

LIST OF PUBLICATIONS

Helsinki 19.8.2025

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A. Peer-reviewed scientific articles

1. Boyer, M., Quéléver, L., Brasseur, Z., McManus, B., Herndon, S., Agnese, M., Nelson, D., Roscioli, J., Weis, F., Sel, S., Marinovich, G. L., Quarín, F. J., Buchholz, A., Xavier, C., Perchivale, P. J., Kerminen, V.-M., Kulmala, M., Petäjä, T., He, X.-C., Sofieva-Rios, S., **Timonen, H.**, Aurela, M., Barreira, L., Virkkula, A., Asmi, E., Worsnop, D., and Sipilä, M.: Penguin guano is an important source of climate-relevant aerosol particles in Antarctica, *Communications Earth & Environment*, 6, 368, <https://doi.org/10.1038/s43247-025-02312-2>, 2025.
2. Elomaa, J. T., Luoma, K., Harni, S. D., Virkkula, A., **Timonen, H.**, and Petäjä, T.: The applicability and challenges of black carbon sensors in monitoring networks, *Aerosol Research*, 3, 293–314, <https://doi.org/10.5194/ar-3-293-2025>, 2025.
3. Martinmäki, T., **Timonen, H.**, Saarikoski, S., Niemi, J., Sillanpää, M.: Plastic and Rubber Polymers in Urban PM10 by Pyrolysis–Gas Chromatography–Mass Spectrometry, accepted to *Analytical and Bioanalytical Chemistry*, ref. ABC-00402-2025.R1, 2025.
4. Lepistö, T., Aurela, M., Lintusaari, H., Silvonen, V., Markkula, L., Hoivala, J., Schins, R.P.F., **Timonen, H.**, Jalava, P., Saarikoski, S., Rönkkö, T., The regional and local sources of particle lung deposited surface area (LDSAal) and aerosol physical and chemical characteristics in a major Central European city, *Atmospheric Environment*, 2025, <https://doi.org/10.1016/j.atmosenv.2025.121181>.
5. Elsayed, M., Silvonen, V., Luoto, A., Lintusaari, H., Hakala, J., **Timonen, H.**, Harni, S. D., Rönkkö, T., and Sormunen, P.: How air cleaners, ventilation, and outdoor air pollution influence air quality in European hospitals: Case studies from Finland and Romania, *Building and Environment*, 112865, <https://doi.org/10.1016/j.buildenv.2025.112865>, 2025.
6. Savadkoohi, M., Gherras, M., Favez, O., Petit, J.-E., Rovira, J., Chen, G. I., Via, M., Platt, S., Aurela, M., Chazeau, B., de Brito, J. F., Riffault, V., Eleftheriadis, K., Flentje, H., Gysel-Beer, M., Hueglin, C., Rigler, M., Gregorić, A., Ivančić, M., Keernik, H., Maasikmets, M., Liakakou, E., Stavroulas, I., Luoma, K., Marchand, N., Mihalopoulos, N., Petäjä, T., Prevot, A. S. H., Daellenbach, K. R., Vodička, P., **Timonen, H.**, Tobler, A., Vasilescu, J., Dandocsi, A., Mbengue, S., Vratolis, S., Zografou, O., Chauvigné, A., Hopke, P. K., Querol, X., Alastuey, A., and Pandolfi, M.: Addressing the advantages and limitations of using Aethalometer data to determine the optimal Absorption Ångström Exponents (AAEs) values for eBC

source apportionment, Atmospheric Environment, 121121, <https://doi.org/10.1016/j.atmosenv.2025.121121>, 2025.

7. Teinilä, K., Saarikoski, S., Lintusaari, H., Lepistö, T., Marjanen, P., Aurela, M., Hellén, H., Tykkä, T., Lampimäki, M., Lampilahti, J., Barreira, L., Mäkelä, T., Kangas, L., Hatakka, J., Harni, S., Kuula, J., Niemi, J. V., Portin, H., Yli-Ojanperä, J., Niemelä, V., Jäppi, M., Lehtipalo, K., Vanhanen, J., Pirjola, L., Manninen, H. E., Petäjä, T., Rönkkö, T., and **Timonen, H.**: Measurement report: Wintertime aerosol characterization at an urban traffic site in Helsinki Finland, Accepted to *Atmos. Chem. Phys.* <https://doi.org/10.5194/egusphere-2024-2235>, 2025.
8. Lintusaari, H., Lepistö, T., Saarikoski, S., Salo, L., Silvonen, V., Barreira, L. M. F., Aurela, M., Hoivala, J., Markkula, L., Ondracek, J., Wahle, T., Vojtisek-Lom, M., Topinka, J., Schins, R. P. F., Jalava, P., **Timonen, H.**, Kanninen, K. M., and Rönkkö, T.: Importance of sub-23 nm particles in traffic environments: Particle number emission factors and extrathoracic deposition doses, *Environmental Pollution*, 369, 125835, <https://doi.org/10.1016/j.envpol.2025.125835>, 2025.
9. Karhu, J., Mikkonen, T., Kuula, J., Virkkula, A., Ikonen, E., Vainio, M., **Timonen, H.**, and Hieta, T.: Field-deployable cantilever-enhanced photoacoustic instrument for aerosol light absorption measurement at three wavelengths, *Aerosol Research*, 3, 113–124, <https://doi.org/10.5194/ar-3-113-2025>, 2025.
10. Kuula, J., Karhu, J., Mikkonen, T., Grahn, P., Virkkula, A., **Timonen, H.**, Hieta, T., and Vainio, M.: Validation of cantilever-enhanced photoacoustic particle-size-resolved light absorption measurement using nigrosin reference particles and Mie modelling, *Aerosol Research*, 3, 1–13, <https://doi.org/10.5194/ar-3-1-2025>, 2025.
11. Navarro-Barboza, H., Rovira, J., Obiso, V., Pozzer, A., Via, M., Alastuey, A., Querol, X., Perez, N., Savadkoohi, M., Chen, G., Yus-Díez, J., Ivancic, M., Rigler, M., Eleftheriadis, K., Vratolis, S., Zografou, O., Gini, M., Chazeau, B., Marchand, N., Prevot, A. S. H., Dallenbach, K., Ehn, M., Luoma, K., Petäjä, T., Tobler, A., Necki, J., Aurela, M., **Timonen, H.**, Niemi, J., Favez, O., Petit, J.-E., Putaud, J.-P., Hueglin, C., Pascal, N., Chauvigné, A., Conil, S., Pandolfi, M., and Jorba, O.: Characterization of brown carbon absorption in different European environments through source contribution analysis, *Atmos. Chem. Phys.*, 25, 2667–2694, <https://doi.org/10.5194/acp-25-2667-2025>, 2025.
12. Garcia-Marlès, M., Lara, R., Reche, C., Pérez, N., Tobías, A., Savadkoohi, M., Beddows, D., Salma, I., Vörösmarty, M., Weidinger, T., Hueglin, C., Mihalopoulos, N., Grivas, G., Kalkavouras, P., Ondracek, J., Zikova, N., Niemi, J. V., Manninen, H. E., Green, D. C., Tremper, A. H., Norman, M., Vratolis, S., Diapouli, E., Eleftheriadis, K., Gómez-Moreno, F. J., Alonso-Blanco, E., Wiedensohler, A., Weinhold, K., Merkel, M., Bastian, S., Hoffmann, B., Altug, H., Petit, J.-E., Acharja, P., Favez, O., Santos, S. M. D., Putaud, J.-P., Dinoi, A., Contini, D., Casans, A., Casquero-Vera, J. A., Crumeyrolle, S., Bourrianne, E., Poppel, M. V., Dreesen, F. E., Harni, S., **Timonen, H.**, Lampilahti, J., Petäjä, T., Pandolfi, M., Hopke, P. K., Harrison, R. M.,

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13. Das, S., Teinilä, K., **Timonen, H.**, Ikonen, E., and Laurila, T.: Real-time measurement of metals in submicron aerosols with particle-into-liquid sampler combined with micro-discharge optical emission spectroscopy, *Environmental Monitoring and Assessment*, 196, 1128, <https://doi.org/10.1007/s10661-024-13298-3>, 2024.
14. Rovira, J., Savadkoohi, M., Chen, G. I., Močnik, G., Aas, W., Alados-Arboledas, L., Artiñano, B., Aurela, M., Backman, J., Banerji, S., Beddow, D., Brem, B., Chazeau, B., Coen, M. C., Colombi, C., Conil, S., Costabile, F., Coz, E., de Brito, J. F., Eleftheriadis, K., Favez, O., Flentje, H., Freney, E., Gregorić, A., Gysel-Berl, M., Harrison, R., Hueglin, C., Hyvärinen, A., Ivančić, M., Kalogridis, A.-C., Keernik, H., Konstantinos, G., Laj, P., Liakakou, E., Lin, C., Listrani, S., Luoma, K., Maasikmets, M., Manninen, H. E., Marchand, N., dos Santos, S. M., Mbengue, S., Mihalopoulos, N., Nicolae, D., Niemi, J. V., Norman, M., Ovadnevaite, J., Petit, J.-E., Platt, S., Prévôt, A. S. H., Pujadas, M., Putaud, J.-P., Riffault, V., Rigler, M., Rinaldi, M., Schwarz, J., Silvergren, S., Teinemaa, E., Teinilä, K., **Timonen, H.**, Titos, G., Tobler, A., Vasilescu, J., Vratolis, S., Yttri, K. E., Yubero, E., Zíková, N., Alastuey, A., Petäjä, T., Querol, X., Yus-Díez, J., and Pandolfi, M.: A European aerosol phenomenology – 9: Light absorption properties of carbonaceous aerosol particles across surface Europe, *Environment International*, 109185, <https://doi.org/10.1016/j.envint.2024.109185>, 2024.
15. Barreira, L. M. F., Aurela, M., Saarikoski, S., Li, D., Teinilä, K., Virkkula, A., Niemi, J. V., Manninen, H. E., Pirjola, L., Petäjä, T., Rönkkö, T., and **Timonen, H.**: Characterizing winter-time brown carbon: Insights into chemical and light-absorption properties in residential and traffic environments, *Science of The Total Environment*, 955, 177089, <https://doi.org/10.1016/j.scitotenv.2024.177089>, 2024.
16. Harni, S. D., Aurela, M., Saarikoski, S., Niemi, J. V., Portin, H., Manninen, H., Leinonen, V., Aalto, P., Hopke, P. K., Petäjä, T., Rönkkö, T., and **Timonen, H.**: Source apportionment of particle number size distribution at the street canyon and urban background sites, *Atmos. Chem. Phys.*, 24, 12143–12160, <https://doi.org/10.5194/acp-24-12143-2024>, 2024.
17. Lepistö, T., Lintusaari, H., Salo, L., Silvonen, V., Barreira, L. M. F., Hoivala, J., Markkula, L., Niemi, J. V., Ondracek, J., Teinilä, K., Manninen, H. E., Saarikoski, S., **Timonen, H.**, Dal Maso, M., and Rönkkö, T.: Comparison of size distribution and electrical particle sensor measurement methods for particle lung deposited surface area (LDSA^{al}) in ambient measurements with varying conditions, *Aerosol Research*, <https://doi.org/10.5194/ar-2024-13>, 2024.
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21. Salo, L., Saarnio, K., Saarikoski, S., Teinilä, K., Barreira, L. M. F., Marjanen, P., Martikainen, S., Keskinen, H., Mustonen, K., Lepistö, T., Aakko-Saksa, P., Hakkarainen, H., Pfeiffer, T., Jalava, P., Karjalainen, P., Keskinen, J., Kuittinen, N., **Timonen, H.**, and Rönkkö, T.: Black carbon instrument responses to laboratory generated particles, Atmospheric Pollution Research, 102088, <https://doi.org/10.1016/j.apr.2024.102088>, 2024.
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B. Non-refereed scientific articles (selected abstracts)

1. Sanna Saarikoski, Minna Aurela, Luis M. Barreira, **Hilkka Timonen**, Jarkko V. Niemi, Hanna E. Manninen, Topi Rönkkö Changes in the composition of ambient organic aerosol related to traffic emissions during the last decade, European Aerosol Conference, 25.8-1.9.2024, Tampere, Finland.

2. J.V. Niemi, A. Kousa, H. Portin, A. Julkunen, M. Aurela, K. Teinilä, S. Saarikoski, T. Lepistö, T. Rönkkö, **H. Timonen**, and H.E. Manninen, Air quality trends and insights at street canyon supersite in Helsinki, European Aerosol Conference, 25.8-1.9.2024, Tampere, Finland.
3. K. Teinilä¹, J.V. Niemi², H. Portin², A. Julkunen², A. Kousa², T. Lepistö³, H.E. Manninen², T. Petäjä⁴, T. Rönkkö³, E. Saukko⁵, and **H. Timonen**¹. Particle number concentrations measured with AQ urban in Helsinki in two different environments, European Aerosol Conference, 25.8-1.9.2024, Tampere, Finland.
4. L.M.F. Barreira¹, M. Aurela¹, S. Saarikoski¹, D. Li¹, K. Teinilä¹, A. Virkkula¹, J.V. Niemi², H.E. Manninen², L. Pirjola³, T. Rönkkö⁴, **H. Timonen**¹. Chemical composition and light-absorption properties of brown carbon in residential and traffic environments, European Aerosol Conference, 25.8-1.9.2024, Tampere, Finland.
5. S.D. Harni, L. Johansson, J.V. Niemi, K. Luoma, A. Kousa, J.A. Casquero-Vera, T. Chang, H.E. Manninen, T. Petäjä, **H. Timonen**; Impact of noise barriers on traffic-related pollutant concentrations along a major highway, European Aerosol Conference, 25.8-1.9.2024, Tampere, Finland.
6. A. Kousa, J.V. Niemi, T. Mäkelä, A. Julkunen, S. Harni, V. Silvonen, K. Luoma, T. Rönkkö, **H. Timonen**, T. Petäjä⁴, and H.E. Manninen. The effect of a noise fence on air quality near a highway, 14th International conference on Air Quality, Helsinki, May 2024.
7. **H. Timonen**, N., P. Aakko-Saksa, P. Simonen, L. Barreira, S. Saarikoski, N. Kuittinen, M. Aurela, K. Lehtoranta, J. Keskinen, P. Karjalainen, M. Dal maso, J. Moldanova, L. Ntziachristos, T. Rönkkö: Secondary aerosol formation from shipping: influence of technology, fuel and exhaust after-treatment systems, International Aerosol Conference, Helsinki 13-17.5.2024.
8. M. Aurela, S. Saarikoski, K. Saarnio, K. Teinilä, J.V. Niemi and **H. Timonen**: sources of trace elements at urban environment in Finland, International Aerosol Conference, Helsinki 13-17.5.2024.
9. K. Kylämäki, M. Jäppi, L. Markkula, W. Honkisz, L. Salo, H. Lintusaari, T. Lepistö, P. Marjanen, K. Teinilä, L. Barreira, D. Li, L. Simon, M. Aurela, S. Saarikoski, S. Harni, A. Järvinen, H. Kuutti, R. Ashger, S. Farhoudian, S. Iyer, A. Kumar, T. Cervena, K. Honkova, M. Vojtisek-Lom, M. Pechout, M. Rissanen, A. Szczotka, P. Bielaczyc, J. Topinka, **H. Timonen**, P. Aakko-Saksa, T. Rönkkö, Seceondary Aerosol Emissions From Diesel and Natural Gas Vehicles, 27th ETH Nanoparticles Conference June 10-14, 2024, ETH Zurich.
10. Teemu Lepistö, Luis M.F. Barreira, Henna Lintusaari, Jarkko V. Niemi, Ville Silvonen, Laura Salo, Minna Aurela, **Hilkka Timonen**, Pasi Jalava, Sanna Saarikoski, Topi Rönkkö. TUBE Partners Contribution of local ultrafine particle emissions and regional background aerosol on lung deposited surface area (LDSA) of particles in Finland, Central Europe, India and Chile. European Aerosol Conference, Malaga 2023.
11. **H. Timonen**, S. Harni, M. Aurela, K. Teinilä, J.V. Niemi, L. Pirjola, T. Rönkkö, L.M.F. Barreira, S. Saarikoski. Characterizing size distributions of particles at the different urban environments, European Aerosol Conference, Malaga, 09/2023
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16. Aurela, M., Teinilä, K., Saarikoski, S., Julkunen, A., Niemi, J., Pirjola, L., **Timonen, H.** Sources of carbonaceous aerosol at the street canyon site over the years 2015-2022 in Helsinki, Finland. submitted to 13th International Conference on Carbonaceous Particles in the Atmosphere, Berkeley National Lab, July 9–12, 2023.
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