

# NEWSLETTER GEOBRASIL

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- **NATURE**

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The role of environmental degradation in the collapse of human societies.  
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Geochemistry: Neon illuminates the mantle 25  
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The outer Earth grew largely from material added by impacts from planetesimals, rather than by capture of dust grains from the solar nebula — or at least that's the inference from the latest geochemical analyses.  
doi: 10.1038/433025a

Neon isotopes constrain convection and volatile origin in the Earth's mantle 33  
CHRIS J. BALLENTINE, BERNARD MARTY, BARBARA SHERWOOD LOLLAR & MARTIN CASSIDY  
doi: 10.1038/nature03182

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doi: 10.1038/nature03135

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doi: 10.1038/nature03138

- **SCIENCE**

System-Dependent Boundary Condition for Water Flow from Subsurface Source  
N. Lazarovitch, J. Simunek, and U. Shani

Soil Sci. Soc. Am. J. 2005; 69(1): p. 46-50  
<http://soil.scijournals.org/cgi/content/abstract/69/1/46?ct>

Extended Dual Composite Sphere Model for Determining Dielectric Permittivity of Andisols

Teruhito Miyamoto, Takeyuki Annaka, and Jiro Chikushi  
Soil Sci. Soc. Am. J. 2005; 69(1): p. 23-29  
<http://soil.scijournals.org/cgi/content/abstract/69/1/23?ct>

Oxidizing Behavior of Soil Manganese: Interactions among Abundance, Oxidation State, and pH

Christine Negra, Donald S. Ross, and Antonio Lanzirotti  
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<http://soil.scijournals.org/cgi/content/abstract/69/1/87?ct>

Composition of Organic Matter Fractions for Explaining Wettability of Three Forest Soils

R. H. Ellerbrock, H. H. Gerke, J. Bachmann, and M.-O. Goebel  
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Range of Fragipan Expression in Some Michigan Soils: I. Morphological, Micromorphological, and Pedogenic Characterization

Beth N. Weisenborn and Randall J. Schaetzl  
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Physical and Chemical Characteristics of Soils Forming on Boulder Tops, Karkevagge, Sweden

C. E. Allen  
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<http://soil.scijournals.org/cgi/content/abstract/69/1/148?ct>

Path and Multiple Regression Analyses of Phosphorus Sorption Capacity

H. Zhang, J. L. Schroder, J. K. Fuhrman, N. T. Basta, D. E. Storm, and M. E. Payton  
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<http://soil.scijournals.org/cgi/content/abstract/69/1/96?ct>

The Pathogenesis of Machado Joseph Disease: A High Manganese/Low Magnesium Initiated CAG Expansion Mutation in Susceptible Genotypes?

Mark Purdey  
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PALEONTOLOGY: Early Toolmakers

Brooks Hanson  
Science. 2005; 307(5706): p. 18a  
<http://www.sciencemag.org/cgi/content/summary/307/5706/18a?ct>

Giant Eagle had Modest Origins

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<http://www.sciencemag.org/cgi/content/summary/307/5706/38d?ct>

The Enigma of Prokaryotic Life in Deep Hypersaline Anoxic Basins

Paul W. J. J. van der Wielen, Henk Bolhuis, Sara Borin, Daniele

Daffonchio, Cesare Corselli, Laura Giuliano, Giuseppe D'Auria, Gert J. de Lange, Andreas Huebner, Sotirios P. Varnavas, John Thomson, Christian Tamburini, Danielle Marty, Terry J. McGenity, Kenneth N. Timmis, and BioDeep Scientific Party  
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ASTRONOMY: Enhanced: How Is the Solar Corona Heated?

Robert W. Walsh  
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INDIAN OCEAN TSUNAMI: In Wake of Disaster, Scientists Seek Out Clues to Prevention

Yudhijit Bhattacharjee  
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Mercury Adaptation among Bacteria from a Deep-Sea Hydrothermal Vent

Costantino Vetriani, Yein S. Chew, Susan M. Miller, Jane Yagi, Jonna Coombs, Richard A. Lutz, and Tamar Barkay  
Appl. Environ. Microbiol. 2005; 71(1): p. 220-226  
<http://aem.asm.org/cgi/content/abstract/71/1/220?ct>

Diversity and Distribution of Methanotrophic Archaea at Cold Seeps

Katrin Knittel, Tina Losekann, Antje Boetius, Renate Kort, and Rudolf Amann  
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Use of Fluorophore-Conjugated Lectins To Study Cell-Cell Interactions in Model Marine Biofilms

Barbara Wigglesworth-Cooksey and Keith E. Cooksey  
Appl. Environ. Microbiol. 2005; 71(1): p. 428-435  
<http://aem.asm.org/cgi/content/abstract/71/1/428?ct>

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