

## CONTENT

	Page
Introduction	xiii
Section 1	
Incineration and Waste Management	
1. Hazardous Waste Detoxication at Contract Waste Management Facilities	3
2. Chemical Processes in the Incineration of Hazardous Materials	41
3. Combustion Characteristics of Chlorinated Hydrocarbons	61
4. Impact of the Resource Conservation and Recovery Act on the Design of Hazardous Waste Incinerators	93
5. Using Solidification as a Waste Detoxication Process	109
Section 2	
Polychlorinated Biphenyls : Treatment, Recovery and Destruction	
6. Summary of Polychlorinated Biphenyl Treatment Alternatives	119
7. Federal Polychlorinated Biphenyl Regulations	121
8. Treatment and Destruction of Polychlorinated Biphenyls and Polychlorinated Biphenyl-Contaminated Materials	131
9. Incineration of Chemical Wastes containing Polychlorinated Biphenyls : Assessment of Tests conducted at Rollins Environment Services, Deer Park, Texas, and Energy Systems company, El Dorado, Arkansas	143
10. Ultimate Disposal of Polychlorinated Biphenyls	185
11. Chemical Destruction of Polychlorinated Biphenyls in Transformer Oil	201
12. Light-Activated Reduction of Chemicals for Destruction of Polychlorinated Biphenyls in oil and Soil	215
13. Catalyzed Wet oxidation of Hazardous Wastes	227
14. Kinetics Model and Simulation of Concentration Variations of Species of Polychlorinated Biphenyls Involved in Photochemical Transformation	233
Section 3	
Destruction of Dioxins ; Case Studies	
15. Chlorodibenzodioxins and Chlorodibenzofurans : An Overview	243
16. Selected Legal Aspects of a Dioxin Detoxication Project	261
17. Process for Destroying Tetrachlorodibenzo-p-dioxin in a Hazardous Waste	269
18. Environmental Health and Safety Considerations for a Dioxin Detoxication Process	289
Section 4	
Biological Detoxication : Genetic Engineering, Microbial and Enzymatic Treatment	
19. Opportunities for Development of New Detoxication Processes Through Genetic Engineering	301
20. Potential Role of Genetically Engineering Microorganisms to Degrade Toxic Chlorinated Hydrocarbons	315
21. Microbiological Separation for Trace-Organics Removal	323
22. Peroxidase for Removal of Hazardous Aromatics from Industrial Wastewaters	349
Index	357