

# Liste de publications de CHIM

## Articles dans des revues avec comité de lecture

### A paraître

Radisson, B., Bense, H., Domino, L., Hua, H. A. B., Siefert, E., & Brau, F. (2025). Optimal rigid brush for fluid capture. *Journal of fluid mechanics*.

### 2026

Hwang, K.-H., Brandt, D., Cristofaro, S., Nickerson, C. J., Modesti, F., Gicevičius, M., Cervantes, M. T. R., Volpi, M., Spalek, L. L., Muccioli, L., Claesson, P. M., Fruk, L., Geerts, Y., Schweicher, G., Olivier, Y., Johnson, E. R., & Venkateshvaran, D. (2026). Measuring the molecular origins of stiffness in organic semiconductors. *Nature communications*. doi:10.1038/s41467-026-68328-0

Nyström, S., Odino, D., Relini, A., Canale, C., Parlato, R., Knelissen, Y., Lasorsa, A., Roos, W., van der Wel, P., Hoffmann, S. V., Jones, N. C., Van Hemelryck, V., Waeytens, J., Raussens, V., & Hammarström, P. (2026). Standardization of cross-site biophysical studies of bovine insulin amyloids is challenged by structural polymorphism. *European biophysics journal*. doi:10.1007/s00249-025-01811-6

Leyder, T., Mignon, J., Bongiovanni, E., Machiels, Q., Waeytens, J., Raussens, V., Monari, A., Mottet, D., & Michaux, C. (2026). Unveiling the effect of phosphorylation and phosphomimetics on the structural and aggregation properties of the amyloidogenic intrinsically disordered protein DPF3a. *International journal of biological macromolecules*, 335, 149393. doi:10.1016/j.ijbiomac.2025.149393

Grosso, S., Marchese, M., Salamone, L., Riant, O., & Evano, G. (2026). Copper-Catalyzed Trifluoromethylation of Vinylsiloxanes. *ACS Catalysis*, 16, 197-202. doi:10.1021/acscatal.5c07064

### 2025

Renier, N., Weyckmans Mele, G., Lelièvre, P., Boeckstaens, M., Lavendomme, R., Aydogan, A., Dussein, Y., Charbonnier, P., Puillet Anselme, L., Chovelon, B., Castillo-Michel, H., Tumanov, N., Wouters, J., Sancey, L., Busser, B., Marini, A. M., Veronesi, G., Jabin, I., Deniaud, A., & Valkenier, H. (2025). Potent Biological Activity by a Synthetic Cu(I) Cationophore Redistributing Intracellular Copper Pools. *Journal of the American Chemical Society*. doi:10.1021/jacs.5c15335

Zeng, Z.-C., Clarisse, L., Franco, B., Clerbaux, C., Theys, N., Qi, C., Lee, L., Zhu, L., Hu, X., Gu, M., & Zhang, P. (2025). Volcanic sulfur dioxide monitored from a constellation of FengYun hyperspectral infrared sounders in dawn-dusk, mid-morning, and afternoon sun-synchronous orbits. *Remote sensing of environment*, 331, 115057. doi:10.1016/j.rse.2025.115057

Hansjacob, P., Audet, F., Ali Ahmad, M., Jacob, C., Echeverria, P.-G., & Evano, G. (2025). A Simple and Efficient Procedure for the Deoxygenation of Ketones via a Palladium-Catalyzed Reduction of Vinyl Mesylates. *European Journal of Organic Chemistry*, e202501059. doi:10.1002/ejoc.202501059

Gosselin, B., Retout, M., Lepeintre, V., Tisaun, J., Mangeney, C., Moucheron, C., Bruylants, G., & Jabin, I. (2025). Plasmon-mediated functionalization of colloidal gold nanoparticles through reductive grafting of diazonium salts under pulsed laser irradiation. *RSC Applied Interfaces*. doi:10.1039/D5LF00197H

Rana, S., Remigio, M., Aravindan Geetha, L., Strutyński, K., Volpi, M., John, S., Baczewski, L. T., Paltiel, Y., Resel, R., Melle-Franco, M., Mali, K. S., Geerts, Y., & De Feyter, S. (2025). Chirality-Induced Spin Selectivity in Two-Dimensional Self-Assembled Molecular Networks. *Journal of the American Chemical Society*, 147, 42426-42432. doi:10.1021/jacs.5c12143

Makogon, A., Bertolucci Coelho, L., Ustarroz Troyano, J., Decorse, P., Kanoufi, F., & Shkirskiy, V. (2025). Machine learning-enhanced optical monitoring for identifying pitting-susceptible zones in 316L stainless steel. *Corrosion science*, 256, 113184. doi:10.1016/j.corsci.2025.113184

Pucci Couto, C., Moapon, M., Venkatesan, P., Ustarroz Troyano, J., Yang, Y., Garcia, S. J., & Abrahami, S. (2025). Evaluation of early-stage dissolution of spent NdFeB permanent magnets in organic acids by in-situ quantitative reflected light microscopy. *Journal of Materials Research and Technology*, 39, 6981-6993. doi:10.1016/j.jmrt.2025.11.006

Negrojevic, L., Karan, P., Heyman, J., Le Borgne, T., Brau, F., & De Wit, A. (2025). Growth and Arrest of Reactive Mixing Fronts from Spherical Point-Source Injections. *Environmental science & technology*. doi:10.1021/acs.est.5c07664

Escala, D. M., De Wit, A., & Brau, F. (2025). Scaling properties of  $A + B \rightarrow C$  reaction-diffusion fronts in finite rectilinear geometries. *Chaos*, 35, 103138. doi:10.1063/5.0291093

Kumar, P., Broquet, G., Hauglustaine, D., Beaudor, M., Clarisse, L., Van Damme, M., Coheur, P., Cozic, A., Zheng, B., Revilla Romero, B., Delavois, A., & Ciais, P. (2025). Global atmospheric inversion of the anthropogenic NH<sub>3</sub> emissions over 2019–2022 using the LMDZ-INCA chemistry transport model and the IASI NH<sub>3</sub> observations. *Atmospheric chemistry and physics*, 25(19), 12379-12407. doi:10.5194/acp-25-12379-2025

Boynard, A., Wespes, C., Hadji-Lazaro, J., Sinnathamby, S., Hurtmans, D., Coheur, P., Doutriaux-Boucher, M., Onderwaater, J., Steinbrecht, W., Pennington, E. E., Bowman, K., & Clerbaux, C. (2025). Assessment of 16-year tropospheric ozone trends from the IASI Climate Data Record. *Atmospheric chemistry and physics*, 25(19), 11719-11755. doi:10.5194/acp-25-11719-2025

Gerard, P., Landrain, Y., Heymans, T., & Evano, G. (2025). Introducing N-Carboxyethyl-Ynamides, Precursors of Metallated Ketenimines: Protecting Group Swap in Ynamides and Olefination of Aldehydes. *Organic letters*, 27, 11344-11350. doi:10.1021/acs.orglett.5c03692

Noppen, L., Clarisse, L., Tack, F., Ruhtz, T., Van Damme, M., Van Roozendael, M., Schuette Meyer, D., & Coheur, P. (2025). Towards a low-resolution infrared sounder for monitoring atmospheric ammonia (NH<sub>3</sub>) at high spatial resolution. *Atmospheric Measurement Techniques*, 18(17), 4183-4205. doi:10.5194/amt-18-4183-2025

Millet, T., Benchérif, H., Portafaix, T., Bègue, N., Baron, A., Duflot, V., Clerbaux, C., Coheur, P., Pazmino, A., Sicard, M., Boynard, A., Metzger, J., Payen, G., Marquestaut, N., & Godin Beekmann, S. (2025). Evidence of a transient ozone depletion event in the early Hunga plume above the Indian Ocean. *Atmospheric chemistry and physics*, 25(18), 10887-10905. doi:10.5194/acp-25-10887-2025

Hua, J., Liu, S., Qi, C., Wu, S., Lee, L., Hu, X., Zhao, X., Strong, K., Flood, V., Franco, B., Clarisse, L., Clerbaux, C., Wunch, D., Roehl, C., Wennberg, P. O., & Zeng, Z.-C. (2025). Observing carbon monoxide and volatile organic compounds from Canadian wildfires in 2023 from FengYun-3E/HIRAS-II in a dawn-dusk sun-synchronous orbit. *Remote sensing of environment*, 327, 114829. doi:10.1016/j.rse.2025.114829

Donik, #., Suhadolnik, L., Tomc, B., Voronkin, A., Ustarroz Troyano, J., Bele, M., Godec, M., & Hodnik, N. (2025). Grain-resolved mapping of oxygen evolution activation on a Ni-superalloy. *Chemical communications*, 61(74), 14097-14100. doi:10.1039/D5CC02703A

Xu, Y., Li, G., Liang, S., De Leener, G., Luhmer, M., Lavendomme, R., Gao, E.-Q., & Zhang, D. (2025). Engineering Cavity and Aperture Binding Sites Within a Metal–Organic Cage for Up- and Down-Regulation of Catalysis. *Angewandte Chemie*. doi:10.1002/anie.202507981

Spanoudaki, D., Brau, F., & De Wit, A. (2025). Bubble-guided chemical gardens growth in a confined space: straight tubes, worms and helices. *Journal of solid state electrochemistry*. doi:10.1007/s10008-025-06424-9

Oger, S., & Evano, G. (2025). Synthesis of Nitrogen Heterocycles by Intramolecular Radical Addition to Alkynes: a Systematic Study. *Synlett*, 36, 3391-3396. doi:10.1055/a-2661-3996

Bomfim, G. H. S., Dupont, G., Wright, T. J., Mighell, A., & Lacruz, R. R. (2025). Burden of hereditary enamel disorders. *Trends in molecular medicine*. doi:10.1016/j.molmed.2025.06.002

Facchini, G., Budroni, M., Schuszter, G., Brau, F., & De Wit, A. (2025). Phyllotactic structures in radially growing spatial symmetry breaking systems. *Physical review letters*, 135, 018001. doi:10.1103/7tnn-pq49

Moos, S., Vichi, M., Fripiat, F., Tison, J.-L., De Wit, A., & Rampai, T. (2025). Developing digital image processing methods to quantify internal and interfacial convection in the Hele-Shaw cell, with applications to the laboratory ice–ocean boundary layer. *Journal of Glaciology*, 71, e86. doi:10.1017/jog.2025.10066

Peluzo, B. M. T. C., Meena, R., Catalano, L., Schweicher, G., & Ruggiero, M. T. (2025). Exploring the Interplay of Lattice Dynamics and Charge Transport in Organic Semiconductors: Progress Toward Rational Phonon Engineering. *Angewandte Chemie International Edition in English*, 64(26), e202507566. doi:10.1002/anie.202507566

Fosseur, N., Fontaine, T., Petitjean, D., Malet, L., SNYDERS, R. U., Godet, S., & Reniers, F. (2025). Tuning the crystallinity of TiO<sub>2</sub> coatings synthesized by an atmospheric pressure dielectric barrier discharge in a single step process. *Journal of Vacuum Science*

& *Technology. A: International Journal Devoted to Vacuum, Surfaces, and Films*, 43, 043413. doi:10.1116/6.0004617

Nyssen, N., De Leener, G., Luhmer, M., Colasson, B., Jabin, I., Višnjevac, A., & Reinaud, O. (2025). Ligand exchange in TREN-based cobalt (II) funnel complexes in the solid state. *Journal of molecular structure*, 1344, 142970. doi:10.1016/j.molstruc.2025.142970

Prista Santos Von Bonhorst Silva, F., Gandrillon, O., Herbach, U., Robert, C., Chazaud, C., De Decker, Y., Gonze, D., & Dupont, G. (2025). Uncovering candidate Nanog-Helper genes in early mouse embryo differentiation using differential entropy and network inference. *Scientific Reports*, 15, 19975. doi:10.1038/s41598-025-03956-y

Pandey, P., Modesti, F., McIntosh, N., Ruzié, C., Turetta, N., Fijahi, L., Remigio, M., Schweicher, G., Geerts, Y., Mas-Torrent, M., Erk, P., Cornil, J., Samori, P., Modena, E., & Maini, L. (2025). Polymorph Screening and Investigation of Charge Transport of ditBuC6-BTBT. *Crystal growth & design*, 25(12), 4214. doi:10.1021/acs.cgd.5c00046

Kim, C., Kim, J., Park, J. H., Koo, J. H., Kwak, K. H., Boynard, A., Pan, L. L., Clerbaux, C., Hurtmans, D., Coheur, P., & Park, S. S. (2025). Springtime UTLS Ozone Variability in East Asia: Insights From 16 Years of IASI Observations (2008–2023). *Journal of Geophysical Research: Atmospheres*, 130(12), e2024JD043183. doi:10.1029/2024JD043183

Siefert, E., Scheid, B., Brau, F., & Cappello, J. (2025). Elastocapillary sequential fluid capture in hummingbird-inspired grooved sheets. *Nature communications*, 16, 4913. doi:10.1038/s41467-025-60203-8

Coelho, L. B., Amand, T., Torres Morillo, D., Olivier, M., & Ustarroz Troyano, J. (2025). Identifying stable pitting pathways in 316 L stainless steel via fractal-inspired PCA-based clustering. *npj Materials degradation*, 9(1). doi:10.1038/s41529-025-00594-7

Franceschini, F., Fernandes, C., Schouteden, K., Ustarroz Troyano, J., Locquet, J. P., & Taurino, I. (2025). Tailoring the glucose oxidation activity of anodized copper thin films. *Catalysis science & technology*, 15(10), 3022-3035. doi:10.1039/D4CY01248H

Van den Eeckhoudt, R., Rusli, N. I., Sieira, B., Garcia Mayo, S., Hussain, S., Vangalis, V., Seveno, D., Verstrepen, K. J., Ustarroz Troyano, J., Tavernier, F., Kraft, M., & Taurino, I. (2025). On-Chip Nanostructuring of Gold Microelectrodes in Phosphate-Buffered Saline for Broadband Single-Cell Impedance Biosensors. *ACS Applied Electronic Materials*, 7(9), 3786-3794. doi:10.1021/acsaelm.5c00050

Mohammadi, A., Deroo, S., Leitner, A. A. L., Stengel, F., Krammer, E.-M., Aebersold, R., Prévost, M., & Raussens, V. (2025). Characterization of the N- and C-terminal domain interface of the three main apoE isoforms: A combined quantitative cross-linking mass spectrometry and molecular modeling study. *Biochimica et biophysica acta (G). General subjects*, 1869(4), 130768. doi:10.1016/j.bbagen.2025.130768

Meena, R., Pandey, P., Zuffa, C., Brázda, P., Samolova, E., McIntosh, N., Volpi, M., Modesti, F., Gatsios, C., Turetta, N., Catalano, L., Choi, W., Seki, S., Cornil, J., Erk, P., Koch, N., Samori, P., Maini, L., Schweicher, G., & Geerts, Y. (2025). Crystal Engineering

in Oligorylenes: The Quest for Optimized Crystal Packing and Enhanced Charge Transport. *Crystal growth & design*, 25(9), 3087–3099. doi:10.1021/acs.cgd.5c00145

Deprince, J., Wagle, G., Ben Nasr, S., Carvajal Gallego, H., Godefroid, M., Goriely, S., Just, O., Palmeri, P., Quinet, P., & Van Eck, S. (2025). Kilonova ejecta opacity inferred from new large-scale HFR atomic calculations in all elements between Ca ( $Z = 20$ ) and Lr ( $Z = 103$ ). *Astronomy & astrophysics*, 696, 32. doi:10.1051/0004-6361/202452967

Fathallah, B. O., Béguier, S., Rey, M., Vander Auwera, J., & Campargue, A. (2025). Rovibrational assignments of the ethylene absorption spectrum near 3.3  $\mu\text{m}$  based on variational calculations. *Journal of quantitative spectroscopy & radiative transfer*, 336, 109362. doi:10.1016/j.jqsrt.2025.109362

Theys, N., Yu, H., Franco, B., Clarisse, L., Volkamer, R. M., Cha, H., Kim, J., De Smedt, I., Stavrou, T., Van Gent, J., & Van Roozendaal, M. (2025). Atmospheric HONO Observed Over Global Biomass Burning Regions Using Satellite Observations of TROPOMI and GEMS. *Journal of Geophysical Research: Atmospheres*, 130(8), e2024JD043163. doi:10.1029/2024JD043163

Robert, C., Prista Santos Von Bonhorst Silva, F., Dupont, G., Gonze, D., & De Decker, Y. (2025). Role of tristability in the robustness of the differentiation mechanism. *PloS one*, 20, e0316666.

Hagiwara, Y., Schweicher, G., Das, S., Hasebe, S., Asahi, T., Koshima, H., & Geerts, Y. (2025). Control of Polymorphism and Alignment in Photochromic Salicylideneaniline Crystals Grown by Directional Crystallization. *Crystal growth & design*, 25(7), 2090-2098. doi:10.1021/acs.cgd.4c01729

Gilbert, U. G., Mu, X. X., Lam, Y. Y. S. Y., De Leener, G., Schoenauen, M., Bottin, M. B., Robeyns, K., Luhmer, M., Robiette, R., & Singleton, M. M. (2025). Influence of imidazole functionalization on the properties of small molecule models of the LPMO active site. *Dalton transactions*, 54(15), 6174-6187. doi:10.1039/d4dt03424d

Gosselin, B., Dutour, R., Janssens, J., Jabin, I., & Bruylants, G. (2025). Repurposing Lateral Flow Assays as a Versatile and Rapid Characterization Tool for Bioconjugation of Nanoparticles. *Bioconjugate chemistry*, 36(3), 531-539. doi:10.1021/acs.bioconjchem.4c00589

Lambeets, S., Cardwell, N., Onyango, I., Wirth, M. G., Vo, E., Wang, Y., Gaspard, P., Ivory, C., Perea, D. D., Visart de Bocarmé, T., & McEwen, J.-S. (2025). Elucidating the Role of Electric Fields in Fe Oxidation via an Environmental Atom Probe. *Angewandte Chemie*, e202423434 11. doi:https://doi.org/10.1002/anie.202423434

Lucena, R. M., Pontès, J., Brau, F., De Wit, A., & Mangiavacchi, N. (2025). Effect of an interface undulation on convective dissolution of CO<sub>2</sub>. *Advances in water resources*, 197, 104904. doi:10.1016/j.advwatres.2025.104904

Gicevičius, M., Gong, H., Turetta, N., Wood, W., Volpi, M., Geerts, Y., Samori, P., & Siringhaus, H. (2025). Probing Out-Of-Plane Charge Transport in Organic

Semiconductors Using Conductive Atomic Force Microscopy. *Advanced materials*, 37(7), 2418694. doi:10.1002/adma.202418694

Coheur, P., Van Damme, M., Clarisse, L., Whitburn, S., Franco, B., & Clerbaux, C. (2025). An Eye in the Sky — Tracking Ammonia Pollution From Space. *Frontiers for Young Minds*, 13. doi:10.3389/frym.2025.1511863

Beaudor, M., Hauglustaine, D., Lathiere, J., Van Damme, M., Clarisse, L., & Vuichard, N. (2025). Evaluating present-day and future impacts of agricultural ammonia emissions on atmospheric chemistry and climate. *Atmospheric chemistry and physics*, 25(4), 2017-2046. doi:10.5194/acp-25-2017-2025

Ruiz-Molina, S., Ricci, S., Martínez-Domingo, C., Ortiz-Aguayo, M. J., Pfattner, R., Schweicher, G., Geerts, Y., Salzillo, T., & Mas-Torrent, M. (2025). Influence of mechanical stress on flexible electrolyte-gated organic field-effect transistors. *Journal of Materials Chemistry C*, 13(9), 4807-4815. doi:10.1039/D4TC05403B

Bigaj, A., Budroni, M., & Rongy, L. (2025). Exploring buoyancy-driven effects in chemo-hydrodynamic oscillations sustained by bimolecular reactions. *PCCP. Physical chemistry chemical physics*, 27, 1008. doi:10.1039/d4cp03617d

Marais, E. E., Van Damme, M., Clarisse, L., Wiedinmyer, C., Murphy, K., & Van Der Werf, G. G. (2025). Subtropical southern Africa fire emissions of nitrogen oxides and ammonia obtained with satellite observations and GEOS-Chem. *Environmental Science: Atmospheres*. doi:10.1039/d5ea00041f

Brabant, M., Demaude, A., Mertens, J., Fosseur, N., Remy, A., Fall, S. M., Petitjean, D., Segato, T., Godet, S., & Reniers, F. (2025). New perspectives of atmospheric pressure dielectric barrier discharges for the deposition of thin films: From uncontrolled amorphous plasma-polymer layers to chemically patterned and crystalline (in)organic coatings. *Surface & coatings technology*, 496, 131710. doi:10.1016/j.surfcoat.2024.131559

## 2024

Carpentier, R., Testa, C., Pappalardo, A., Jabin, I., & Bartik, K. (2024). Binding of Bioactive Ammonium Ions in Water with a Cavity-Based Selectivity: Water Solubilization versus Micellar Incorporation. *Journal of organic chemistry*, 90(1), 682-690. doi:10.1021/acs.joc.4c02610

Annibaleto, J., Jacob, C., Thilmany, P., Loison, A., Escorihuela, J., & Evano, G. (2024). Mechanistic Studies on the Gold-Catalyzed Intramolecular Hydroalkylation of Ynamides to Indenes. *ACS Omega*, 9, 51690-51700. doi:10.1021/acsomega.4c09973

Stergiou, Y., Perrakis, A., De Wit, A., & Schwarzenberger, K. (2024). Flow-driven pattern formation during coacervation of xanthan gum with a cationic surfactant. *PCCP. Physical chemistry chemical physics*, 10.1039/D4CP01055H.

Ornelas Guevara, R., Diercks, B. P., Guse, A. H., & Dupont, G. (2024). Ca<sup>2+</sup> puffs underlie adhesion-triggered Ca<sup>2+</sup> microdomains in T cells. *Biochimica et biophysica acta. Molecular cell research*, 1871(8), 119808. doi:10.1016/j.bbamcr.2024.119808

Cacciani, P., #ermák, P., Vander Auwera, J., & Campargue, A. (2024). The ammonia absorption spectrum between 3900 and 6350 cm<sup>-1</sup>: <sup>15</sup>NH<sub>3</sub> contribution and a recommended list for natural ammonia. *Journal of quantitative spectroscopy & radiative transfer*, 329, 109148. doi:10.1016/j.jqsrt.2024.109148

Zhai, S., Jacob, D. D., Franco, B., Clarisse, L., Coheur, P., Shah, V. V., Bates, K. K., Lin, H., Dang, R., Sulprizio, M. P., Huey, L. G., Moore, F. A., Jaffe, D. D., & Liao, H. (2024). Transpacific Transport of Asian Peroxyacetyl Nitrate (PAN) Observed from Satellite: Implications for Ozone. *Environmental science & technology*. doi:10.1021/acs.est.4c01980

Kruse, N., & Visart de Bocarmé, T. (2024). The Dynamic Atom-Probe: Past, Present, and Perspectives. *Microscopy and microanalysis*, 30(6), 1100-1108. doi:10.1093/mam/ozae115

Venkateshvaran, D., Cervantes, M. T. R., Spalek, L. L., Hwang, K.-H., Pudzs, K., Rutkis, M., Schweicher, G., & Padilla-Longoria, P. (2024). Understanding the Thermoelectric Transport Properties of Organic Semiconductors through the Perspective of Polarons. *Advanced devices & instrumentation*, 5, a.0067. doi:10.34133/adi.0067

Suzuki, R. X., Arai, S., Masumo, T., Nagatsu, Y., & De Wit, A. (2024). Opposite effects of a reaction-driven viscosity decrease on miscible viscous fingering depending on the injection flow rate. *Journal of fluid mechanics*, 1001, A25.

Izumoto, S., Escala, D. M., Heyman, J., Le Borgne, T., & De Wit, A. (2024). Control of Chemical Waves by Fluid Stretching and Compression. *Physical review letters*, 133, 218001.

Negrojevic, L., Comolli, A., Brau, F., & De Wit, A. (2024). Frozen autocatalytic fronts in a radial flow. *Physical Review Research*, 6, L042044. doi:10.1103/PhysRevResearch.6.L042044

Carpentier, R., Lavendomme, R., Colasson, B., Bartik, K., & Jabin, I. (2024). Development of a water-soluble ouroboros-like calix[6]arene-trisimidazole-based ligand for enhanced binding of zinc. *Dalton transactions*, 54, 1052-1062. doi:10.1039/D4DT03158J

Catalano, L., Sharma, R., Karothu, D. P., Saccone, M., Elishav, O., Chen, C., Juneja, N., Volpi, M., Jouclas, R., Chen, H.-Y., Liu, J., Liu, G., Gopi, E., Ruzié, C., Klimis, N., Kennedy, A. R., Vanderlick, K., McCulloch, I., Ruggiero, M. T., Naumov, P., Schweicher, G., Yaffe, O., & Geerts, Y. (2024). Toward On-Demand Polymorphic Transitions of Organic Crystals via Side Chain and Lattice Dynamics Engineering. *Journal of the American Chemical Society*, 146(46), 31911-31919. doi:10.1021/jacs.4c11289

Gonzalez-Casal, S., Jouclas, R., Arbouch, I., Geerts, Y., van Dyck, C., Cornil, J., & Vuillaume, D. (2024). Thermoelectric Properties of Benzothieno-Benzothiophene Self-Assembled Monolayers in Molecular Junctions. *The Journal of Physical Chemistry Letters*, 15(46), 11593-11600. doi:10.1021/acs.jpcllett.4c02753

Dang, R., Jacob, D., Zhai, S., Yang, L. H., Pendergrass, D. C., Coheur, P., Clarisse, L., Van Damme, M., Choi, J.-S., Park, J.-S., Liu, Z., Xie, P., & Liao, H. (2024). A Satellite-Based Indicator for Diagnosing Particulate Nitrate Sensitivity to Precursor

Emissions: Application to East Asia, Europe, and North America. *Environmental science & technology*, 58(45), 20101-20113. doi:10.1021/acs.est.4c08082

Franco, B., Clarisse, L., Van Damme, M., Hadji-Lazaro, J., Clerbaux, C., & Coheur, P. (2024). Satellite-Based Identification of Large Anthropogenic NMVOC Emission Sources. *Journal of Geophysical Research: Atmospheres*, 129(22). doi:10.1029/2024JD042047

Zhang, T., Cepauskas, A., Nadieina, A., Thureau, A., Coppieters, T., Wallant, K., Martens, C., Lim, D. C., Garcia-Pino, A., & Laub, M. T. (2024). A bacterial immunity protein directly senses two disparate phage proteins. *Nature (London)*, 635(8039), 728-735. doi:10.1038/s41586-024-08039-y

Torres Morillo, D., Bernal, M., & Ustarroz Troyano, J. (2024). Deciphering Spatially-Resolved Electrochemical Nucleation and Growth Kinetics by Correlative Multimicroscopy. *Small methods*. doi:10.1002/smt.202401029

Moya, C., Brion, N., Troian-Gautier, L., Jabin, I., & Bruylants, G. (2024). Robust calix[4]arene-polyethyleneimine coated iron oxide nanoparticles for enhanced recovery of gold and platinum chloride complexes. *Environmental Science: Nano*, 12, 777-790. doi:10.1039/D4EN00408F

Betnga, T. W., Perrin, A., Manceron, L., Vander Auwera, J., Hindle, F., Cuisset, A., Mouret, G., Bocquet, R., Roy, P., Landsheere, X., Voute, A., & Kwabia-Tchana, F. (2024). New line list for the #4 bands of the trans (790.117 cm<sup>-1</sup>) and cis (851.943 cm<sup>-1</sup>) conformers of nitrous acid (HONO): Accurate positions and absolute intensities. *Journal of quantitative spectroscopy & radiative transfer*, 325, 109082. doi:10.1016/j.jqsrt.2024.109082

Schweicher, G., Das, S., Resel, R., & Geerts, Y. (2024). On the importance of crystal structures for organic thin film transistors. *Acta Crystallographica Section C Structural Chemistry*, 80(10), 601-611. doi:10.1107/S2053229624008283

Zeng, Z.-C., Franco, B., Clarisse, L., Lee, L., Qi, C., & Lu, F. (2024). Observing a Volatile Organic Compound From a Geostationary Infrared Sounder: HCOOH From FengYun-4B/GIIRS. *Journal of Geophysical Research: Atmospheres*, 129(19), e2024JD041352. doi:10.1029/2024JD041352

Sun, W., Tack, F., Clarisse, L., Schneider, R., Stavrakou, T., & Van Roozendael, M. (2024). Inferring Surface NO<sub>2</sub> Over Western Europe: A Machine Learning Approach With Uncertainty Quantification. *Journal of Geophysical Research: Atmospheres*, 129(20), e2023JD040676. doi:10.1029/2023JD040676

Bertin, T., & Vander Auwera, J. (2024). CO<sub>2</sub> collision-induced line parameters for the #3 band of 12CH<sub>4</sub> measured using a hard-collision speed-dependent line shape and the relaxation matrix formalism. *Journal of quantitative spectroscopy & radiative transfer*, 324, 109069. doi:10.1016/j.jqsrt.2024.109069

Fathallah, B. O., Vander Auwera, J., Tudorie, M., Boudon, V., Richard, C., Loroño-Gonzalez, M. M., Aroui, H., & Rotger, M. (2024). Analysis of the rotationally-resolved 3.3

$\mu\text{m}$  region of  $\text{C}_2\text{H}_4$  in natural isotopic abundance. *Journal of quantitative spectroscopy & radiative transfer*, 323, 108995. doi:10.1016/j.jqsrt.2024.108995

Zveny, J., Remy, A., Nickmilder, P., Delchambre, A., Nonclercq, A., Leclère, P., & Reniers, F. (2024). Evaluating Cold Atmospheric Plasma for Endoscope Decontamination: Feasibility and Impact Analysis on PTFE Surfaces. *Plasma medicine*, 14(2), 1-18.

Lepeintre, V., Camerel, F., Lagrost, C., Retout, M., Bruylants, G., & Jabin, I. (2024). Calixarene-coated gold nanorods as robust photothermal agents. *Nanoscale*, 16, 19692-19703. doi:10.1039/D4NR02296C

Tetenoire, A., Omelchuk, A., Malytskyi, V., Jabin, I., Lepeintre, V., Bruylants, G., Luo, Y., Fihey, A., Kepenekian, M., & Lagrost, C. (2024). Multipodal Au-C grafting of calix[4]arene molecules on gold nanorods. *Chemical science*, 15, 14677-14684. doi:10.1039/D4SC02355B

Bistri, D., Arretche, I., Lessard, J. J., Zakoworotny, M., Vyas, S., Rongy, L., Gómez-Bombarelli, R., Moore, J. J., & Geubelle, P. (2024). A Mechanism-Based Reaction-Diffusion Model for Accelerated Discovery of Thermoset Resins Frontally Polymerized by Olefin Metathesis. *Journal of the American Chemical Society*, 146(31), 21877-21888. doi:10.1021/jacs.4c06527

Doneux, T., Sorgho, A., Soma, F., Rayee, Q., & Bougouma, M. (2024). Electrodeposition in deep eutectic solvents: the “obvious”, the “unexpected” and the “wonders”. *Molecules*, 29, 3439. doi:10.3390/molecules29143439

Lambert, S., Carpentier, R., Lepeintre, M., Testa, C., Pappalardo, A., Bartik, K., & Jabin, I. (2024). Development of a Cone Homooxacalix[3]arene-Based Fluorescent Chemosensor for the Selective Detection of Biogenic Ammonium Ions in Protic Solvents. *Journal of organic chemistry*, 89(15), 10903-10911. doi:10.1021/acs.joc.4c01249

Gregori, G., Doneux, T., & Lim, J. (2024). Preparation and characterization of ion-exchanged Ni-Na- $\beta$ - $\text{Al}_2\text{O}_3$  and Fe-Na- $\beta$ - $\text{Al}_2\text{O}_3$  solid electrolytes for applications in liquid metals. *Solid state sciences*, 154, 107630. doi:10.1016/j.solidstatesciences.2024.107630

Darvot, C., Gosselin, B., Martin, F., Patskovsky, S., Jabin, I., Bruylants, G., Trudel, D., & Meunier, M. (2024). Multiplexed immunolabelling of cancer using bioconjugated plasmonic gold-silver alloy nanoparticles. *Nanoscale Advances*, 6, 4385-4393. doi:https://doi.org/10.1039/D4NA00052H

Soma, F., Nguyen, V. T., Bougouma, M., Djorf, O., Buess Herman, C., & Doneux, T. (2024). Gold electrochemistry in the acidic choline chloride-oxalic acid deep eutectic solvent. *Electrochimica acta*, 498, 144660. doi:10.1016/j.electacta.2024.144660

Gicevičius, M., James, A. M., Reicht, L., McIntosh, N., Greco, A., Fijahi, L., Devaux, F., Mas-Torrent, M., Cornil, J., Geerts, Y., Zojer, E., Resel, R., & Siringhaus, H. (2024). Impact of hydrophilic side chains on the thin film transistor performance of a benzothieno-benzothiophene derivative. *Materials Advances*, 5(15), 6285-6294. doi:10.1039/D4MA00594E

Bègue, N., Baron, A., Krysztofiak, G., Berthet, G., Kloss, C., Jégou, F., Khaykin, S., Ranaivombola, M., Millet, T., Portafaix, T., Dufлот, V., Keckhut, P., Vérèmes, H., Payen, G., Sha, M. K., Coheur, P., Clerbaux, C., Sicard, M., Sakai, T., Querel, R., Liley, B., Smale, D., Morino, I., Uchino, O., Nagai, T., Smale, P., Robinson, J. P., & Benchérif, H. (2024). Evidence of a dual African and Australian biomass burning influence on the vertical distribution of aerosol and carbon monoxide over the southwest Indian Ocean basin in early 2020. *Atmospheric chemistry and physics*, 24(13), 8031-8048. doi:10.5194/acp-24-8031-2024

Ramirez Avila, G., Kapitaniak, T., & Gonze, D. (2024). Dynamical analysis of a periodically forced chaotic chemical oscillator. *Chaos*, 34(7), 073154. doi:10.1063/5.0213913

Doneux, T., & Bizzotto, D. (2024). Editorial overview: Sensors and biosensors (2023): Addressing the challenges in building and characterizing electrochemical sensors. *Current opinion in electrochemistry*, 46, 101517. doi:10.1016/j.coelec.2024.101517

Vander Steen, J., Luhmer, M., Buess Herman, C., & Doneux, T. (2024). Electrochemical behavior of furfural, a bio-based building block, in the [BMPyrr][NTf<sub>2</sub>] ionic liquid. *Electrochimica acta*, 498, 144635. doi:10.1016/j.electacta.2024.144635

Simatos, D., Nikolka, M., Charmet, J., Spalek, L. L., Toprakcioglu, Z., Jacobs, I. E., Dimov, I. I., Schweicher, G., Lee, M. J., Fernández-Posada, C. C., Howe, D. J., Hakala, T. T., Roode, L. L., Pecunia, V., Sharp, T. H., Zhang, W., Alsufyani, M., McCulloch, I., Knowles, T. P. J., & Sirringhaus, H. (2024). Electrolyte-gated organic field-effect transistors with high operational stability and lifetime in practical electrolytes. *SmartMat*, 5, e1291. doi:10.1002/smm2.1291

Ma, M., Li, Y., Godefroid, M., Gaigalas, G., Li, J., Biero, J., Chen, C. Y., Wang, J., & Jönsson, P. (2024). Natural Orbitals and Targeted Non-Orthogonal Orbital Sets for Atomic Hyperfine Structure Multiconfiguration Calculations †. *Atoms*, 12(6), 30. doi:10.3390/atoms12060030

Pontisso, I., Ornelas Guevara, R., Chevet, E., Combettes, L., & Dupont, G. (2024). Gradual ER calcium depletion induces a progressive and reversible UPR signaling. *PNAS Nexus*, 3(6), pgae229. doi:10.1093/pnasnexus/pgae229

Crippa, M., Guizzardi, D., Pagani, F., Schiavina, M., Melchiorri, M., Pisoni, E., Graziosi, F., Munteanu, M., Maes, J., Dijkstra, L., Van Damme, M., Clarisse, L., & Coheur, P. (2024). Insights into the spatial distribution of global, national, and subnational greenhouse gas emissions in the Emissions Database for Global Atmospheric Research (EDGAR v8.0). *Earth System Science Data*, 16(6), 2811-2830. doi:10.5194/essd-16-2811-2024

Fernandes, C., Franceschini, F., Smets, J., Deschaume, O., Rusli, N., Bartic, C., Ameloot, R., Baert, K., Ustarroz Troyano, J., & Taurino, I. (2024). A Fully-Bioresorbable Nanostructured Molybdenum Oxide-Based Electrode for Continuous Multi-Analyte Electrochemical Sensing. *Advanced Materials Interfaces*. doi:10.1002/admi.202400054

Stergiou, Y., Escala, D. M., Papp, P., Horváth, D., Hauser, M., Brau, F., De Wit, A., Tóth, Á., Eckert, K., & Schwarzenberger, K. (2024). Unraveling dispersion and buoyancy

dynamics around radial A + B # C reaction fronts: microgravity experiments and numerical simulations. *npj Microgravity*, 10(1), 53. doi:10.1038/s41526-024-00390-8

Vernier, J. P., Aubry, T. T., Timmreck, C., Schmidt, A., Clarisse, L., Prata, F., Theys, N., Prata, A., Mann, G., Choi, H., Carn, S., Rigby, R., Loughlin, S. C., & Stevenson, J. A. (2024). The 2019 Raikoke eruption as a testbed used by the Volcano Response group for rapid assessment of volcanic atmospheric impacts. *Atmospheric chemistry and physics*, 24(10), 5765-5782. doi:10.5194/acp-24-5765-2024

Mets, T., Kurata, T., Ernits, K., Johansson, M. J. O., Craig, S., Evora, G. M., Buttress, J., Odai, R., Coppieters T Wallant, K., Nakamoto, J., Shyrokova, L., Egorov, A., Doering, C. R., Brodiazhenko, T., Laub, M. T., Tenson, T., Strahl, H., Martens, C., Harms, A., Garcia-Pino, A., Atkinson, G. C., & Haurlyuk, V. (2024). Mechanism of phage sensing and restriction by toxin-antitoxin-chaperone systems. *Cell Host & Microbe*. doi:10.1016/j.chom.2024.05.003

Fernandes, C., Loukopoulos, V., Smets, J., Franceschini, F., Deschaume, O., Bartic, C., Ameloot, R., Ustarroz Troyano, J., & Taurino, I. (2024). Unraveling the Potential of a Nanostructured Tungsten–Tungsten Oxide Thin Film Electrode as a Bioresorbable Multichemical Wound Healing Monitor. *Advanced Materials Technologies*, 9(10). doi:10.1002/admt.202302007

Reinaud, O., Nyssen, N., Abudayyeh, A., Zhurkin, F., Aoun, P., Višnjevac, A., Colasson, B., & Jabin, I. (2024). TMPA#based Cavitory Cobalt (II) Funnel Complexes. *European Journal of Inorganic Chemistry*. doi:10.1002/ejic.202400228

Jacob, C., Annibaleto, J., Peng, J., Bai, R., Maes, B. U. W., Lan, Y., & Evano, G. (2024). Rhodium-Catalyzed Direct ortho-Arylation of Anilines. *Angewandte Chemie International Edition in English*, 63, e202403553. doi:10.1002/anie.202403553

Gillet, J., Geerts, Y., Rongy, L., & De Decker, Y. (2024). Differences in enantiomeric diffusion can lead to selective chiral amplification. *Proceedings of the National Academy of Sciences of the United States of America*, 121(17), e2319770121. doi:10.1073/pnas.2319770121

Franco, B., Clarisse, L., Theys, N., Hadji-Lazaro, J., Clerbaux, C., & Coheur, P. (2024). Pyrogenic HONO seen from space: Insights from global IASI observations. *Atmospheric chemistry and physics*, 24(8), 4973-5007. doi:10.5194/acp-24-4973-2024

Bernal, M., Torres Morillo, D., Parapari, S. S., Bertolucci Coelho, L., Delfosse, S., #eh, M., Rožman, K. Ž., Šturm, S., & Ustarroz Troyano, J. (2024). A microscopic view on the electrochemical deposition and dissolution of Au with scanning electrochemical cell microscopy – Part II: potentiostatic dissolution and correlation with in-situ EC-TEM. *Electrochimica acta*, 144302. doi:10.1016/j.electacta.2024.144302

Boquet, V., Sauber, C., Beltran, R., Ferey, V., Rodier, F., Hansjacob, P., Theunissen, C., & Evano, G. (2024). Copper-Catalyzed Coupling between ortho-Haloanilines and Lactams/Amides: Synthesis of Benzimidazoles and Telmisartan. *Journal of organic chemistry*, 89, 5469-5479. doi:10.1021/acs.joc.3c02905

Ferrari, E., Pandolfi, L., Schweicher, G., Geerts, Y., Salzillo, T., Masino, M., & Venuti, E. (2024). Structural Order and Thermal Behavior of Ph-BTBT-10 Monolayer Phases. *The Journal of Physical Chemistry Part C: Nanomaterials and Interfaces*, 128(10), 4258-4264. doi:10.1021/acs.jpcc.3c07365

Gonze, D., & Dupont, G. (2024). Computational insights in cell physiology. *Frontiers in systems biology*, 4, 1335885.

Romero Campos, H. H., Dupont, G., & Gonzalez-Velez, V. (2024). STIM1 regulates pancreatic  $\beta$ -cell behaviour: A modelling study. *Biosystems*, 237, 105138. doi:10.1016/j.biosystems.2024.105138

Das, S., Catalano, L., & Geerts, Y. (2024). Gas Release as an Efficient Strategy to Tune Mechanical Properties and Thermoresponsiveness of Dynamic Molecular Crystals. *Small*. doi:10.1002/smll.202401317

Gonze, D. (2024). Coupling between the cell cycle and the circadian clock: Lessons from computational modelling and consequences for cancer chronotherapy. *Current opinion in systems biology*, 37, 100507. doi:10.1016/j.coisb.2024.100507

Brabant, M., Demaude, A., Zveny, J., Remy, A., Segato, T., Petitjean, D., Delplancke, M.-P., & Reniers, F. (2024). Spatially differentiated crystalline inorganic coatings deposited by an atmospheric pressure dielectric barrier discharge with immobilized filaments. *Journal of vacuum science & technology*, 42(2), 023008. doi:10.1116/6.0003268

Lepeintre, M., Champciaux, J., Colasson, B., & Jabin, I. (2024). Synthesis of C3v-Symmetrical 1,3,5-Tris-Protected Calix[6]arene-Based Molecular Platforms. *Journal of organic chemistry*, 89(6), 4210-4214. doi:10.1021/acs.joc.3c02790

Gosselin, B., Bruylants, G., & Jabin, I. (2024). Tailored Ultrastable Core-Shell Au@Ag Nanoparticles for Enhanced Colorimetric Detection in Lateral Flow Assays. *ACS Applied Nano Materials*, 7(6), 6169-6177. doi:10.1021/acsanm.3c06070

Zongo, I., Bougouma, M., & Moucheron, C. (2024). Impact d'outils didactiques sur une sensibilisation écocitoyenne au tri des déchets plastiques selon les polymères. *Les cahiers de l'ACAREF*, Vol. 6 TOME 1, 78-105.

Bigaj, A., Upadhyay, V., & Rongy, L. (2024). Thermal effects on chemically induced Marangoni convection around  $A + B \rightarrow C$  reaction fronts. *The Journal of Chemical Physics*, 160(6), 064705. doi:10.1063/5.0187785

Soro, L., Soma, F., Bougouma, M., Buess Herman, C., Parpal Gimenez, M., Ustarroz Troyano, J., & Doneux, T. (2024). Electrodeposition of tin, selenium and tin-selenium compound in the choline chloride-glycerol deep eutectic solvent. *Journal of solid state electrochemistry*, 28, 1509-1519. doi:10.1007/s10008-024-05807-8

Gerard, P., Guissart, C., & Evano, G. (2024). Copper-Catalyzed Direct alpha-Peroxylation of Nitrogen Heterocycles. *Arkivoc*, 5, 202312154. doi:10.24820/ark.5550190.p012.154

Zongo, I., Bougouma, M., & Moucheron, C. (2024). Education environnementale : implémentation du tri des déchets plastiques en classe de première au Burkina Faso. *Revue LES TISONS (en ligne)*, Numéro spécial 1, 515-544.

Zongo, I., Bougouma, M., & Moucheron, C. (2024). Évaluation des préconceptions liées à l'éducation à l'environnement et à la gestion des déchets comme prérequis à la formation des enseignants. *Collection Pluraxes/Mondes*, 2(4), 208-226.

Tchana Betnga, W., Hindle, F., Manceron, L., Vander Auwera, J., Cuisset, A., Mouret, G., Bocquet, R., Perrin, A., Roy, P., & Kwabia-Tchana, F. (2024). A new instrumentation for simultaneous terahertz and mid-infrared spectroscopy in corrosive gaseous mixtures. *Review of scientific instruments*, 95(1), 015114. doi:10.1063/5.0178449

Cacciani, P., Hermák, P., Votava, O., Vander Auwera, J., & Campargue, A. (2024). The ammonia absorption spectrum revisited between 5650 and 6350 cm<sup>-1</sup>. *Molecular Physics*, 122, e2256893.

Yang, Y., Shtukenberg, A. G., Zhou, H., Ruzié, C., Geerts, Y., Lee, S. S., & Kahr, B. (2024). Coherence in Polycrystalline Thin Films of Twisted Molecular Crystals. *Chemistry of materials*, 36(2), 881-891. doi:10.1021/acs.chemmater.3c02740

Gatsios, C., Dreher, M., Amsalem, P., Opitz, A., Jouclas, R., Geerts, Y., Witte, G., & Koch, N. (2024). Two Isomeric Thienoacenes in Thin Films: Unveiling the Influence of Molecular Structure and Intermolecular Packing on Electronic Properties. *The Journal of Physical Chemistry Part C: Nanomaterials and Interfaces*, 128(49), 21228-21236. doi:10.1021/acs.jpcc.4c06741

James, A. M., Gicevičius, M., Hofer, S., Schrode, B., Werzer, O., Devaux, F., Geerts, Y., Sirringhaus, H., & Resel, R. (2024). Thin film crystallization of oligoethylene glycol-benzothieno benzothiophene: Physical vapor deposition versus spin coating. *Journal of crystal growth*, 627, 127539. doi:10.1016/j.jcrysgro.2023.127539

Di Gioacchino, T., Clarisse, L., Noppen, L., Van Damme, M., Bauduin, S., & Coheur, P. (2024). Spatial and Temporal Variations of Thermal Contrast in the Planetary Boundary Layer. *Journal of Remote Sensing (United States)*, 28, 0142. doi:10.34133/remotesensing.0142

Remy, A., Zveny, J., Serra, T., Lakhoulfi, D., Bourgeois, A., Devière, J., Botteaux, A., Delchambre, A., Reniers, F., & Nonclercq, A. (2024). Pseudomonas aeruginosa biofilm decontamination and removal by Ar/H<sub>2</sub>O cold atmospheric plasma in endoscope-like tubing. *Journal of physics. D, Applied physics*, 58(7). doi:10.1088/1361-6463/ad9484

Gosselin, B., Retout, M., Jabin, I., & Bruylants, G. (2024). Development of a Peptide-based Lateral Flow Assay for the Detection of the Cancer Biomarker Mdm2. *Sensors & Diagnostics*, 3, 248-255. doi:10.1039/D3SD00253E

Smiljanic, M., Bleteau, P., Papageorgiou, A., Goffart, N., Adam, C., & Doneux, T. (2024). Introducing common oxazine fluorophores as new redox labels for electrochemical DNA sensors. *Bioelectrochemistry*, 155, 108582. doi:10.1016/j.bioelechem.2023.108582

Gregori, G., Tsisar, V., Doneux, T., & Lim, J. (2024). Electrochemical and metallographic characterization of Ni-NiO-NiBi<sub>3</sub> equilibrium in molten lead-bismuth eutectic. *Journal of nuclear materials*, 589, 154866. doi:10.1016/j.jnucmat.2023.154866

Fang, J., Van Laethem, S., Blanchard, N., & Evano, G. (2024). Ring-Closing Enyne Metathesis of Allylic and Propargylic Cyanamides. *Arkivoc*, 2, 202312098. doi:10.24820/ark.5550190.p012.098

Adaoudi, O., Le Bescont, J., Bruneau-Voisine, A., & Evano, G. (2024). Copper-Catalyzed Carbonylative Cross-Coupling of Alkyl Iodides with Alcohols and Sodium Hydroxide: Synthesis of Esters and Carboxylic Acids. *Synthesis*, 56, 668-676. doi:10.1055/a-2042-3417

Evano, G., & Theunissen, C. (2024). Copper-(Photo)Catalyzed Radical Reactions with Organic Halides. *Synlett*, 35, 485-499. doi:DOI: 10.1055/a-2095-5242