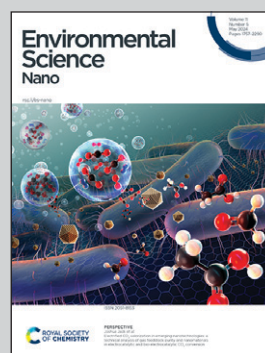


Featuring work from Professor Yong-Jun Kim's laboratory, Yonsei University, on the integrated microfluidic-based Ultrafine Water Condensation Particle Counter (UWCPC).

Integrated microfluidic-based ultrafine water condensation particle counter (UWCPC) for monitoring of airborne nanoparticle generation and growth mechanisms

To understand the mechanisms leading to the generation of new nanoparticles in detail, careful measurements of the nucleation and growth (<10 nm) of atmospheric nanoparticles are required. To achieve this, a microfluidic-based UWCPC capable of measuring under 10 nm sized nanoparticles was developed. The combined lab-on-PCB and 3D-printing technology used for UWCPC development is an optimized method for manufacturing low-cost miniaturized integrated microfluidic devices. This novel methodology provides a highly accurate, harmless, low-cost, miniaturized system for multipoint monitoring of airborne nanoparticle generation and growth mechanisms.

As featured in:



See Seong-Jae Yoo
and Yong-Jun Kim,
Environ. Sci.: Nano, 2024, **11**, 1891.