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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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Soggetti	Sewage - Purification - Ozonization Water - Purification - Oxonization Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
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 DNA 4.3. 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 Ozonation 5.3. Micropollutants in Water Resources, Drinking Water and Wastewater; 5.4. Enhanced Wastewater Treatment with Ozone; 5.5. Energy Requirements for Micropollutant Transformation in Drinking Water and 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.	UNINA9910790388203321
Autore	Stokl Jonathan <1977->
Titolo	Prophecy in the ancient Near East [[electronic resource] ] : a philological and sociological comparison / / by Jonathan Stokl
Pubbl/distr/stampa	Leiden ; ; Boston, : Brill, 2012
ISBN	1-280-49600-2 9786613591234 90-04-22993-0
Descrizione fisica	1 online resource (313 p.)
Collana	Culture and history of the ancient Near East, , 1566-2055 ; ; v. 56
Disciplina	202.117
Soggetti	Prophecy Prophecies Forecasting - Religious aspects
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Revision of the author's thesis (doctoral)--Oriental Institute, Oxford University, 2009.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Preliminary Material -- Chapter One. Introduction -- Chapter Two. Introduction to Old Babylonian Prophecy -- Chapter Three. Old Babylonian Prophets -- Chapter Four. The Prophetic Message -- Chapter Five. Further Aspects of Old Babylonian Prophecy -- Chapter Six. Conclusions -- Chapter Seven. Introduction to Neo-Assyrian Prophecy -- Chapter Eight. Neo-Assyrian Prophets -- Chapter Nine. The Message -- Chapter Ten. Other Aspects of Neo-Assyrian Prophecy -- Chapter Eleven. Conclusions -- Chapter Twelve. Introduction to Prophecy in the Hebrew Bible -- Chapter Thirteen. The Messengers -- Chapter Fourteen. Conclusions -- Chapter Fifteen. Comparison of Old Babylonian, Neo-Assyrian and Biblical Prophecy -- Chapter Sixteen. Conclusions -- Bibliography -- General Index -- Names -- Terms Referred To -- Cited Texts.
Sommario/riassunto	Since the 1990's there has been an emphasis on the study of ancient Israelite prophecy in its ancient Near East context. Prophecy in the Ancient Near East is the first book-length study that compares prophecy in the ancient Near East by focusing on texts from Mari, the Neo-Assyrian State Archives, and the Hebrew Bible. The author

analyzes prophecy in each culture independently before comparisons are made. This method demonstrates how prophecy is a part of the wider system of divination, but also shows where scholarship has unduly imported concepts found in one corpus to the other two. This method, for example, calls into question the supposed link between music and prophecy from the Hebrew Bible to the ancient Near East. This work provides an up-to-date analysis of ancient Near Eastern, including Israelite and Judean, prophecy to scholars and students alike. 'I thoroughly enjoyed reading the book, and I can highly recommend it to anyone interested in prophecy in Israel and the ancient Near East.'

Lena-Sofia Tiemeyer, University of Aberdeen, Review of Biblical Literature 'The content of Jonathan Stökl's book...testifies to the value of the book for the studies of prophecy in the ancient Near East.'

Wojciech Pikor, John Paul II Catholic University of Lublin, The Biblical Annals

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