## CONTENT

TERESTRIAL AND FRESHWATER SYSTEMS: EMISSIONS	
1. Biogenic Slfr Emissions: A Review	2
2. U.S. National Biogenic Sulfur Emissions Inventory	14
3. Variability in Biogenic Sulfur Emissions from Florida Wetlands	31
4. Synthesis and Emission of Hydrogen Sulfide by Higher Plants	44
5. Sulfur emissions from Roots of the Rain Forest Tree Stryphnodendron excelsum: Ecosystem	n,
Community, and Physiological Implications	58
TERRESTRIAL AND FRESHWATER SYSTEMS: TRANSFORMATION	NS
6. Origin of Hydrogen Sulfide in Freshwater Sediments	72
7. Sulfur Cycling in an Experimentally Acidified Seepage Lake	79
8. Reactivity of Sulfur Nucleophiles Toward Halogenated Organic Compounds in Natural Water	rs 101
THE OCEANS: DISTRIBUTIONS	
9. Distribution of Dimethyl Sulfide in the Oceans: A Review	140
10. Biogeochemicasl Cycling of Dimethyl Sulfide in Marine Environments	152
11. Dimethyl Sulfide Production in Marine Phytoplankton	167
12. Dimethyl Sulfide and (Dimethylsulfonio) propionate in European Coastal and Shelf Waters	183
THE OCEANS: BIOLOGICAL TRANSFORMATIONS	
13. Microbial Metabolism of Dimethyl Sulfide	202
14. Metabolism of Acrylate and 3-Mercaptopropionate: Decomposition Products of (Dimethylsu	ılfonio)
propionate in Anoxic Marine Sediments	222
15. Mechanistic Studies of Organosulfur (Thiol) Formation in Coastal Marine Sediments	231
16. Reduced Sulfur Compounds in the Marine Environment: Analysis by High-Performance Liq	luid
Chromatography	243
17. Enzymatic Steps and Dissimilatory Sulfur Metabolism by Whole Cells of Anoxyphotobacter	ria 262
18. Thermodynamics and Kinetics of Hydrogen Sulfide in Natural Waters	282
19. Hydrogen Sulfides in Oxic Seawater	314
THE ATMOSPHERE: DISTRIBUTION	
20. Dimethyl Sulfide and Hydrogen Sulfide in Marine Air	330
21. Distribution of Biogenic Sulfur Compounds in the Remote Southern Hemisphere	352
22. Sulfur Isotope Ratios: Tracers of Non-Sea Salt Sulfate in the Remote Atmosphere	367
23. Two Automated Methods for Measuring Trace Levels of Sulfur Dioxide Using Translation	
Reactions	380

THE	ATMOSPHERE:	GAS DHASE TR	ANSFORMATIONS
ппг	ALWIDSPERKE	UAN-PHANE IK	ANACUKIVIA LIUNA

24. Gas-Phase Atmospheric Oxidation of Biogenic Sulfur Compounds: A Review			
25. OH-Initiated Oxidation of Biogenic Sulfur Compounds: Kinetics and Mechanisms Under			
Atmospheric Conditions	424		
26. Mechanism of Atmospheric Oxidation of Sulfur Dioxide by Hydroxyl Radicals	437		
27. Atmospheric Reactions of CH3S Radicals	450		
28. Mechanisms for the Reaction of CH3S with NO2	459		
29. Impact of Halogen Oxides on Dimethyl Sulfide Oxidation in the Marine Atmosphere	464		
30. Fourier Transform IR Studies of the Reactions of Dimethyl Sulfoxide with OH, NO3, and			
CI Radicals	476		
31. North Sea Dimethyl Sulfide Emissions as a Source of Background Sulfate over Scandinavia:			
A Model	489		
32. The Uptake of Gases by Liquid Droplets: Sulfur Dioxide	504		
33. Rate of Reaction of Methanesulfonic Acid, Dimethyl Sulfoxide, and Dimethyl Sulfone with			
Hydroxyl Radical in Aqueous Solution	518		
34. Oxidation of Biogenic Sulfur Compounds in Aqueous Media: Kinetics and Environmental			
Implications	529		
Author Index	560		
Affiliation Index	560		
Subject Index	561		