

Leipziger Meteorologisches Kolloquium

Dienstag, 31.01.2023, 14.00 Uhr, TROPOS, Seminarraum, Geb. 23.1 und
online: <https://us02web.zoom.us/j/83704915323?pwd=em0rVjBkTGUxUllzdHFBNIhkd0xZZz09>

Leipziger Meteorologisches Kolloquium

Prof. Dr. Anja Engel

GEOMAR, Helmholtz-Zentrum für Ozeanforschung Kiel

Extracellular polymeric substances and their potential role in air-sea exchange processes

Organic exopolymers are abundant in the marine environment. They are largely derived from microbial production, primarily photosynthesis, and can form three-dimensional hydrogels. Polysaccharide-rich hydrogels have been shown to accelerate coagulation and sinking of particles due to their high stickiness, potentially promoting the export of carbon to the deep sea. In addition, organic polymers accumulate at interfaces, such as the air-sea interface. Here they can affect gas exchange or be released into the atmosphere, contributing to the primary aerosol pool. This talk will provide an overview of exopolymeric substances in the ocean, their relationship to the diversity and ecology of microbial plankton, and give examples of their potential influence on processes at the sea surface and in the lower atmosphere.