University of Denmark energy department*, Copenhagen, Denmark – Direct and inverse design of molecules for next-generation organic electronics
- Canadian Symposium on Theoretical and Computational Chemistry*, Halifax, Canada – Learning excited states for solar energy
- Alberta Machine Intelligence Institute Upper Bound conference*, Edmonton, Canada – Data-driven molecular design for solar energy
- 2023 *Croatian Chemical Society – Section for Theoretical Chemistry seminar*, Zagreb, Croatia – Machine learning-enabled discovery of optical materials for singlet fission and delayed fluorescence

Other Merits

Selected Scholarships and Prizes

- 2024 Best thesis in chemistry & chemical engineering, EPFL (CHF 3,000)
Thesis distinction award for top 8% of university PhD theses, EPFL
- 2022 Finalist, *Three-minute thesis* competition for scientific popularization, EPFL
- 2018 Department of Chemistry Award for Excellence in a Master's thesis defense, U. Laval
Travel Grant, Natural Sciences and Engineering Research Council of Canada, NSERC (\$1,755)
- 2017 Richard J. Schmeelk Canada Fellowship, Schmeelk Foundation
full graduate funding for anglophone students studying at a francophone university (\$25,000)
Scholarship for Canadian Francophonie, Fonds de recherche du Québec (\$15,000)
Canadian Graduate Scholarships Master's Program, NSERC (\$17,500)
- 2016 Michael Smith Foreign Study Supplement for research stay abroad, NSERC (\$6,000)
German Academic Exchange Service Study Scholarship, TU Dresden (€20,000, declined)
Medal of the Lieutenant-Governor of Québec for Youth, Government of Québec
Canadian Society for Chemistry medal, U. Laval
Lucien-Piché Foundation – Paraza Pharma Scholarship, Order of Chemists of Québec
for the top student in Quebec in the final year of a chemistry-related BSc program (\$2,000)
- 2015 Hypercube scholar award for the highest academic average, Hypercube/U. Laval
- 2014 – 2018 Roger-Mahé scholarship for academic excellence, Government of Alberta (\$4,000)
- 2014, 2015 Undergraduate Student Research Award, NSERC (\$12,000)
Best oral presentations, University of Sherbrooke Undergraduate Chemistry Symposium
(1st place - 2015, 2nd place - 2014; \$500)
- 2012 – 2016 Inaugural Schulich Leader Scholarship, U. Laval (full funding for a four-year degree)
largest scholarship in Canada; for academic excellence and community leadership (\$60,000)
- 2012 Governor General of Canada's Academic Medal, Government of Canada

Research supervision

- 2025 – ongoing *PhD thesis of Harold Mena* (U. Alberta) – project underway
MSc thesis of Ian Leblanc (U. Alberta) – project underway
MSc thesis of Juan Diego Castro Miyashiro (U. Alberta) – project underway
BSc student internship placement (SIP) of Archit Gupta (U. Alberta) – project underway
BSc project of Yasna Naseri (U. Alberta) – project underway
BSc research project of Alex Cross (U. Alberta) – From Data to Dimers: Engineering Acene Derivatives for Photovoltaic Singlet Fission
- 2024 – 2025 *BSc course project of Alex Cross* (U. Alberta) – Machine Learning-Driven Design and Synthesis of Acene Derivatives for Singlet Fission
- 2023 *MSc thesis of Luca Schaufelberger* (EPFL/ETH Zürich) – Leveraging Machine Learning Uncertainty to Discover Singlet Fission Materials (led to a publication)
- 2021 *BSc project of Zhengqing Wu, Zhendong Li, and Guoyuan Liu* (EPFL) – Towards Accurate Prediction of Donor-acceptor Copolymer Properties: Feature Design, Auxiliary Task, Knowledge Distillation, and Novel Neural Network Structures
MSc project of Yuri Cho (EPFL/U. Basel) – Controlling Singlet-Triplet Splitting in Intramolecular Singlet Fission Building Blocks (led to a publication)
- 2020 *BSc thesis of Iwona Swiderska and Hélène Wu* (EPFL) – Effects of Side Arm Size and Position on Charge Transport of Amorphous Organic Hole Transport Materials (led to a publication)

Other Merits (continued)

Teaching

- 2026 *Atomic and Molecular Structure* instructor (U. Alberta)
2025 *Introductory University Chemistry I* instructor (U. Alberta)
2022 *Organic electronic materials* teaching assistant (EPFL/ETH Zürich)
2019 – 2021 *Advanced general chemistry* teaching assistant (EPFL)
2018 – 2019 Teacher of mathematics, science and music, Gandhi Ashram School (K Kalimpong, India)
One-year volunteer teaching position at a Jesuit-run school for underprivileged youth
2018 *Practical Assignments in Organic Synthesis* teaching assistant (U. Laval)
2017 *The Quantum World* EdX online course tester (Harvard U./HarvardX)

Scientific Mobility

- 2018 Visiting student at Stanford U. (USA) with Prof. Todd Martinez (*2 months*)
2016 – 2017 Research stay at Harvard U. (USA) with Prof. Alán Aspuru-Guzik (*6 months*)


Organizational Contributions

- 2025 Poster judge, Chemical Society for Chemistry conference (Ottawa, Canada)
2024 Session chair, International Conference on Synthetic Electronic Materials (Dresden, Germany)
2023 Poster judge, Max-Planck Institute for Polymer Research poster day (Mainz, Germany)
2021 *From Atoms to Computers* academic summer camp co-organizer and presenter (Swiss National Center for Competence in Research - MARVEL/EPFL, Switzerland)
2019 – 2023 Introduction to computational chemistry research for undergraduate thesis students (EPFL, Switzerland)
Organizer of lab visits and presentations for undergraduate and school students (EPFL, Switzerland)
2016 Session organizer and co-chair, CIFAR Bio-Inspired Solar Energy Program Meeting (Montréal, Canada)

Other Activities and Social Engagement

- 2009 – *ongoing* First violinist in 9 symphony and chamber orchestras (Canada, France, Belgium, USA, India, Switzerland)
2008 – *present* 11 half-marathons, marathons and mountain half-marathons (Canada, USA, Switzerland)
2000 – *present* Hiking, cycling, canoeing, and mountain-trekking (Canada, India, Nepal, Switzerland)

J. Terence Blaskovits - Publication list

 <https://orcid.org/0000-0002-1452-5508>

Google Scholar: [hJgesv4AAAAJ](https://scholar.google.com/citations?user=hJgesv4AAAAJ)

PUBLICATION SUMMARY

Peer-reviewed journal publications: 25

Peer-reviewed book chapters: 1

First-authored publications: 15

h-index (Google Scholar): 16

MANUSCRIPTS SUBMITTED OR IN PREPARATION

PEER-REVIEWED PUBLICATIONS

† These authors contributed equally.

30. From Data to Dimers: Engineering Acene Derivatives for Photovoltaic Singlet Fission. Cross, A. J.; Tykwinski, R. R.; Blaskovits, J. T. Submitted.
29. Organic Materials of Tomorrow: Current and Future Horizons of Artificial Intelligence. Mena, H.; Blaskovits, J. T.; Lin, K.-H.; Andrienko, D. Submitted.
28. Synthesis, solubilization, and photophysical properties of polyfluorinated pentacene dimers. Schroeder, Z. W.; Greißel, P. M.; Wollny, A.-S.; Cross, A.; Chen, L.; Piny, G. F. P.; Muller, V.; Hall, A.; Blaskovits, J. T.; Guldi, D. M.; Tykwinski, R. R. Submitted.
27. Enhancing the operational stability of carbene-metal-amide organic light emitting diodes. Saxena, R., Blaskovits, J. T., Brannan, A. C., Romanov, A. Andrienko, D.; Blom, P. W. M.; Wetzelaer, G.-J. A. H. Submitted.
26. Worakul, T.; Laplaza, R.; **Blaskovits, J. T.**; Corminboeuf, C. Generative design of singlet fission materials leveraging a fragment-oriented database. *2025*, *16* (38), 17956-17969, [DOI]
25. Sachnik, O.; Kinaret, N.; Saxena, R.; Manz, M.; Liu, W.; **Blaskovits, J. T.**; Andrienko, D.; Michels, J. J.; Blom, P. W. M.; Wetzelaer, G.-J. A. H.; Efficient and stable pure-blue single-layer organic light-emitting diodes based on trap-free hyperfluorescence. *Nature Materials*, **2025**, *24*, 1742-1748. [DOI]
24. Shukla, A.; Pranav, M.; He, G.; **Blaskovits, J. T.**; Mascione, D.; Cao, Y.; Gong, Y.; Riley, D. B.; Steele, J. A.; Solano, E.; Ehm, A.; Shadabroo, M. S.; Armin, A.; Shoaee, S.; Zahn, D. R. T.; Li, Y.; Meng, L.; Lang, F.; Andrienko, D.; Neher, D. Discerning Performance Bottlenecks of State-of-the-Art Narrow Bandgap Organic Solar Cells. *Advanced Energy Materials*, **2025**, 2502398. [DOI]
23. Schaufelberger, L.; **Blaskovits, J. T.**; Laplaza, R.; Jorner, K.; Corminboeuf, C. Inverse Design of Singlet Fission Materials with Uncertainty-Controlled Genetic Optimization. *Angewandte Chemie*, **2025**, *137* (3), e202415056. [DOI]
22. **Blaskovits, J. T.**; Laplaza, R.; Vela, S.; Corminboeuf, C. Data-driven discovery of organic electronic materials enabled by hybrid top-down/bottom-up design. *Advanced Materials*, **2024**, *36*, 2305602. [DOI]
21. **Blaskovits, J. T.**; Corminboeuf, C.; Garner, M. H. Singlet-triplet inversions in through-bond charge-transfer states. *Journal of Physical Chemistry Letters*, **2024**, *15*, 10062-10067, [DOI]
20. Das, S.; Laplaza, R.; **Blaskovits, J. T.**; Corminboeuf, C. Engineering frustrated Lewis pair active sites in metal-organic frameworks for catalytic CO₂ hydrogenation. *Journal of the American Chemical Society*, **2024**, *146*, 15806-15814. [DOI]
19. Garner, M. H.†; **Blaskovits, J. T.**†; Corminboeuf, C. Enhanced inverted singlet-triplet gaps in azaphenalenenes and non-alternant hydrocarbons. *Chemical Communications*, **2024**, *60*, 2070-2073. [DOI]
18. **Blaskovits, J. T.**; Corminboeuf, C.; Garner, M. H. Excited-state Hund's Rule Violations in Bridged [10]- and [14]Annulene Perimeters. *Journal of Physical Chemistry A – Special issue: TADF-Active Systems: Mechanism, Applications, and Future Directions.*, **2024**, *128*, 10404-10412. [DOI]
17. Garner, M. H.†; **Blaskovits, J. T.**†; Corminboeuf, C. Double-bond delocalization in non-alternant hydrocarbons induces inverted singlet-triplet gaps. *Chemical Science*, **2023**, *14*, 10458-10466. [DOI]

16. **Blaskovits, J. T.**†; Garner, M. H.†; Corminboeuf, C. Symmetry-induced singlet-triplet inversions in non-alternant hydrocarbons. *Angewandte Chemie*, **2023**, *135* (15), e202218156. [DOI]
15. **Blaskovits, J. T.**; Fumanal, M.; Vela, S.; Cho, Y.; Corminboeuf, C. Heteroatom oxidation controls singlet–triplet energy splitting in singlet fission building blocks. *Chemical Communications*, **2022**, *58* (9), 1338–1341. [DOI]
14. Das, S.; Laplaza, R.; **Blaskovits, J. T.**; Corminboeuf, C. Mapping active site geometry to activity in immobilized frustrated Lewis pair catalysts. *Angewandte Chemie*, **2022**, *134* (32), e202202727. [DOI]
13. **Blaskovits, J. T.**†; Lin, K.-H.†; Fabregat, R.; Swiderska, I.; Wu, H.; Corminboeuf, C. Is a single conformer sufficient to describe the reorganization energy of amorphous organic transport materials? *Journal of Physical Chemistry C*, **2021**, *125* (31), 17355–17362. [DOI]
12. Dong, Z.; **Blaskovits, J. T.**; Fadaei-Tirani, F.; Scopelliti, R.; Sienkiewicz, A.; Corminboeuf, C.; Severin, K. Tuning the π -accepting properties of mesoionic carbenes: A combined computational and experimental study. *Chemistry – A European Journal*, **2021**, *27* (46), 11983–11988. [DOI]
11. **Blaskovits, J. T.**; Fumanal, M.; Vela, S.; Fabregat, R.; Corminboeuf, C. Identifying the trade-off between intramolecular singlet fission requirements in donor–acceptor copolymers. *Chemistry of Materials*, **2021**, *33* (7), 2567–2575. [DOI]
10. **Blaskovits, J. T.**; Fumanal, M.; Vela, S.; Corminboeuf, C. Designing singlet fission candidates from donor–acceptor copolymers. *Chemistry of Materials*, **2020**, *32* (15), 6515–6524. [DOI]
9. **Blaskovits, J. T.**; Leclerc, M. Direct (hetero) arylation polymerization for the preparation of conjugated polymers. In T. A. Skotheim, B. C. Thompson and J. R. Reynolds (Eds.), *The handbook of conducting polymers, 4th edition* (pp. 195–238). CRC Press, **2019**. [DOI]
8. **Blaskovits, J. T.**; Johnson, P. A.; Leclerc, M. Mechanistic origin of β -defect formation in thiophene-based polymers prepared by direct (hetero)arylation. *Macromolecules*, **2018**, *51* (20), 8100–8113. [DOI]
7. **Blaskovits, J. T.**; Leclerc, M. C-H activation as a shortcut to conjugated polymer synthesis. *Macromolecular Rapid Communications*, **2018**, *40* (1), 1800512. [DOI]
6. Zindy, N.; **Blaskovits, J. T.**; Beaumont, C.; Michaud-Valcourt, J.; Saneifar, H.; Johnson, P. A.; Bélanger, D.; Leclerc, M. Pyromellitic diimide-based copolymers and their application as stable cathode active materials in lithium and sodium-ion batteries. *Chemistry of Materials*, **2018**, *30* (19), 6821–6830. [DOI]
5. Sun, J.-P.; **Blaskovits, J. T.**; Bura, T.; Beaupré, S.; Leclerc, M.; Hill, I. G. Photovoltaic device performance of highly regioregular fluorinated poly(3-hexylthiophene). *Organic Electronics*, **2017**, *50*, 115–120. [DOI]
4. Bura, T.; Beaupré, S.; Légaré, M.-A.; Quinn, J.; Rochette, E.; **Blaskovits, J. T.**; Fontaine, F.-G.; Pron, A.; Li, Y.; Leclerc, M. Direct heteroarylation polymerization: Guidelines for defect-free conjugated polymers. *Chemical Science*, **2017**, *8* (5), 3913–3925. [DOI]
3. **Blaskovits, J. T.**†; Bura, T.†; Beaupré, S.; Lopez, S. A.; Roy, C.; de Goes Soares, J.; Oh, A.; Quinn, J.; Li, Y.; Aspuru-Guzik, A.; Leclerc, M. A study of the degree of fluorination in regioregular poly(3-hexylthiophene). *Macromolecules*, **2016**, *50* (1), 162–174. [DOI]
2. Pouliot, J.-R.; Grenier, F.; **Blaskovits, J. T.**; Beaupré, S.; Leclerc, M. Direct (hetero)arylation polymerization: Simplicity for conjugated polymer synthesis. *Chemical Reviews*, **2016**, *116* (22), 14225–14274. [DOI]
1. Bura, T.†; **Blaskovits, J. T.**†; Leclerc, M. Direct (hetero)arylation polymerization: Trends and perspectives. *Journal of the American Chemical Society*, **2016**, *138* (32), 10056–10071. [DOI]

J. Terence Blaskovits - Presentation list

32. *Schulich Leaders Across Canada* alumni panel on career development, Edmonton, Canada, 2025 – Invited talk
31. *National Liberal caucus* presentation to MPs and cabinet members, Edmonton, Canada, 2025 – Invited talk
30. *Canadian Society for Chemistry conference*, Ottawa, Canada, 2025 – Invited talk
29. *Technical University of Denmark* energy department seminar, Copenhagen, Denmark, 2024 – Invited talk
28. *Canadian Symposium on Theoretical and Computational Chemistry*, Halifax, Canada, 2024 – Invited talk
27. *Max-Planck Institute for Polymer Research* poster day, Mainz, Germany, 2024 – Poster (*with Felix Post, Nawaz Qaisrani, Naomi Kinaret, Wenlan Liu, Andriy Zbugayevych, and Denis Andrienko*)
26. *International Conference on Synthetic Electronic Materials*, Dresden, Germany, 2024 – 2 talks
25. *Alberta Machine Intelligence Institute Upper Bound* conference, Edmonton, Canada, 2024 – Invited talk
24. *Chemical Compound Space* conference, Heidelberg, Germany, 2024 – Poster
23. *Max-Planck Institute for Polymer Research* group retreat, Tegernsee, Germany, 2024 – Tutorial
22. *Max-Planck Institute for Polymer Research* seminar, Mainz, Germany, 2023 – Invited talk
21. *Donostia International Physics Center* seminar, Donostia, Spain, 2023 – Invited talk
20. *16th International Materials Chemistry* conference, Dublin, Ireland, 2023 – Talk
19. *University of Alberta Department of Chemistry* seminar, Edmonton, Canada, 2023 – Invited talk
18. *European Materials Research Society* spring meeting, Strasbourg, France, 2023 – Talk
17. *Croatian Chemical Society – Section for Theoretical Chemistry* seminar, Zagreb, Croatia, 2023 – Invited talk
16. *EPFL Chemistry department* lab introduction for undergraduates, Lausanne, Switzerland, 2023 – Talk (with Simone Gallarati)
15. *World Association of Theoretical and Computational Chemists* congress, Vancouver, Canada, 2022 – Poster
14. *Three-Minute Thesis* finals, Lausanne, Switzerland, 2022 – Invited talk
13. *Three-Minute Thesis* selection, Lausanne, Switzerland, 2022 – Talk
12. *International Thermally-Activated Delayed Fluorescence* workshop, Fukuoka, Japan, 2022 (Online) – Talk
11. *American Chemical Society* fall meeting, Atlanta, USA, 2021 (Online) – Talk
10. *Theoretical Physical Organic Chemistry* meeting, Houston, USA, 2021 (Online) – Talk
9. *"From Atoms to Computers"* academic summer camp for secondary-school students, Lausanne, Switzerland, 2021 – 2 talks
8. *Swiss Chemical Society* fall meeting, Geneva, Switzerland, 2020 (Online) – Talk
7. *Materials Research Society* spring meeting, Phoenix, USA, 2018 – Talk
6. *Canadian Institute for Advanced Research (CIFAR) Bio-Inspired Solar Energy* program meeting, Toronto, Canada, 2018 – Invited talk
5. *Québec Center for Advanced Materials* conference, Sherbrooke, Canada, 2017 – Talk
4. *CIFAR Bio-Inspired Solar Energy* program meeting, Montréal, Canada, 2016 – Invited talk and poster
3. *CIFAR Bio-Inspired Solar Energy* program meeting, Vancouver, Canada, 2016 – Invited talk
2. *27th University of Sherbrooke Chemistry Colloquium*, Sherbrooke, Canada, 2015 – Talk
1. *26th University of Sherbrooke Chemistry Colloquium*, Sherbrooke, Canada, 2014 – Talk