

1 Book chapters

Olenius, T., and Pakarinen, O.:

Nucleation: Formation of new particles from gases by molecular clustering.

In: Topping, D., and Bane, M. (ed.): *Introduction to Aerosol Modelling: From Theory to Code*, 223-258, John Wiley & Sons Ltd, ISBN 9781119625650, doi:10.1002/9781119625728 (2022)

2 Research papers

11. Svenhag, C., Sporre, M. K., Olenius, T., Yazgi, D., Blichner, S. M., Nieradzic, L. P., and Roldin, P.: Implementing detailed nucleation predictions in the Earth system model EC-Earth3.3.4: sulfuric acid—ammonia nucleation. *Geosci. Model Dev.* 17, 4923–4942, doi:10.5194/gmd-17-4923-2024 (2024)
10. Wollesen de Jonge, R., Xavier, C., Olenius, T., Elm, J., Svenhag, C., Hyttinen, N., Nieradzic, L., Sarnela, N., Kristensson, A., Petäjä, T., Ehn, M., and Roldin, P.: Natural marine precursors boost continental new particle formation and production of cloud condensation nuclei. *Environ. Sci. Technol.* 58, 10956–10968, doi:10.1021/acs.est.4c01891 (2024)
9. Xavier, C., Wollesen de Jonge, R., Jokinen, T., Beck, L., Sipilä, M., Olenius, T., and Roldin, P.: Role of iodine-assisted aerosol particle formation in Antarctica. *Environ. Sci. Technol.* 58, 7314–7324, doi:10.1021/acs.est.3c09103 (2024)
8. Yazgi, D., and Olenius, T.: J-GAIN v1.1: a flexible tool to incorporate aerosol formation rates obtained by molecular models into large-scale models. *Geosci. Model Dev.* 16, 5237–5249, doi:10.5194/gmd-16-5237-2023 (2023)
7. Olenius, T., Bergström, R., Kubečka, J., Myllys, N., and Elm, J.: Reducing chemical complexity in representation of new-particle formation: Evaluation of simplification approaches. *Environ. Sci.: Atmos.* 3, 552-567, doi:10.1039/D2EA00174H (2023)
6. Clusius, P., Xavier, C., Pichelstorfer, L., Zhou, P., Olenius, T., Roldin, P., and Boy, M.: Atmospherically Relevant Chemistry and Aerosol box model – ARCA box (version 1.2). *Geosci. Model Dev.* 15, 7257–7286, doi:10.5194/gmd-15-7257-2022 (2022)
5. Olenius, T., and Roldin, P.: Role of gas–molecular cluster–aerosol dynamics in atmospheric new-particle formation. *Sci. Rep.* 12, 10135, doi:10.1038/s41598-022-14525-y (2022)
4. Kontkanen, J., Stolzenburg, D., Olenius, T., Yan, C., Dada, L., Ahonen, L., Simon, M., Lehtipalo, K., and Riipinen, I.: What controls the observed size-dependency of the growth rates of sub-10 nm atmospheric particles? *Environ. Sci.: Atmos.* 2, 449-468, doi:10.1039/D1EA00103E (2022)
3. Becker, D., Heitland, J., Carlsson, P. T. M., Elm, J., Olenius, T., Tödter, S., Kharrazizadeh, A., and Zeuch, T.: Real-time monitoring of aerosol particle formation from sulfuric acid vapor at elevated concentrations

and temperatures.

Phys. Chem. Chem. Phys. 24, 5001-5013, doi:10.1039/D1CP04580F (2022)

2. Olenius, T., Heitto, A., Roldin, P., Yli-Juuti, T., and Duwig, C.:
Modeling of exhaust gas cleaning by acid pollutant conversion to aerosol particles.
Fuel 290, 120044, doi:10.1016/j.fuel.2020.120044 (2021)
1. Fang, X., Hu, M., Shang, D., Tang, R., Shi, L., Olenius, T., Wang, Y., Wang, H., Zhang, Z., Chen, S., Yu, X., Zhu, W., Lou, S., Ma, Y., Li, X., Zeng, L., Wu, Z., Zheng, J., and Guo, S.:
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Environ. Sci. Technol. Lett. 7, 388–394, doi:10.1021/acs.estlett.0c00270 (2020)