1. Record Nr. UNINA9910979381003321

Autore	Stazione agraria sperimentale <San Michele all'Adige>
Titolo	Esperienze e ricerche : relazioni tecniche sull'attività sperimentale svolta nell'ottennio 1947-1954
Pubbl/distr/stampa	Trento, : Arti grafiche Saturnia, 1955
Descrizione fisica	XXXII, 390 p., [3] carte di tav. ripiegate : ill. ; 25 cm
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Locazione	FAGBC
Collocazione	A BOT 281
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Livello bibliografico	Monografia
Note generali	In testa al frontespizio: Stazione agraria sperimentale di S. Michele all'Adige (Trento).

2.

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Autore	Lens Piet
Titolo	Environmental Technologies to Treat Sulfur Pollution : Principles and Engineering
Pubbl/distr/stampa	London : , : IWA Publishing, , 2020 ©2020
ISBN	9781523162291 1523162295
Edizione	[1st ed.]
Descrizione fisica	1 online resource (545 pages)
Collana	Integrated Environmental Technology
Disciplina	363.7/3
Soggetti	Sulfur compounds Pollution control equipment
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	Cover -- Contents -- Preface -- List of Contributors -- Part I: Introduction -- Chapter 1: Environmental technologies to treat sulfur pollution: How to read this book? -- 1.1 INTRODUCTION -- 1.2 THE SULFUR CYCLE -- 1.3 SULFUR-RELATED PROBLEMS -- 1.4 TECHNOLOGIES TO DESULFURISE RESOURCES -- 1.5 TREATMENT OF POLLUTION BY SULFUROUS COMPOUNDS -- 1.6 USE OF SULFUR CYCLE CONVERSIONS IN ADVANCED WASTEWATER TREATMENT AND RESOURCE RECOVERY -- REFERENCES -- Part II: The Sulfur Cycle -- Chapter 2: The chemical sulfur cycle -- 2.1 INTRODUCTION -- 2.1.1 Oxidation states and redox potentials -- 2.1.2 Catenation of sulfur atoms -- 2.2 ELEMENTAL SULFUR AND HYDROPHOBIC SULFUR SOLS -- 2.2.1 Sulfur allotropes -- 2.2.2 Liquid sulfur -- 2.2.3 Gaseous sulfur -- 2.2.4 Sulfur sols from elemental sulfur (Weimarn sols) -- 2.3 SULFIDE AND POLYSULFIDES -- 2.3.1 Hydrogen sulfide and sulfide ions -- 2.3.2 Polysulfides and polysulfanes -- 2.3.3 Polysulfido complexes of transition metals and ion pairs -- 2.3.4 Oxidation of sulfide and polysulfide ions by metal ions -- 2.4 SULFITES, THIOSULFATES, DITHIONITES AND DITHIONATES -- 2.4.1 Sulfur dioxide, sulfite and disulfite ions as well as sulfurous and sulfonic acids -- 2.4.2 Thiosulfates and thiosulfuric acid -- 2.4.3 Dithionites and dithionous acid -- 2.4.4 Dithionates and dithionic acid -- 2.5 POLYTHIONATES

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5.2.2.2 Chemical microbiologically influenced corrosion (CMIC) -- 5.2.2.3 Electrical microbiologically influenced corrosion (EMIC) -- 5.2.2.4 SOB influenced corrosion -- 5.3 MIC OBSERVATIONS -- 5.3.1 MIC of concrete -- 5.3.1.1 Corrosion areas -- 5.3.1.2 Corrosion rates -- 5.3.1.3 Cement types -- 5.3.1.4 Siliceous and calcareous aggregates -- 5.3.2 MIC of carbon steel -- 5.3.2.1 Corrosion caused by SRB -- 5.3.2.2 Corrosion caused by SOB -- 5.4 MITIGATION AND CONTROL MEASURES -- 5.4.1 For MIC of concrete -- 5.4.1.1 Improving sewer design features -- 5.4.1.2 Controlling sulfide in the sewer environment -- 5.4.1.3 Improving the performance of concrete -- 5.4.2 For MIC of carbon steel -- 5.4.2.1 Biocides -- 5.4.2.2 Inhibitors -- 5.4.2.3 Biological inhibition -- 5.4.2.4 Periodic pigging/assuring cleanliness -- 5.4.2.5 Protective coatings -- 5.4.2.6 Cathodic protection -- REFERENCES -- Chapter 6: Biological treatment of organic sulfate-rich wastewaters -- 6.1 INTRODUCTION -- 6.2 ANAEROBIC TREATMENT OF SULFATE-RICH WASTEWATERS -- 6.2.1 Competition between sulfate-reducing bacteria and methanogenic archaea -- 6.2.2 Sulfide toxicity in anaerobic digestion -- 6.2.3 Techniques for quantification of sulfide toxicity on microbial populations involved in anaerobic digestion -- 6.2.3.1 Specific methanogenic activity/toxicity tests -- 6.2.3.2 Specific sulfidogenic activity/toxicity tests -- 6.2.3.3 Determination of kinetic growth properties of microbial populations -- 6.2.4 Sulfite toxicity -- 6.2.5 Cation inhibition in anaerobic digestion -- 6.3 PROCESS TECHNOLOGY OF TREATMENT OF ORGANIC SULFATE-RICH WASTEWATERS -- 6.3.1 Modelling the effect of sulfide toxicity in anaerobic digestion -- 6.3.2 Alleviating sulfide toxicity -- 6.4 DOWNSTREAM PROCESSES FOR BIOLOGICAL SULFATE-REDUCTION EFFLUENTS -- 6.4.1 Sulfide partial oxidation to elemental sulfur.
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Sommario/riassunto

This comprehensive reference book, edited by Piet N.L. Lens, focuses on environmental technologies to treat sulfur pollution. The second edition is updated with new chapters on sulfur removal systems, sulfate radicals in advanced oxidation processes, and sulfur nanoparticle biosynthesis. It covers the sulfur cycle chemistry, microbiology, and innovative processes for treating sulfur-rich waste streams. The book includes case studies on sulfur pollution control in various settings, emphasizing resource recovery from sulfur-polluted wastes. It is intended for students in environmental sciences, technology, or engineering, as well as educators, researchers, and policymakers in sulfur-related fields.