

Particle Numbers at the traffic site in Istanbul in the autumn

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Nano particles between 10 to 400 nm were measured at the traffic site in Istanbul using a NanoScan SMPS the autumn and winter seasons. The average number counts and contributions of each PN fraction (Nucleation: <30 nm, Aitken: 30-100 nm, Accumulation: 100-400 nm) are given in Figure 1. Generally, the wintertime PN levels were slightly higher than in the autumn. The contribution of ultrafine particles (UFPs) to the total numbers are almost same (90 % in the autumn, 89 % in the winter). These contributions are higher than Asian cities ~49 % [1] and approximately same in European cities [2]. Wu and Boor [3] analysed the particle number size distribution (PNSD) around the globe and reported that the PNSD in Europe, North America, Australia, and New Zealand are dominated by UFP, while in Asia they are dominated by the substantial contribution from the accumulation mode.

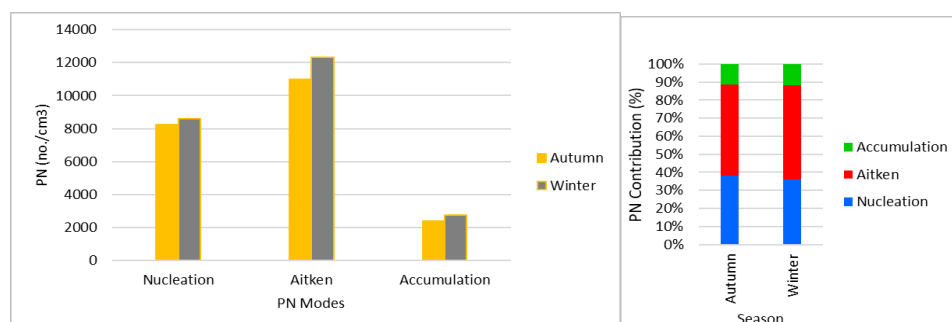


Figure 1: Particle numbers in the nucleation, Aitken and accumulation modes at the traffic site in Istanbul.

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[1] Şahin, Ü.A., et al. *Atmos. Chem. Phys.* **2022**, *22*, 5415–5433.

[2] Vu, T.V., et al., *Atmos. Environ.* **2015**, *122*, 114–132.

[3] Wu, T. and Boor, B. E., *Atmos. Chem. Phys.* **2021**, *21*, 8883–8914