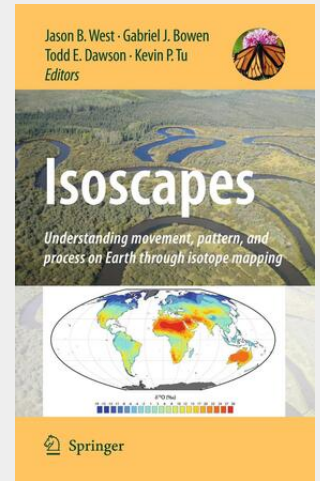


## Isoscapes

Understanding movement, pattern, and process on Earth through isotope mapping

Stable isotope ratio variation in natural systems reflects the dynamics of Earth systems processes and imparts isotope labels to Earth materials. Carbon isotope ratios of atmospheric CO<sub>2</sub> record exchange of carbon between the biosphere and the atmosphere; the incredible journeys of migrating monarchs is documented by hydrogen isotopes in their wings; and water carries an isotopic record of its source and history as it traverses the atmosphere and land surface. Through these and many other examples, improved understanding of spatio-temporal isotopic variation in Earth systems is leading to innovative new approaches to scientific problem-solving. This volume provides a comprehensive overview of the theory, methods, and applications that are enabling new disciplinary and cross-disciplinary advances through the study of "isoscapes": isotopic landscapes. "This impressive new volume shows scientists deciphering and using the natural isotope landscapes that subtly adorn our spaceship Earth.", Brian Fry, Coastal Ecology Institute, Louisiana State University, USA "An excellent timely must read and must-have reference book for anybody interested or engaged in applying stable isotope signatures to questions in e.g. Anthropology, Biogeochemistry, Ecology, or Forensic Science regarding chronological and spatial movement, changes, or distribution relating to animals, humans, plants, or water.", Wolfram Meier-Augenstein, Centre for Anatomy & Human Identification, University of Dundee, UK "Natural resources are being affected by global change, but exactly where, how, and at what pace? Isoscapes provide new and remarkably precise answers.", John Hayes, Woods Hole Oceanographic Institution, USA "This exciting volume is shaping a new landscape in environmental sciences that is utilizing the remarkable advances in isotope research to enhance and extend the capabilities of the field.", Dan Yakir, Weizmann Institute of Science, Israel

Stable isotope ratio variation in natural systems reflects the dynamics of Earth systems processes and imparts isotope labels to Earth materials. Carbon isotope ratios of atmospheric CO<sub>2</sub> record exchange of carbon between the biosphere and the atmosphere; the incredible journeys of migrating monarchs is documented by hydrogen isotopes in their wings; and water carries an isotopic record of its source and history as it traverses the atmosphere and land surface. Through these and many other examples, improved understanding of spatio-temporal isotopic variation in Earth systems is leading to innovative new approaches to scientific problem-solving. This volume provides a comprehensive overview of the theory, methods, and applications that are enabling new disciplinary and cross-disciplinary advances through the study of "isoscapes": isotopic landscapes. "This impressive new volume shows scientists deciphering and using the natural isotope landscapes that subtly adorn our spaceship Earth.", Brian Fry, Coastal Ecology Institute, Louisiana State University, USA "An excellent timely must read and must-have reference book for anybody interested or engaged in applying stable isotope signatures to questions in e.g. Anthropology, Biogeochemistry, Ecology, or Forensic Science regarding chronological and spatial movement, changes, or distribution relating to animals, humans, plants, or water.", Wolfram Meier-Augenstein, Centre for Anatomy & Human Identification, University of Dundee, UK "Natural resources are being affected by global change, but exactly where, how, and at what pace? Isoscapes provide new and remarkably precise answers.", John Hayes, Woods Hole Oceanographic Institution, USA "This exciting volume is shaping a new landscape in environmental sciences that is utilizing the remarkable advances in isotope research to enhance and extend the capabilities of the field.", Dan Yakir, Weizmann Institute of Science, Israel



**181,89 €**

169,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

**Artikelnummer:** 9789400791206

**Medium:** Buch

**ISBN:** 978-94-007-9120-6

**Verlag:** Springer Netherlands

**Erscheinungstermin:** 20.11.2014

**Sprache(n):** Englisch

**Auflage:** 2010

**Produktform:** Kartoniert

**Gewicht:** 768 g

**Seiten:** 487

**Format (B x H):** 155 x 235 mm

