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Autore	Sonntag C. von (Clemens)
Titolo	Chemistry of ozone in water and wastewater treatment : from basic principles to applications / / Clemens von Sonntag and Urs von Gunten
Pubbl/distr/stampa	London : , : IWA Publishing, , 2012
ISBN	1-78040-083-7
Descrizione fisica	1 online resource (320 p.)
Altri autori (Persone)	GuntenUrs von
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Lingua di pubblicazione	Inglese
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Nota di contenuto	Cover ; Copyright; Contents; About the Authors; Chapter 1: Historical background and scope of the book; Chapter 2: Physical and chemical properties of ozone; 2.1. Introductory Remarks; 2.2. Generation of Ozone; 2.3. Ozone Solubility in Water; 2.4. UV-VIS Spectrum of Ozone; 2.5. Determination of the Ozone Concentration; 2.5.1. The N,N-diethyl-p-phenylenediamine (DPD) method; 2.5.2. The indigo method; 2.6. Methods for Measuring Ozone Kinetics; 2.6.1. Ozone decay measurements; 2.6.2. Quenching of ozone with buten-3-ol; 2.6.3. Reactive absorption; 2.6.4. Competition kinetics 2.7. Reduction Potentials of Ozone and Other Oxygen Species2.8. Stability of Ozone Solutions; 2.9. Reactivity of Ozone; 2.9.1. pH dependence of ozone reactions and the "reactivity pK"; 2.9.2. Multiple reaction sites within one molecule; Chapter 3: Ozone kinetics in drinking water and wastewater; 3.1. Stability of Ozone in Various Water Sources; 3.2. Molecular Weight Distribution of Dissolved Organic Matter; 3.3. Mineralisation and Chemical Oxygen Demand; 3.4. Formation of Assimilable Organic Carbon; 3.5. Formation and Mitigation of Disinfection By-products 3.6. UV Absorbance of Dissolved Organic Matter3.7. Relevance of Ozone Kinetics for the Elimination of Micropollutants; 3.8. Hydroxyl Radical Yield and OH-Scavenging Rate of DissolvedOrganic Matter; 3.9. Elimination of Ozone-Refractory Micropollutants by the OH Route;

3.10. Ozone-based Advanced Oxidation Processes; 3.10.1. Peroxone process; 3.10.2. UV photolysis of ozone; 3.10.3. Reaction of ozone with activated carbon; Chapter 4: Inactivation of micro-organisms and toxicological assessment of ozone-induced products of micropollutants; 4.1. Disinfection Kinetics
4.2. Inactivation Mechanisms: Role of Membranes and DNA4.3. Reactions with Nucleic Acid Components; 4.4. Reaction with DNA; 4.5. Application of Ozone for Disinfection in Drinking Water and Wastewater; 4.6. Toxicological Assessment of Ozone Induced Transformation Products; 4.7. Endocrine Disrupting Compounds; 4.7.1. Laboratory studies; 4.7.2. Full-scale studies; 4.8. Antimicrobial Compounds; 4.9 Toxicity; Chapter 5: Integration of ozonation in drinking water and wastewater process trains; 5.1. Historical Aspects; 5.1.1. Drinking water; 5.1.2. Municipal wastewater
5.2. Drinking Water Treatment Schemes Including Ozonation5.3. Micropollutants in Water Resources, Drinking Water and Wastewater; 5.4. Enhanced Wastewater Treatment with Ozone; 5.5. Energy Requirements for Micropollutant Transformation in Drinking Waterand Wastewater; 5.6. Source Control; 5.7. Reclamation of Wastewater; 5.8. Comparison of the Application of Ozone in the Urban Water Cycle; Chapter 6: Olefins; 6.1. Reactivity of Olefins; 6.2. The Criegee Mechanism; 6.3. Partial Oxidation; 6.4. Decay of the Ozonide via Free Radicals; 6.5. Detection of -Hydroxyalkylhydroperoxides
6.6. Ozone Reactions of Olefins - Products and Reactions of Reactive Intermediates

Sommario/riassunto

Even though ozone has been applied for a long time for disinfection and oxidation in water treatment, there is lack of critical information related to transformation of organic compounds. This has become more important in recent years, because there is considerable concern about the formation of potentially harmful degradation products as well as oxidation products from the reaction with the matrix components. In recent years, a wealth of information on the products that are formed has accumulated, and substantial progress in understanding mechanistic details of ozone reactions in aqueous solution has been made. Based on the latter, this may allow us to predict the products of as yet not studied systems and assist in evaluating toxic potentials in case certain classes are known to show such effects. Keeping this in mind, Chemistry of Ozone in Water and Wastewater Treatment: From Basic Principles to Applications discusses mechanistic details of ozone reactions as much as they are known to date and applies them to the large body of studies on micropollutant degradation (such as pharmaceuticals and endocrine disruptors) that is already available. Extensively quoting the literature and updating the available compilation of ozone rate constants gives the reader a text at hand on which his research can be based. Moreover, those that are responsible for planning or operation of ozonation steps in drinking water and wastewater treatment plants will find salient information in a compact form that otherwise is quite disperse. A critical compilation of rate constants for the various classes of compounds is given in each chapter, including all the recent publications. This is a very useful source of information for researchers and practitioners who need kinetic information on emerging contaminants. Furthermore, each chapter contains a large selection of examples of reaction mechanisms for the transformation of micropollutants such as pharmaceuticals, pesticides, fuel additives, solvents, taste and odor compounds, cyanotoxins.

2. Record Nr. UNISA996384474903316

Autore	Gardyner George
Titolo	A description of the new world, or, America, islands and continent [[electronic resource]] : and by what people those regions are now inhabited, and what places are there desolate and without inhabitants, and the bays, rivers, capes, forts, cities and their latitudes, the seas / by George Gardyner .
Pubbl/distr/stampa	London, : Printed for Robert Leybourn and are to be sold by Thomas Pirrepoint ..., 1651
Descrizione fisica	[14], 187, [1] p
Soggetti	America Description and travel
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Errata: p. [6]. Reproduction of original in Harvard University Libraries.
Sommario/riassunto	eebo-0062

3. Record Nr. UNINA9910143578003321

Titolo	Pharmacometrics : the science of quantitative pharmacology / / edited by Ene I. Ette, Anoixis Corporation, Paul J. Williams, University of the Pacific and Anoixis Corporation
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley-Interscience, , [2007] ©2007
ISBN	1-118-67951-2 1-280-82698-3 9786610826988 0-470-08797-8 0-470-08796-X
Descrizione fisica	1 online resource (1227 p.)
Classificazione	44.38
Disciplina	615.1 615/.1
Soggetti	Pharmacology Pharmacokinetics
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Nota di contenuto	PHARMACOMETRICS; CONTENTS; CONTRIBUTORS; PREFACE; ACKNOWLEDGMENTS; 1. Pharmacometrics: Impacting Drug Development and Pharmacotherapy; PART I GENERAL PRINCIPLES; 2. General Principles of Programming: Computer and Statistical; 3. Validation of Software for Pharmacometric Analysis; 4. Linear, Generalized Linear, and Nonlinear Mixed Effects Models; 5. Bayesian Hierarchical Modeling with Markov Chain Monte Carlo Methods; 6. Estimating the Dynamics of Drug Regimen Compliance; 7. Graphical Displays for Modeling Population Data; 8. The Epistemology of Pharmacometrics; 9. Data Imputation PART II POPULATION PHARMACOKINETIC BASIS OF PHARMACOMETRICS10. Population Pharmacokinetic Estimation Methods; 11. Timing and Efficiency in Population Pharmacokinetic/Pharmacodynamic Data Analysis Projects; 12. Designing Population Pharmacokinetic Studies for Efficient Parameter

Estimation; 13. Population Models for Drug Absorption and Enterohepatic Recycling; 14. Pharmacometric Knowledge Discovery from Clinical Trial Data Sets; 15. Resampling Techniques and Their Application to Pharmacometrics; 16. Population Modeling Approach in Bioequivalence Assessment
PART III PHARMACOKINETICS / PHARMACODYNAMICS RELATIONSHIP: BIOMARKERS AND PHARMACOGENOMICS, PK/PD MODELS FOR CONTINUOUS DATA, AND PK/PD MODELS FOR OUTCOMES DATA17. Biomarkers in Drug Development and Pharmacometric Modeling; 18. Analysis of Gene Expression Data; 19. Pharmacogenomics and Pharmacokinetic/Pharmacodynamic Modeling; 20. Empirical Pharmacokinetic/Pharmacodynamic Models; 21. Developing Models of Disease Progression; 22. Mechanistic Pharmacokinetic/Pharmacodynamic Models I; 23. Mechanistic Pharmacokinetic/Pharmacodynamic Models II; 24. PK/PD Analysis of Binary (Logistic) Outcome Data
25. Population Pharmacokinetic/Pharmacodynamic Modeling of Ordered Categorical Longitudinal Data26. Transition Models in Pharmacodynamics; 27. Mixed Effects Modeling Analysis of Count Data; 28. Mixture Modeling with NONMEM V; PART IV CLINICAL TRIAL DESIGNS; 29. Designs for First-Time-in-Human Studies in Nononcology Indications; 30. Design of Phase 1 Studies in Oncology; 31. Design and Analysis of Clinical Exposure: Response Trials; PART V PHARMACOMETRIC KNOWLEDGE CREATION; 32. Pharmacometric/Pharmacodynamic Knowledge Creation: Toward Characterizing an Unexplored Region of the Response Surface
33. Clinical Trial Simulation: Theory34. Modeling and Simulation: Planning and Execution; 35. Clinical Trial Simulation: Efficacy Trials; PART VI PHARMACOMETRIC SERVICE AND COMMUNICATION; 36. Engineering a Pharmacometrics Enterprise; 37. Communicating Pharmacometric Analysis Outcome; PART VII SPECIFIC APPLICATION EXAMPLES; 38. Pharmacometrics Applications in Population Exposure-Response Data for New Drug Development and Evaluation; 39. Pharmacometrics in Pharmacotherapy and Drug Development: Pediatric Application
40. Pharmacometric Methods for Assessing Drug-Induced QT and QTc Prolongations for Non-antiarrhythmic Drugs

Sommario/riassunto

Pharmacometrics is the science of interpreting and describing pharmacology in a quantitative fashion. The pharmaceutical industry is integrating pharmacometrics into its drug development program, but there is a lack of and need for experienced pharmacometricians since fewer and fewer academic programs exist to train them. Pharmacometrics: The Science of Quantitative Pharmacology lays out the science of pharmacometrics and its application to drug development, evaluation, and patient pharmacotherapy, providing a comprehensive set of tools for the training and development of pharmac