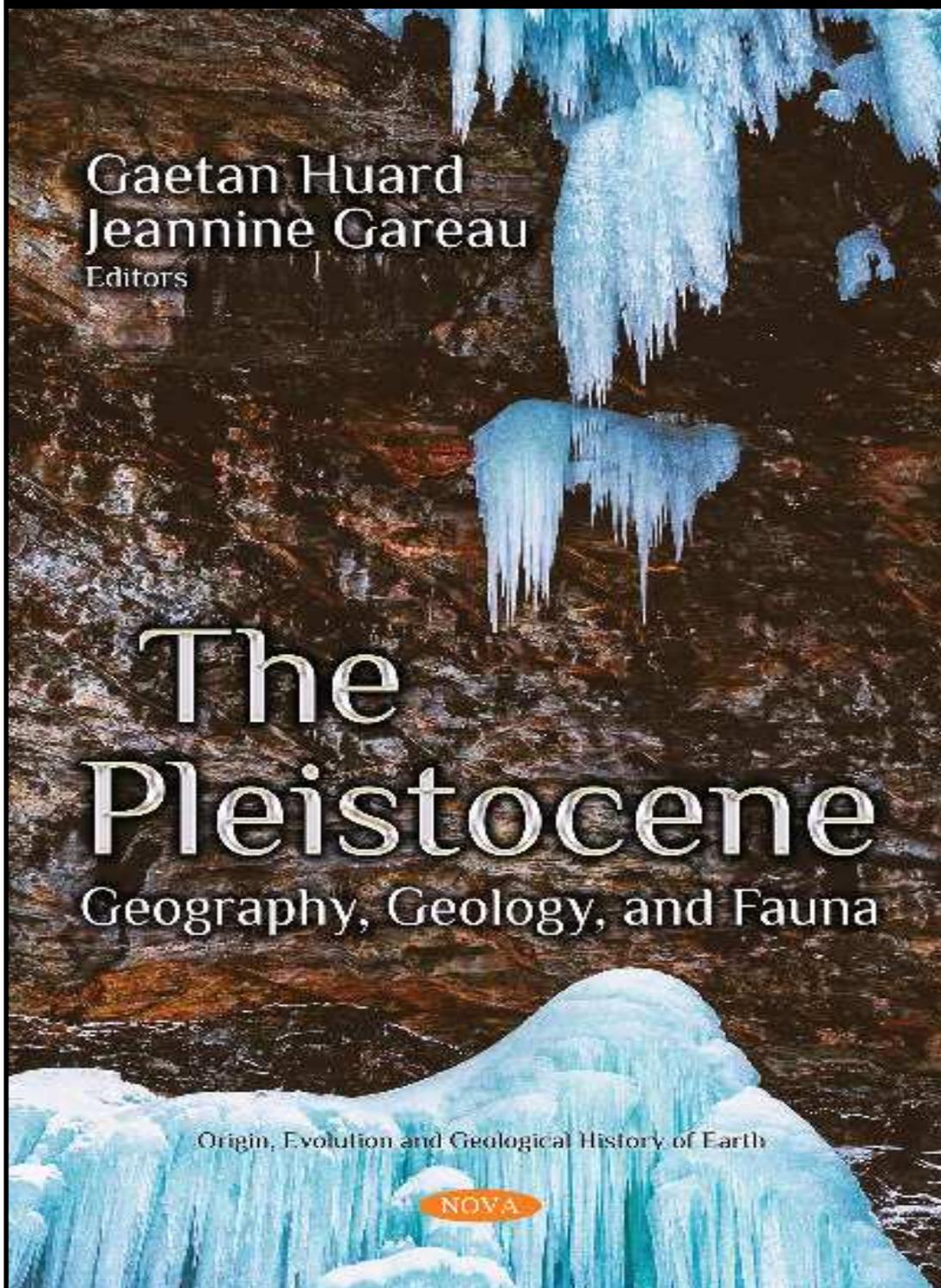




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Earth & Marine Sciences

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Gaetan Huard
Jeannine Gareau
Editors

The Pleistocene

Geography, Geology, and Fauna

Origin, Evolution and Geological History of Earth



The Earth and Atmospheric Electricity

Red Sea

Sedimentary Basins

Horizons in Earth Science Research

The Foundations of Multimoment Hydrodynamics

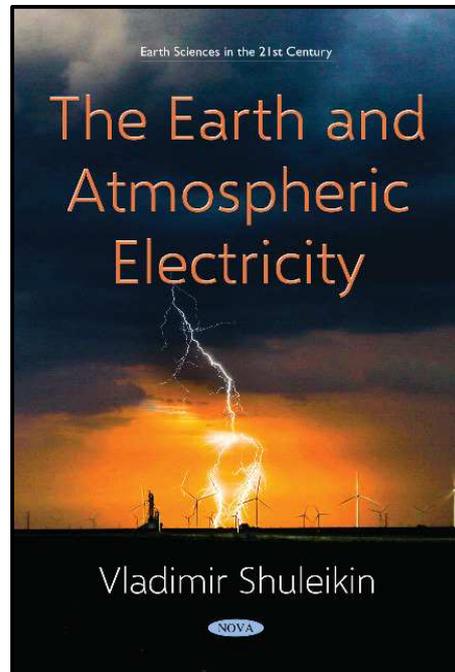
Oceanography of the Reef Corridor of the Southwestern Gulf of Mexico

The Pleistocene

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The Earth and Atmospheric Electricity

Vladimir Shuleikin

According to the provisions of the surface atmospheric electricity theory, the space charge of the surface air layer owes its origin to ionization by exhaling soil radon. According to field observations, a model representation of relations between hydrogen, methane, radon, and surface atmospheric electricity elements is composed. Bubbles of two volatile gases carry soil radon from a depth of 4-6 m to the near-surface atmosphere. As a consequence, light ions produced by ionization determine polar conductivity of the surface air; light ion aggregation with neutral condensation nuclei produces heavy ions primarily responsible for the atmospheric electric field. This means that the surface atmospheric electricity is determined by local geology and geodynamics.

According to the field observations, the radon content in the surface soil layers is at least two orders of magnitude higher than the concentration of ionizer exhalation. A change in the soil radon content of a single percent will lead to a twofold change in the exhalation concentration, i.e., to a twofold change in the polar conductivities and the atmospheric electric field. This means that the surface atmospheric electricity elements will be extremely sensitive to variations in the subvertical carrier gas (hydrogen and methane) flow density.

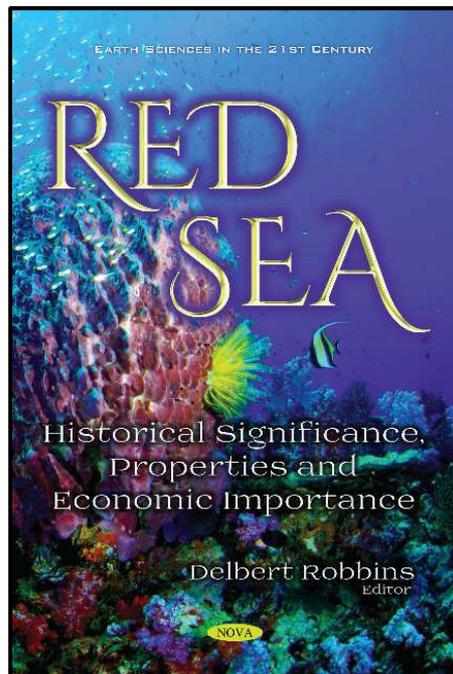
September 2018 - 126 pages

PB (9781536139730) £82.99

Publisher: Nova Science



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Red Sea Historical Significance, Properties and Economic Importance

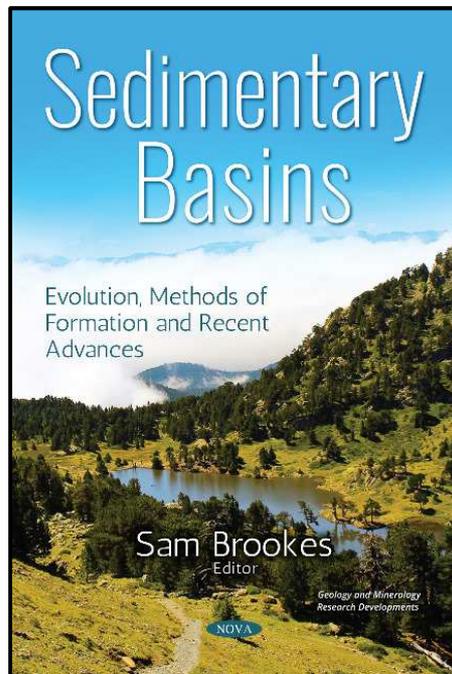
Edited by Delbert Robbins

Red Sea: Historical Significance, Properties and Economic Importance opens with a discussion on oceanic spreading beginning in the Pliocene (~5 Ma) (after advanced continental drifting) and continuing to the present day, as demonstrated by the intense volcanic and seismic activity in the area during the last 10,000 years. The authors present geochemical features that are typical of mid ocean ridge basalts (MORB), which allow the Red Sea to be regarded as a newborn ocean. Additionally, its development resembles the early stages of the Atlantic Ocean. Next, this compilation discusses the Wadi Masilah Basin in the southeasternmost part of Yemen, which hosts promising base metal and barite prospects. This terrain has a complex geological and structural history, including oblique divergence (transtension) related to the opening phases of the greater Red Sea. The fisheries reserve of the Sudanese Red Sea is dominated by different assemblages of ecologically and commercially important stock of invertebrates, demersal finfish and pelagic fish. The authors address how the national fisheries standing stock remains largely under-exploited with the exception of Mother of Pearl (*Pinctada margaritifera*) and Trochus (*Tectus dentatus*) which are efficiently utilized.

March 2018 - 76 pages
PB (9781536132007) £82.99
Publisher: Nova Science



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Sedimentary Basins
Evolution, Methods of Formation and Recent Advances

Edited by Sam Brookes

In this collection, the sedimentary basins of the northern Campania Tyrrhenian margin have been investigated in detail aimed at studying and reconstructing their Quaternary geologic evolution through seismo-stratigraphic data. This analysis, carried out using multichannel seismic data of the Zone E, has allowed to infer the subsurface volcanism in the Gaeta Gulf through the identification of a wide buried volcanic edifice, fossilized by the prograding sequences supplied by the Volturno river. This volcanism seems to be related to the oldest phases of volcanism in the Campania Plain, evidenced by the Parete and Villa Literno volcanic complexes, detected in the subsurface of the Campania Plain onshore. Continuing, the presence of volcano-sedimentary sequence in pull-apart basins has intrigued the geologists for several decades.

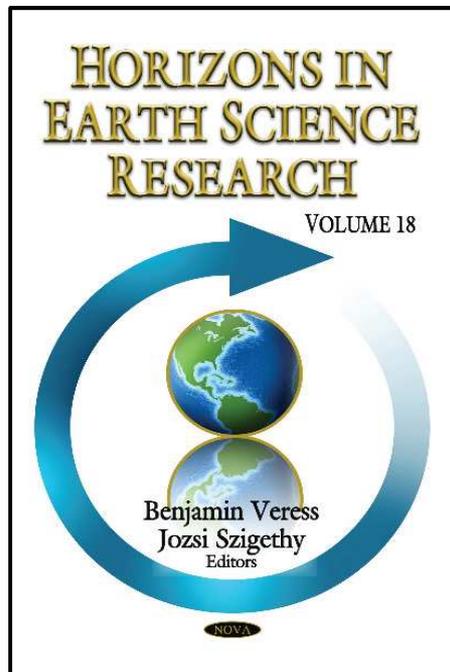
The authors explain that the extensional tectonic processes are not only responsible for formation of these basins but also eruption of volcanic units and emplacement of dykes swarms. High resolution seismic data processed by Pre-Stacking and Depth Migration (PSDM) and Pre-Stacking and Time Migration (PSTM) techniques and hundreds of drill-hole logs have made for an eloquent exposition of basin forming tectonics in different regions of India. Several case studies have also illustrated that the Pre-Cretaceous period is characterized by prolonged extensional tectonics, development of nearly vertical faults, subsidence and formation of basins and sedimentation. In the final chapter, the results obtained from several essays held with aliquots of a sample of the lithostratigraphic formation known as "Batateira Layers" are reported, occurring in the Araripe Sedimentary Basin, Ceará State, Brazil.

July 2018 - 97 pages

PB (9781536139228) £71.99

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Horizons in Earth Science Research Volume 18

Edited by Benjamin Veress, Jozsi Szigethy

Horizons in Earth Science Research. Volume 18 opens with a chapter discussing the influence of canyons at the nearshore of river mouths on water dynamics and sediment transport, seawater intrusion into estuaries, and erosion-accumulative processes. The mouths of the rivers Congo and St. Lawrence are studied as examples of the effect of canyons of different genesis on estuary formation. Next, the authors use numerical examples to demonstrate qualitatively and quantitatively the variability of the Odum – Pianka ecosystem under different conditions. An analysis of stability shows that the Odum – Pianka ecosystem has two steady states. One of them corresponds to the situation when the total amount of the ecosystem material is accumulated in the mineral nutrition component, and the second steady state is stable and corresponds to the ecosystem equilibrium state.

Following this, the authors present depth determination and source characteristics for North Korean nuclear tests using body wave and surface wave spectra. The source depths for the 2016J, 2016S and 2017S nuclear tests were estimated at 2.11 km, 1.99 km and 1.99 km, respectively using spectral nulls of P- and S- wave and Rg-wave spectra. Also in this compilation, ethnography, folklore and historical information is analyzed in order to restore the ancient celestial sphere (with the use of a special astronomy application) and identify the correlations between the megalithic complexes of Shaori Mountain and the Sun and Moon eclipses.

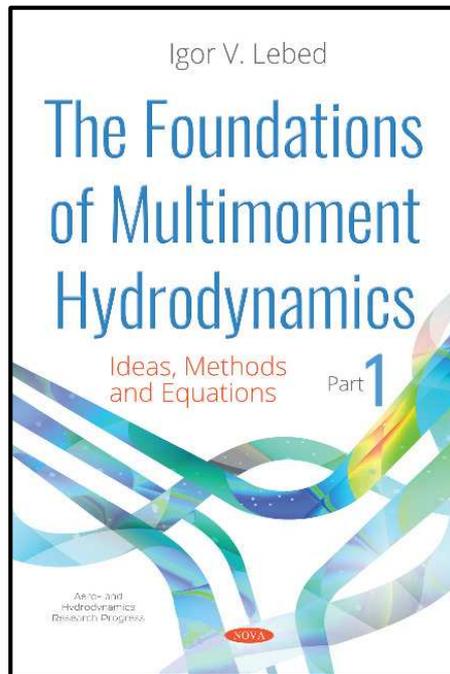
June 2018 - 195 pages

HB (9781536137637) £217.99

Publisher: Nova Science



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The Foundations of Multimoment Hydrodynamics Part 1: Ideas, Methods and Equations

Igor V. Lebed

The Boltzmann hypothesis of molecular chaos (“Stosszahlansatz”) closes the classic kinetic equation. Equations of classic hydrodynamics that directly follow from the Boltzmann equation inevitably contain the error involved in the derivation of classic kinetic equation. The physical meaning of the error introduced by the Boltzmann hypothesis in the equations of hydrodynamics is as follows. Only the Boltzmann hypothesis makes it possible to build hydrodynamics for only three lower principal hydrodynamic values, say, density, velocity, and temperature. The Boltzmann hypothesis also excludes objectively existing higher principal hydrodynamic values from participation in the formation of hydrodynamics equations. Thus, the possibility of the improvement of classic hydrodynamics equations should be sought toward an increase in the number of principal hydrodynamic values.

The idea of separating gas particles into pairs allows using the higher principal hydrodynamic values when constructing equations of hydrodynamics. Two particles are called a pair if they either move towards the collision with each other or fly apart after the collision with each other. Created formalism allows hydrodynamics equations to be built with an arbitrary number of principal hydrodynamic values specified beforehand.

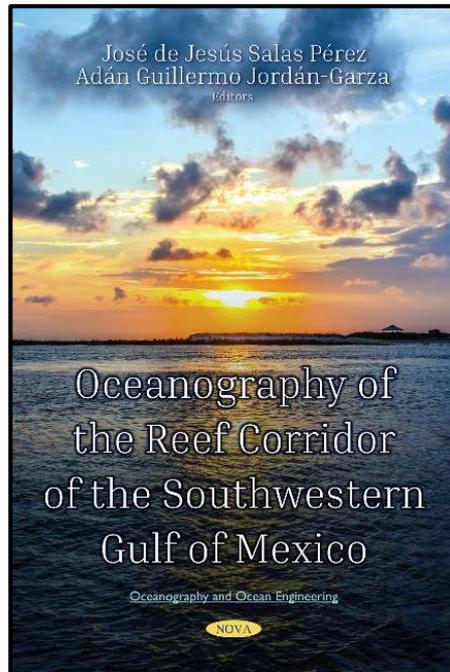
May 2018 - 210 pages

HB (9781536133646) £199.99

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Oceanography of the Reef Corridor of the Southwestern Gulf of Mexico

Edited by Jose de Jesus Salas Perez, Adan Guillermo Jordan-Garza

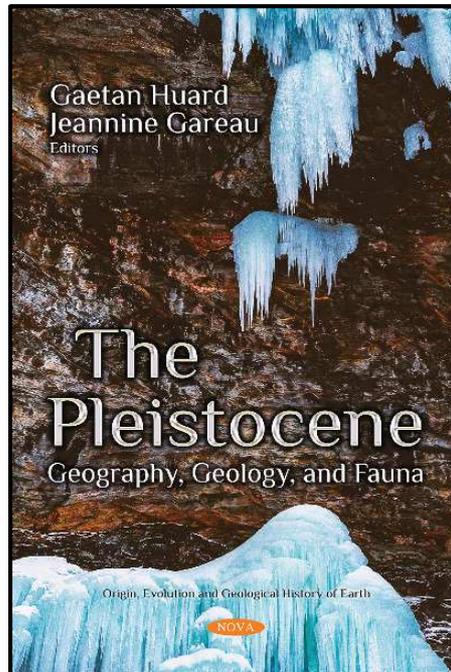
Oceanography of the coastal zone as an interdisciplinary science has received little attention, as most of the studies focus either on the physical oceanography or on the marine ecosystems, independently. The reef corridor of the Southwestern Gulf of Mexico offers the unique opportunity of doing research on meteorological events which affected currents, water masses and tides, but also the interaction with the many coral reefs found on the study region. The presence of these reefs interacts with the oceanographic processes, for example, by diffracting or refracting the tidal waves at different frequencies. These interactions have consequences on the biological and chemical composition of the water masses and drive the exchange of larvae between the reefs located on the northern, central and southern coast of the Southwestern Gulf of Mexico and even more remote areas such as the Caribbean or Florida. Yet, the oceanography of this region is poorly understood and more so the interactions with the important coastal ecosystems located along the coast. More studies relating oceanographic factors with biological processes in a scenario of global and local changes are needed. This work presents research on open questions dealing with the climatology of cold surges, the movement of water masses and tides, the upwelling and fertilizing process related to a permanent cyclonic eddy and the variability of chemical and biological processes related to the complex hydrodynamics on a coral reef system.

One of the main objectives of this book is pointing to the need of interdisciplinary research to understand the process that drives changes on the coastal ecosystems at local, regional and global scales.

April 2018 - 115 pages
PB (9781634835992) £71.99
Publisher: Nova Science



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The Pleistocene Geography, Geology, and Fauna

Edited by Gaetan Huard, Jeannine Gareau

In this collection, the authors begin by discussing the Quaternary, the most recent geological period of time in Earth's history spanning the last 2.588 million years. The Quaternary System is subdivided into the Pleistocene and the Holocene Series, with the Pleistocene spanning most of the Quaternary, while the Holocene covers the last 11 700 calendar year. In order to understand contemporary stratigraphic terms and subdivisions of the Quaternary, the historical background becomes necessary. Besides the traditional chronostratigraphical and geochronological division, the Quaternary was divided also climatostratigraphically based on the recorded climatic changes.

The following paper presents the results of geomorphological and geochronological studies within the highest southeastern part of Russian Altai. Geomorphological evidence of at least of two Pleistocene glacial epochs are mapped within the Chagan-Uzun river basin, and an analysis of all available absolute dates for the reference section is presented. The authors present a survey wherein information about over 200 species of small mammals is given concerning morphology, taxonomy, and distribution across more than 20 localities, covering the last 4.5 million years. A detailed biostratigraphic scheme has been developed, which is compared with independent sources of chronology. In this context, the paleoecological information provided by the individual regional biostratigraphic assemblages is analyzed, and the paleoecological reconstructions are correlated with global paleoclimatic evidence.

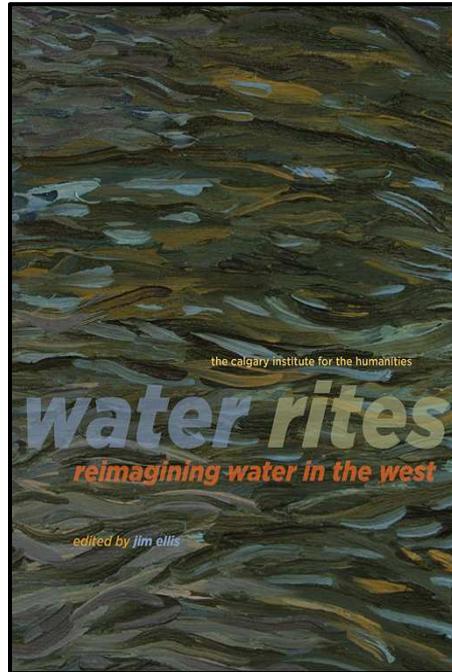
July 2018 - 267 pages

HB (9781536137286) £169.99

Publisher: Nova Science



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Water Rites Reimagining Water in the West

Edited by Jim Ellis

What are the challenges surrounding water in Western Canada?

What are our rights to water? Does water itself have rights?

Water Rites: Reimagining Water in the West documents the many ways that water flows through our lives, connecting the humans, animals, and plants that all depend on this precious and endangered resource.

Essays from scholars, activists, environmentalists, and human rights advocates illuminate the diverse issues surrounding water in Alberta, including the right to access clean drinking water, the competing demands of the resource development industry and Indigenous communities, and the dwindling supply of fresh water in the face of human-caused climate change. Statements from community organizations detail the challenges facing watersheds, and the actions being taken to mitigate these problems. With a special focus on Environmental and Indigenous issues, *Water Rites* explores how deeply water is tied to human life.

These essays are complemented by full-colour portfolios of work by contemporary painters, photographers, and installation artists who explore our relation to water. Reproductions of historical paintings, engravings and film stills demonstrate how water has shaped our country's cultural imaginary from its beginnings, proving that water is a vital resource for our lives and our imaginations.

May 2018 - 168 pages

PB (9781552389973) £23.99

Publisher: University of Calgary Press



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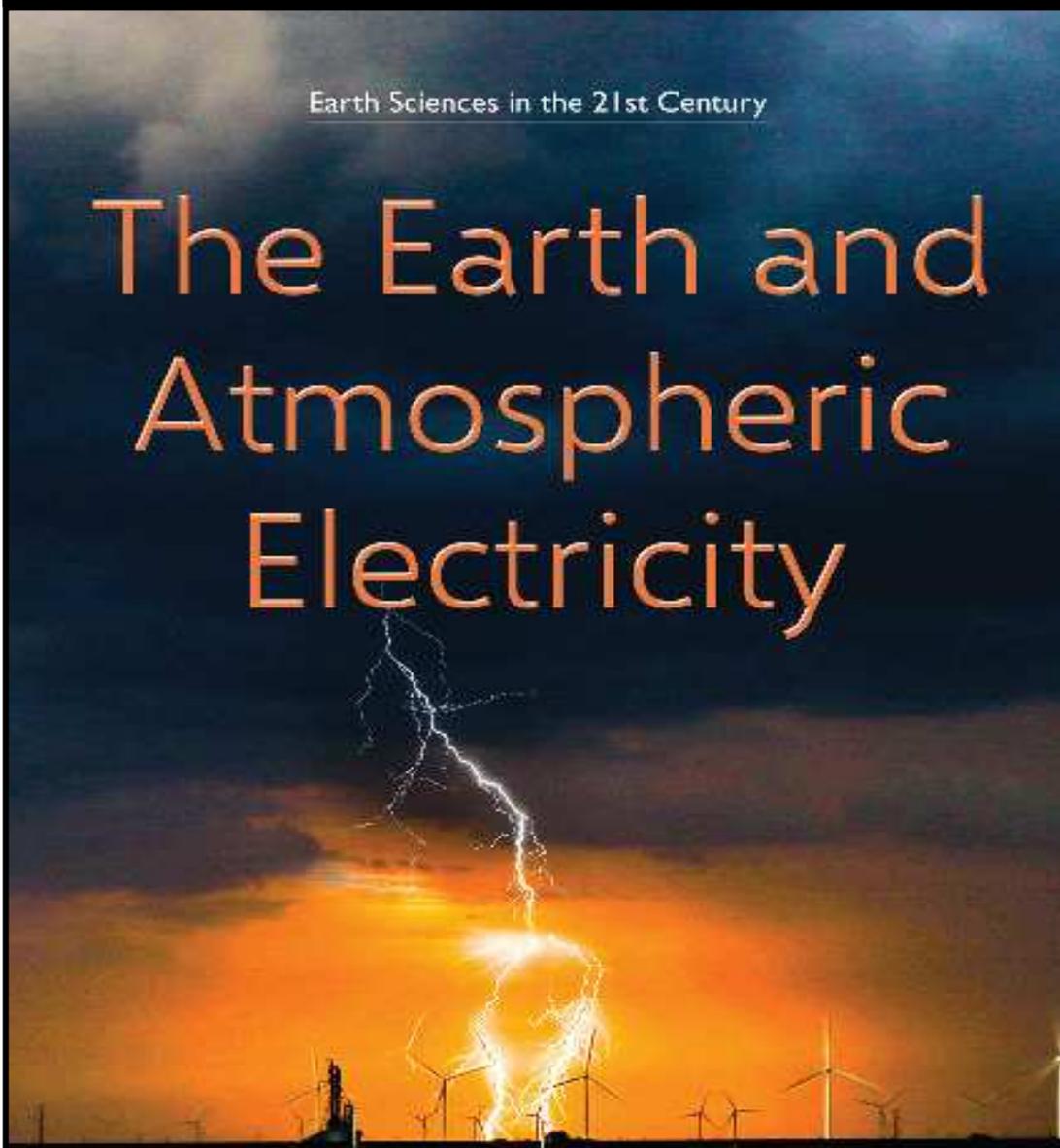
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