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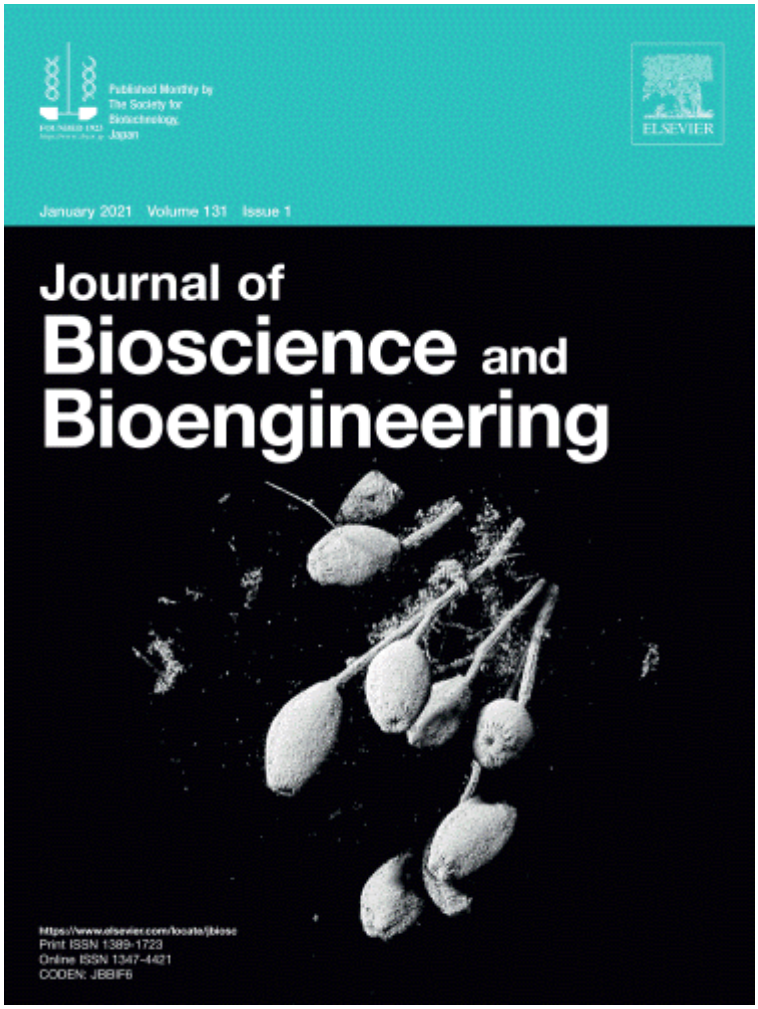

Eukaryotes are an important component of activated sludge and responsible for biological wastewater treatment. The treatment performance depends on the spatial distribution and resulting activity of the sludge microorganisms. However, the mechanism underlying the microbial assemblage formation is still unclear. Tomohiro Inaba and Tomoyuki Hori in the National Institute of Advanced Industrial Science and Technology (AIST) investigate the structure and function of microbial assemblage by confocal reflection microscopy and molecular ecological tools. This image shows a three-dimensional, high-resolution structure of an activated sludge portion composed mainly of ciliate-like eukaryotes. This non-destructive visualization contributes to a better understanding of sociomicrobiology in natural and engineered environments.

This image was taken by Tomohiro Inaba in Environmental Ecophysiological Research Group, Environmental Management Research Institute, AIST (**https://unit.aist.go.jp/env-mri/121env-eco/ja/index.html**)

⇒JBB Archive