

pH measurement of transparent exopolymeric particles secreted by oceanic diatoms

*Tasuku Akagi¹, Rin Ito², Takeshi Ishihara³

1. Department of Earth and Planetary Sciences, Kyushu University, 2. Department of Earth and Planetary Sciences, Faculty of Sciences, Kyushu University, 3. Department of Biology, Kyushu University

The beneficial roles of transparent exopolymer particles (TEP) to secreting diatoms are open to question. TEP are known to be secreted in a greater amount when the nutrient condition is poorer. They are more viscous at deficient nutrient conditions. In this study we measured pH of TEP using fluorescent indicators under a microscope. pH of TEP attached to living diatoms was found very low, whereas that from isolated TEP was moderate. In the presentation, the peripheral observation using microscopes, which seems relevant to physiological roles of diatomaceous TEP will also be shown and discussed.

Keywords: diatom, transparent exopolymer particles, pH