

Accumulation of fine particles and microorganisms by electricity

Staff (Graduate School of Environmental Studies)

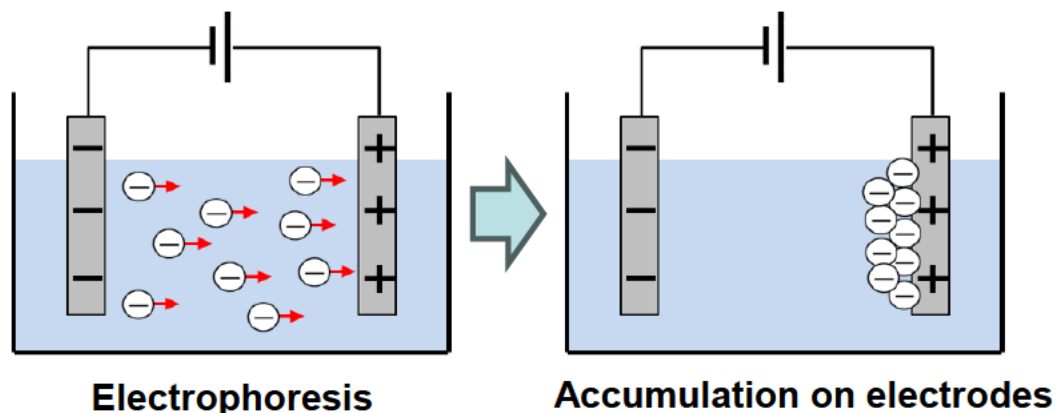
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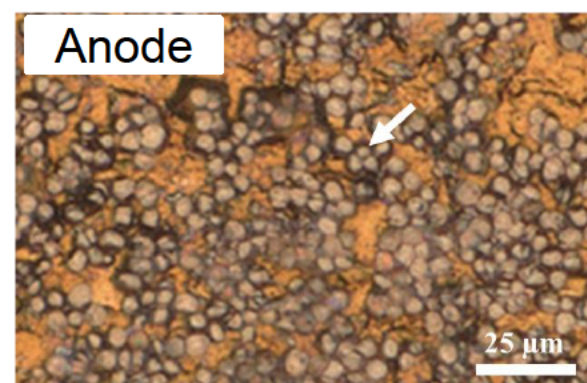
Starting date: 3 October, 17:00

Place: Aobayama Campus, Research Building of Graduate School of Environmental Studies, Room 505

When electrodes are placed in a solvent in which charged fine particles are dispersed and voltage is applied, the fine particles move to the electrode with the opposite pole, allowing the fine particles to be deposited on the electrode. Using this technique, it is possible to accumulate and form fine particles of ceramics, which is used as a process for manufacturing ceramics. On the other hand, microorganisms, which are living organisms, are also electrically charged in water and can be accumulated on the electrode through electrophoresis. If microorganisms can be accumulated on electrodes, applications such as bioreactors that utilize the functions of microorganisms can be expected. In this class, students will accumulate fine particles and microorganisms by electrophoresis, and learn about the electrical state of fine particles and microorganisms and their deposition by electrophoresis.



Electrophoretic deposition of fine particles and microorganisms onto electrodes.



**Microorganisms accumulated on the anode.
(Arrow: Yeast)**