



Oceanic DMS emission: a tiny yet climatically significant leak from tight biogeochemical cycling

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The hypothesis that oceanic plankton influence climate through the production and emission of the cloud precursor dimethylsulfide (DMS) has fostered intensive research on the cycle of biogenic sulfur in the ocean. Because of the cross-scale nature of the hypothesis, DMS research has to be conducted at multiple temporal and spatial scales and with a big load or multidisciplinarity. Over recent years, the incorporation of molecular tools for single-cell and genomic analyses of biogeochemical processes, the performance of ecosystem-scale perturbation experiments, the use of new-generation satellite sensors for global observation, and meta-analyses of global data have yielded important advances in the knowledge of the DMS cycle. In this talk I will present recent work conducted in our group on single-cell and community sulfur biogeochemistry, which advances our understanding of the controls of DMS emissions from the ocean and how they respond to environmental forcing.