Characterization of Atrazine Transport Across Nasal Respiratory and Olfactory Mucosae - Wisam Saad Hasan Al Bakri - 2014

The herbicide atrazine is one of the most commonly used pesticides in United States. Atrazine was banned in the European Union in 2005 because of its ubiquity in drinking water; however, in The United States more than 75 million pounds of atrazine are used annually, especially in the Midwest. Atrazine has many adverse health effects including enhancing developmental, immunologic endocrine alterations. Studies have reported that exposure to atrazine causes dopaminergic toxicity and mitochondrial dysfunction; these cellular changes have been linked to an increase in the incidence of Parkinson's disease. The objective of this study is to characterize atrazine effect on the respiratory and olfactory mucosae with specific attention to the potential for atrazine transfer to the brain via the olfactory system. Uptake of atrazine was investigated across excised nasal mucosal tissues equilibrated in Krebs's buffer (KRB) or in a co-solvent system containing propylene glycol (PG), similar to the commercial herbicide product. Active uptake pathways were probed using 2,4-dinitrophenol (2,4-DNP) as a metabolic inhibitor. Brightfield microscopy was used to assess the effects of ATZ exposure on the tissues. ATZ was found to be transported across the nasal tissues in a manner consistent with passive diffusion, and 2,4-DNP did not reduce the overall uptake of ATZ. Microscopy results showed erosion of the epithelial surface following exposure to ATZ-PG-KRB when compared to control and ATZ-KRB. These results suggest a negative effect of the ATZ co-solvent formulations on nasal tissues with the potential for increased systemic and CNS exposure.
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Field-scale Pesticide Transport and Degradation in Three Missouri Soils - Hossein Varnamkhisti Kazemi - 1995

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Agricultural Atrazine Use and Water Quality - Andrew Manale - 1993

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input substitution effects; environmental impacts; & hazard index.

Karst Management - Philip E. van Beynen - 2011-06-21

Focusing specifically on the management of karst environments, this volume draws together the world’s leading karst experts to provide a vital source for the study and management of this unique physical setting. Although karst landscapes cover 12% of the Earth’s terrain and provide 25% of the world’s drinking water, the resource management of karst environments has only previously received indirect attention. Through a comprehensive approach, Karst Management focuses on engineering issues associated with surface karst such as quarries, dams, and agriculture, subsurface topics such as the management of groundwater, show caves, cave biota, and geo-archaeology projects. Chapters that focus on karst as an integrated system look at IUCN World Heritage sites, national parks, policy and regulation, measuring systematic disturbance, information management, and public environmental education. The text incorporates the most up-to-date research from leading karst scientists. This volume provides important perspectives for university students, educators, geoengineers, resource managers, and planners who are interested in or work with this unique physical landscape.

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Transport and Fate of Atrazine, Nutrients, and Ions in an on Farm Stream with Primary Sources from Tile Lines - Eric L. Rothstein - 1995

Herbicide Metabolites in Surface Water and Groundwater - - 1996

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Vulnerability of Ground Water to Atrazine Leaching in Kent County, Michigan - David J. Holtschlag - 1997

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Water-resources Investigations Report - - 1990

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Assessment of Ground-water Vulnerability to Atrazine Leaching in Kent County, Michigan - David J. Holtschlag - 1998

Vulnerability of Ground Water to Atrazine Leaching in Kent County, Michigan - David J. Holtschlag - 1997

Weeds - Bruce Archibald Auld - 1987

Reprint of a reference book first published in 1987. Lavishly illustrated, it contains detailed descriptions of all the important weeds of Australia. Suitable for primary producers, students, agricultural advisers and research workers.

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Multiple Stressors: A Challenge for the Future - Carmel Mothersill - 2007-08-20

Ecotoxicological risk from multiple stressors covers any situation where organisms are exposed to a combination of environmental stressors. These include physical and chemical pollutants as well as other stressors such as parasites and environmental impact (e.g., climate change or habitat loss). The combination of stressors can result in increased risk to organisms (either additive or synergistic effects) or decreased effects (protective or antagonistic effects). The multiple stressor challenge is an international, multi-disciplinary problem requiring an international, multi-disciplinary approach. The current approach to multiple stressors is to examine one stressor at a time and assume additivity. Little work has been done on combinations of stressors such that potential interactions can be determined. The problem is very complex. Multiple stressors pose a whole spectrum of challenges that range from basic science to regulation, policy and governance. The challenges raise fundamental questions about our understanding of the basic biological response to stressors, as well as the implications of those uncertainties in environmental risk assessment and management. In addition to the great breadth, there is also great depth in the research challenges, largely due to the complexity of the issues. From a basic science point of view, many of the mechanisms and processes under investigation are at the cutting edge of science—involving new paradigms such as genomic instability and bystander effects.

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Soil-Water-Solute Process Characterization - Javier Alvarez-Benedi - 2004-12-28
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Quick Bibliography Series - - 1976
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Reviews of Environmental Contamination and Toxicology - George W. Ware - 2012-12-06
International concern in scientific, industrial, and governmental communities over traces of xenobiotics in foods and in both abiotic and biotic environments has justified the present triumvirate of specialized publications in this field: comprehensive reviews, rapidly published research papers and progress reports, and archival documentations. These three international publications are integrated and scheduled to provide the coherency essential for nonduplicative and current progress in a field as dynamic and complex as environmental contamination and toxicology. This series is reserved exclusively for the diversified literature on "toxic" chemicals in our food, our feeds, our homes, recreational and working surroundings, our domestic animals, our wildlife and ourselves. Tremendous efforts worldwide have been mobilized to evaluate the nature, presence, magnitude, fate, and toxicology of the chemicals loosed upon the earth. Among the sequelae of this broad new emphasis is an undeniable need for an articulated set of authoritative publications, where one can find the latest important world literature produced by these emerging areas of science together with documentation of pertinent ancillary legislation.

Research directors and legislative or administrative advisers do not have the time to scan the escalating number of technical publications that may contain articles important to current responsibility. Rather, these individuals need the background provided by detailed reviews and the assurance that the latest information is made available to them, all with minimal literature searching.
illustrate how defined genetic materials in administrative advisers do not have the time to scan the escalating number of technical publications that may contain articles important to current responsibility. Rather, these individuals need the background provided by detailed reviews and the assurance that the latest information is made available to them, all with minimal literature searching.

Plant molecular biology is rapidly becoming an important and successful component of the worldwide research challenge to apply basic biochemical, physiological and genetic techniques for the improvement of agricultural crops. This book shows how the study of fundamental plant physiological processes is being advanced through the science of genetics. The author has adopted a case study approach to illustrate how defined genetic materials in mutants and plant variants are being productively used to explore photosynthesis, stress tolerance, seed physiology, and flowering and reproductive morphology. This approach also helps avoid overwhelming readers who might be unfamiliar with the enormous detail now available in this burgeoning field. The case studies cover all major fields of plant physiology and are grouped in a format familiar to students of the discipline. Most take the form of a brief introduction followed by a discussion of the isolation and characterization of the mutants in question, and then by examples of how these mutants have been used to provide physiological insights. The aim is to make the information accessible to students with an elementary knowledge of plant physiology, genetics, and molecular biology, as well as other scientists and students who wish to know more about the application of the powerful tools provided by genetics.

**Stochastic Analysis of Flow and Transport in the Vadose Zone** - Alexander Yishan Sun - 2000

**Simulation Models, GIS and Nonpoint-source Pollution** - David Holloway - 1992


**Novel Approaches for Bioremediation of Organic Pollution** - Raffi Fass - 2012-12-06
Proceedings of the 42nd OHOL Conference held in Eilat, Israel, May 3-7, 1998

**Conceptual Models of Flow and Transport in the Fractured Vadose Zone** - National Research Council - 2001-06-21
Fluid flow and solute transport within the vadose...
components of the modeling process. Finally, the surface and the water table, can be the cause of expanded plumes arising from localized contaminant sources. An understanding of vadose zone processes is, therefore, an essential prerequisite for cost-effective contaminant remediation efforts. In addition, because such features are potential avenues for rapid transport of chemicals from contamination sources to the water table, the presence of fractures and other channel-like openings in the vadose zone poses a particularly significant problem, Conceptual Models of Flow and Transport in the Fractured Vadose Zone is based on the work of a panel established under the auspices of the U.S. National Committee for Rock Mechanics. It emphasizes the importance of conceptual models and goes on to review the conceptual model development, testing, and refinement processes. The book examines fluid flow and transport mechanisms, noting the difficulty of modeling solute transport, and identifies geochemical and environmental tracer data as important components of the modeling process. Finally, the book recommends several areas for continued research.

Hydrogeologic Setting and Simulation of Pesticide Fate and Transport in the Unsaturated Zone of a Regolith-mantled, Carbonate-rock Terrain Near Newville, Pennsylvania - Daniel J. Hippe - 1996

This is a textbook for courses and independent study in environmental and chemical engineering, as well as in many other disciplines concerned with transport and diffusion of all manner of chemicals. Estimating the transport and fate of chemicals released into the environment is an interesting and challenging task. The global environment is large, on the chemical transport and fate scale. This text applies the mathematics of diffusion, turbulent diffusion and dispersion to the atmosphere, lakes, rivers, groundwater and the ocean, as well as transport between these media. The required theory is explained as a solution technique to solve the case studies and example problems. A large portion of the book is dedicated to examples and case studies, from which the important principles are derived.
Herbicides use is a common component of many weed management strategies in both agricultural and non-crop settings. However, herbicide use practices and recommendations are continuously updated and revised to provide control of ever-changing weed compositions and to preserve efficacy of current weed control options. Herbicides - Current Research and Case Studies in Use provides information about current trends in herbicide use and weed control in different land and aquatic settings as well as case studies in particular weed control situations.

Bibliography of Agriculture - - 1990

Cumulated Index Medicus - - 1993

High Performance Liquid Chromatography in Pesticide Residue Analysis - Tomasz Tuzimski - 2015-05-20
HPLC is the principal separation technique for identification of the pesticides in environmental samples and for quantitative analysis of analytes. At each stage of the HPLC procedure, the chromatographer should possess both the practical and theoretical skills required to perform HPLC experiments correctly and to obtain reliable, repeatable, and r

Atrazine in North American Surface Waters - Jeffrey M. Giddings - 2005


Analysis of Hydrogeochemical Vulnerability - Constantin Moraru - 2017-12-01
This monograph instructs the reader on how to analyze the hydrogeochemical vulnerability. It introduces notions of geochemical signals, points of migration of pollutants in the unsaturated zone, and new hydrogeochemical classifications. Three test sites in the USA, Germany, and Moldova are described as case studies accompanied by illustrative data. The authors presuppose for future readers only the background mathematics and elementary knowledge of hydrogeology. The presented methodology is both for local and regional assessments. It is simple, does not need implication of high qualification specialists and can be applied to test the groundwater quality. The book is useful for undergraduate, graduate, master, and PhD students as well as water quality specialists, ecologists and geology professionals.
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