First in situ observation of crystallization processes in a basaltic-andesitic melt with the moissanite cell
Federica Schiavi, Nicolas Walte, and Hans Keppler

An Upper Cretaceous sag pond deposit: Implications for recognition of local seismicity and surface rupture along the Kaibab monoclone, Utah

Holocene ooids of Aitutaki Atoll, Cook Islands, South Pacific
Eugene C. Rankey and Stacy Lynn Reeder

Climate-driven processes of hillslope weathering
Jean L. Dixon, Arjun M. Heimsath, James Kaste, and Ronald Amundson

Multiple inflation and deflation events at Kenyan volcanoes, East African Rift
J. Biggs, E.Y. Anthony, and C.J. Ebinger

Lawsonite Lu-Hf geochronology: A new geochronometer for subduction zone processes
Sean R. Mulcahy, Robert L. King, and Jeffrey D. Vervoort

Deposits of flows transitional between turbidity current and debris flow
Esther J. Sumner, Peter J. Talling, and Lawrence A. Amy

Tsunami geomorphology: Erosion and deposition from the 15 November 2006 Kuril Island tsunami
Breany T. MacInnes, Joanne Bourgeois, Tatiana K. Pinenga, and Ekaterina A. Kravchunovskaya

Direct calculation of rupture depth for an exhumed paleoseismogenic fault from mylonitic pseudotachylyte
D.P. Moecher and M.G. Steltenpohl

The combined effect of sea level and supply during Milankovitch cyclicity: Evidence from shallow-marine δ¹⁸O records and sequence architecture (Adriatic margin)
D. Ridente, F. Trincardi, A. Piva, and A. Asioli

TIMING AND STRUCTURE OF THE 8.2 KYR B.P. EVENT INFERRED FROM δ¹⁸O RECORDS OF STALAGMITES FROM CHINA, OMAN, AND BRAZIL
Hai Cheng, Dominik Fleitmann, R. Lawrence Edwards, Xianfeng Wang, Francisco W. Cruz, Augusto S. Auler, Augusto Mangini, Yongjin Wang, Xinggong Kong, Stephen J. Burns, and Albert Matter

Extraterrestrial demise of banded iron formations 1.85 billion years ago
John F. Slack and William F. Cannon

The stable isotope altimeter: Do Quaternary pedogenic carbonates predict modern elevations?
Gregory D. Hohe, Carmala N. Garzione, Diego C. Aranéo, Claudio Latorre, Manfred R. Strecker, and Kendra J. Williams

Lake-sediment geochemistry reveals 1400 years of evolving extractive metallurgy at Cerro de Pasco, Peruvian Andes
Colin A. Cooke, Alexander P. Wolfe, and William O. Hobbs

Strain localization in vesicular magma: Implications for rheology and fragmentation
Heather M.N. Wright and Roberto F. Weinberg

Cellular energy conservation and the rate of microbial sulfate reduction
Qusheng Jin and Craig M. Bethke

Impacts of late Holocene rapid climate changes as recorded in a macrotidal coastal setting (Mont-Saint-Michel Bay, France)
I. Billaud, B. Tessier, and P. Lesueur

Timing and magnitude of recent accelerated sea-level rise (North Carolina, United States)
Andrew C. Kemp, Benjamin P. Horton, Stephen J. Culver, D. Reide Corbett, Orson van de Plassche, W. Roland Gehrels, Bruce C. Douglas, and Andrew C. Parnell

Barchan dunes stabilized under recent climate warming on the northern Great Plains
Stephen A. Wolfe and Christopher H. Hugenholtz

Diverse aqueous environments on ancient Mars revealed in the southern highlands
James J. Wray, Scott L. Murchie, Steven W. Squyres, Frank P. Seelos, and Livio L. Tornabene

A possible link between the geomagnetic field and catastrophic climate at the Paleocene-Eocene thermal maximum
Youn Soo Lee and Kazuto Kodama

Magnetostratigraphic data on Neogene growth folding in the foreland basin of the southern Tianshan Mountains
Jimin Sun, Yang Li, Zhenqing Zhang, and Bihong Fu
Cover: High-resolution elevation data from the Bigstick Sand Hills in southwestern Saskatchewan, Canada, showing parabolic sand dunes with back ridges and residual dune ridges. In association with optical ages, these morphological features document a recent transformation of barchan dunes to parabolic dunes in the northern Great Plains. See “Barchan dunes stabilized under recent climate warming on the northern Great Plains,” by Wolfe and Hugenholtz, p. 1039-1042.

Photo by: Christopher Hugenholtz
Cover design by: Heather L. Sutphin