Liselotte Tinel

Researcher in atmospheric chemistry

°21 mai 1979, Belgian Prof. address: 941 rue C. Bourseul, 59500 Douai, FRANCE

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Experimental physical-chemist, focussed on the production and uptake of gasses at interfaces in the atmosphere, involving the characterization of the gas phase, condensed phase and their interface.

>20 authored peer-reviewed papers, 1 book chapter - 6 × 1st author - Scopus *H*-index: 13

RESEARCH EXPERIENCE:

Assistant Professor, IMT Nord Europe, Douai, FRANCE — *Nov 2020 – present*

- **Field and laboratory measurements** using mass spectrometry and optical techniques probing **emerging pollutants, in particular VOCs,** and their **interfacial reactivity**
- Currently (co-) supervising 1 post-doc and 3 PhD students
- Teaching subjects related to process engineering, thermodynamics and life cycle assessments and carbon footprints. Coordination of a teaching module.

Multiple collaborations with national (CSTB, Université de Lille,..) and international groups (IIMT Pune, India; INU, Incheon, Korea, Plymouth Marine Laboratory, U.K., University of Shanghai, China…)

Post-doctoral research associate, Wolfson Atmospheric Chemistry Laboratories, University of York, York, U.K. — *Jul 2016 – Oct. 2020*

Supervisor: Prof. L. Carpenter - lucy.carpenter@york.ac.uk – tel: +44 (0)1904 324 588

- **Laboratory experiment** using a range of spectroscopic, spectrometric and physical measurement techniques investigating ozone uptake and VOC emissions
- **Participation in and coordination of several field campaigns including an on-going long-term (12 months) sampling campaign** of seawater, surface microlayer and measurement of gasses

Supervision of 5 master students (5 months) and **3 summer students** (6 weeks), **multiple collaborations** (IIMT & NCPOR, India; Plymouth Marine Laboratory, U.K.; University of Leicester, U.K.)

PhD, IRCELYON, CNRS, Université de Lyon 1, Lyon, France — *Oct 2012-Dec 2015*

Supervisors : C. George - christian.george@ircelyon.univ-lyon1.fr - tel: +33 (0)437 423 681
S. Dumas – stephane.dumas@univ-lyon1.fr – tel: +33 (0)472 692 082

- Using spectroscopy techniques and high-resolution mass spectrometry to better understand **interfacial photochemical reactions**

Multiple collaborations. **Teaching assistant** at Université de Lyon 1 concurrent with PhD

EDUCATION:

Université de Provence Aix-Marseille I, Marseille, France — *2009-2012*

Master in Environmental Sciences, specialization of Analytical and Reactional Chemistry and Modelling of the Environment – "mention Bien"/ with honours

Bachelor in General Biology — *2002-2008*

AWARDS AND GRANTS :

- Currently involved as PI or Co-PI in 6 internal and national research projects among which:
  - SHIPAIR (ANR - 400 k€) on the characterisation of shipping emissions and their influence on coastal air quality, through improved inventories and small-scale modelling (Co-PI).
  - DEMELER (IMT – 90 k€) on the fate of microplastics in surface environments: state of the art, inventory and reactivity (PI).

    - DYMITRIA (ADEME/OFB – 250 k€) : on the transfer of microplastics in different compartments of the environment (air, water, soil) (Co-PI)
    - EPISODE (ADEME – 250 k€) on the sources and fate of microplastics in indoor air (PI)
- ASAFIR travel grant awarded by YESI, UoY, for continued collaboration with INGM in Cape Verde, Jun 2019 - £2700
- Travel grant from IGAC to participation the *13th ICACGP Symposium, 13th IGAC Science Conference* in Natal, Bresil, Sept 2014 - $900
- 2nd price of the best presentation at Journée Scientifique de IRCELYON, Lyon, France, Oct 2013 - 250€

Memberships and commissions of trust :

- Elected member of the Early Career Scientist Committee of SOLAS (Surface Ocean Lower Atmosphere Studies, https://www.solas-int.org/ecs-members.html)
- Jan 2022 – Dec 2023: Overseas visiting fellow to Shanghai University, China
- Member of European Geophysical Union, International Society of Indoor Air Quality and Climate…
- Reviewer for international journals (Env. Sci & Tech., Env. Sci & Tech. Letters, J. Geophys. Res. - Atmos.) and member of the early career editorial board of Env. Sci. & Tech.: Air

Selected publications (peer reviewed):

(1) Carpenter, L. J.; Chance, R. J.; Sherwen, T.; Adams, T. J.; Ball, S. M.; Evans, M. J.; Hepach, H.; Hollis, L. D. J.; Hughes, C.; Jickells, T. D.; Mahajan, A.; Stevens, D. P.; Tinel, L.; Wadley, M. R. Marine Iodine Emissions in a Changing World. *Proc. R. Soc. A Math. Phys. Eng. Sci.* **2021**, *477* (2247). https://doi.org/10.1098/RSPA.2020.0824.

(2) Chance, R.; Tinel, L.; Sarkar, A.; Sinha, A. K.; Mahajan, A. S.; Chacko, R.; Sabu, P.; Roy, R.; Jickells, T. D.; Stevens, D. P.; Wadley, M.; Carpenter, L. J. Surface Inorganic Iodine Speciation in the Indian and Southern Oceans From 12°N to 70°S. *Front. Mar. Sci.* **2020**, *7*, 621. https://doi.org/10.3389/fmars.2020.00621.

(3) Tinel, L.; Adams, T.; Hollis, L.; Bridger, A.; Chance, R.; Ward, M.; Ball, S.; Carpenter, L. J. Influence of the Sea Surface Microlayer on Oceanic Iodine Emissions. *Environ. Sci. Technol. 54* (20), **2020**, 13228–13237. https://doi.org/10.1021/acs.est.0c02736.

(4) Wadley, M. R.; Stevens, D. P.; Jickells, T. D.; Hughes, C.; Chance, R.; Hepach, H.; Tinel, L.; Carpenter, L. J. A Global Model for Iodine Speciation in the Upper Ocean. *Global Biogeochem. Cycles*, 34 (9), **2020**, https://doi.org/10.1029/2019GB006467.

(5) Inamdar, S.; Tinel, L.; Chance, R.; Carpenter, L.; Sabu, P.; Chacko, R.; Tripathy, S.; Kerkar, A.; Sinha, A.; Bhaskar, P. V.; Sarkar, A.; Roy, R.; Sherwen, T.; Cuevas, C.; Saiz-Lopez, A.; Ram, K.; Mahajan, A. Estimation of Reactive Inorganic Iodine Fluxes in the Indian and Southern Ocean Marine Boundary Layer. *Atmos. Chem. Phys.* **2020**, *2020*, 1–57. https://doi.org/10.5194/acp-2019-1052.

(6) Sherwen, T.; Chance, R. J.; Tinel, L.; Ellis, D.; Evans, M. J.; Carpenter, L. J. A Machine-Learning-Based Global Sea-Surface Iodide Distribution. *Earth Syst. Sci. Data* **2019**, *11* (3), 1239–1262. https://doi.org/10.5194/essd-11-1239-2019.

(7) Mahajan, A. S.; Tinel, L.; Sarkar, A.; Chance, R.; Carpenter, L. J.; Hulswar, S.; Mali, P.; Prakash, S.; Vinayachandran, P. N. Understanding Iodine Chemistry Over the Northern and Equatorial Indian Ocean. *J. Geophys. Res. Atmos.* **2019**, *124* (14), 8104–8118. https://doi.org/10.1029/2018JD029063.

(8) Alpert, P. A.; Ciuraru, R.; Rossignol, S.; Passananti, M.; Tinel, L.; Perrier, S.; Dupart, Y.; Steimer, S. S.; Ammann, M.; Donaldson, D. J.; George, C. Fatty Acid Surfactant Photochemistry Results in New Particle Formation. *Sci. Rep.* **2017**, *7* (1), 12693. https://doi.org/10.1038/s41598-017-12601-2

(9) Tinel, L.; Rossignol, S.; Bianco, A.; Passananti, M.; Perrier, S.; Wang, X.; Brigante, M.; Donaldson, D. J.; George, C. Mechanistic Insights on the Photosensitized Chemistry of a Fatty Acid at the Air/Water Interface. *Environ. Sci. Technol. 50* (20), **2016,** 11041–11048. https://doi.org/10.1021/acs.est.6b03165.

(10) Rossignol, S.; Tinel, L.; Bianco, A.; Passananti, M.; Brigante, M.; Donaldson, D. J.; George, C. Atmospheric Photochemistry at a Fatty Acid-Coated Air-Water Interface. *Science* **2016**, *353* (6300), 699–702. https://doi.org/10.1126/science.aaf3617.