

## About this Journal

KONA Powder and Particle Journal is an international, interdisciplinary, and Diamond Open-Access journal that focuses on publishing articles on powder and particle science and technology.

This journal is a refereed scientific journal with an annual publication history dating back to 1983. It is distributed free of charge to researchers, members of the scientific community, universities, and research libraries worldwide by the Hosokawa Powder Technology Foundation, established by the late Mr. Masuo Hosokawa in 1991.

The Chinese character “粉” featured on the cover of the journal is pronounced as “KONA” in Japanese and signifies “Powder.” The calligraphy for this character is attributed to the late Mr. Eiichi Hosokawa, the founder of Hosokawa Micron Corporation.

KONA Powder and Particle Journal will cease publication with its issue in early 2026 (No. 43). Submissions close at the end of 2024. The articles published in this journal will remain available on J-STAGE.

### About the Cover

Airborne pathogens, including bacteria, viruses, and fungi, pose a significant threat to human health. Various mitigation strategies have been developed to combat this issue, such as air filtration, ventilation, UV irradiation, and photocatalytic oxidative disinfection (POD). The combination of passive air filtration and active POD techniques shows promise in effectively neutralizing airborne pathogens. However, the efficacy of POD is hindered by factors such as rapid charge recombination, limited understanding of pathogen-catalyst interactions, and short migration distances of reactive oxygen species (ROS). Therefore, it is essential to gain a cellular-level understanding of the fundamental principles and these limiting factors within POD systems. This knowledge will elucidate mechanistic pathways and guide the design of future catalyst particles aimed at improving air quality. This is discussed in detail on pp. 188–199.

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