

TH
G 37



Geochimica et Cosmochimica Acta

JOURNAL OF THE GEOCHEMICAL SOCIETY
AND THE METEORITICAL SOCIETY

EXECUTIVE EDITOR: MARC NORMAN

ASSOCIATE
EDITORS:

ROBERT C. ALLER
JEFFREY C. ALT
YURI AMELIN
CAROL ARNOSTI
MIRYAM BAR-MATTHEWS
LIANE G. BENNING
THOMAS S. BIANCHI
JANNE BLICHERT-TOFT
JEAN-FRANÇOIS BOILY
ANDREW ROSS BOWIE
MAUD BOYET
ALAN D. BRANDON
JOCHEN J. BROCKS
DAVID J. BURDIGE
PETE BURNARD
ROBERT H. BYRNE
JON CHOROVER
GEORGE COOPER
CHRISTOPHER J. DAUGHNEY
NICOLAS DAUPHAS

ANTHONY DOSSITO
JAMES FARQUHAR
JÉRÔME GAILLARDET
JWCHAR GANOR
SUSAN GLASAUER
JITENDRA N. GOSWAMI
JOHNSON R. HAAS
CHRIS M. HALL
H. RODGER HARVEY
GEORGE R. HELZ
SYDNEY R. HEMMING
PETER HERNES
GREGORY F. HERZOG
SHICHUN HUANG
TREVOR IRELAND
JUN-ICHIRO ISHIBASHI
ANDREW D. JACOBSON
KAREN JOHANNESSON
CLARK JOHNSON
DAVID T. JOHNSTON

CHRISTOPHER S. KIM
PENELOPE L. KING
CHRISTIAN KOEBERL
STEPHAN M. KRAEMER
S. KRISHNASWAMI
ALEXANDER N. KROT
GRAHAM A. LOGAN
TIMOTHY J. LYONS
TOM MCCOLLOM
FRANK McDERMOTT
JAMES McMANUS
ANDERS MEIBOM
JACK J. MIDDELBURG
FREDERIC MOYNIER
ALFONSO MUCCI
BJORN MYSEN
HIROKO NAGAHARA
ALEXANDER NEMCHIN
MARTIN NOVAK
PEGGY A. O'DAY

RICHARD PANCOST
DIMITRI PAPANASTASSIOU
ANN PEARSON
MARK REIKAMPER
W. UWE REIMOLD
PETER W. REINERS
EDWARD M. RIPLEY
CLAIRE ROLLION-BARD
YAIR ROSENTHAL
SARA S. RUSSELL
JAMES RUSTAD
EDWIN A. SCHAUBLE
JACQUES SCHIOTT
ALEX SESSIONS
SILKE SEVERMANN
TIMOTHY J. SHAW
STEVEN B. SHREY
DAVID L. SHUSTER
JAAP S. SINNINGHE DAMSTÉ
DONALD L. SPARKS

CARL STEFFEL
BRIAN W. STEWART
WEIDONG SUN
DIMITRI A. SVERJENSKY
MICHAEL J. TOPLIS
PETER ULMER
WIM VAN WESTRENIEN
BENJAMIN A.S. VAN MOOY
DEREK VANCE
RICHARD J. WALKER
JOSEF WERNE
STEFAN WEYER
JAN G. WIEDERHOLD
ROY A. WOGELIUS
QING-ZHU YIN
CHEN ZHU

Volume 100

January 1, 2013

G. QIAN, J. BRUGGER, D. TESTEMALE, W. SKINNER, A. PRING: Formation of As(II)-pyrite during experimental replacement of magnetite under hydrothermal conditions	1
K. TACHIKAWA, T. TOYOFUKU, I. BASILE-DOELSCH, T. DELHAYE: Microscale neodymium distribution in sedimentary planktonic foraminiferal tests and associated mineral phases	11
Z. WANG, S.-W. LEE, P. KAPOOR, B. M. TEBO, D. E. GIAMMAR: Uraninite oxidation and dissolution induced by manganese oxide: A redox reaction between two insoluble minerals	24
A. G. TOMKINS, R. F. WEINBERG, B. F. SCHAEFER, A. LANGENDAM: Disequilibrium melting and melt migration driven by impacts: Implications for rapid planetesimal core formation	41
R. D. DESHPANDE, A. S. MAURYA, B. KUMAR, A. SARKAR, S. K. GUPTA: Kinetic fractionation of water isotopes during liquid condensation under super-saturated condition	60
F. CHABAUX, E. BLAES, P. STILLE, R. DI CHIARA ROUPERT, E. PELT, A. DOSSETO, L. MA, H. L. BUSS, S. L. BRANTLEY: Regolith formation rate from U-series nuclides: Implications from the study of a spheroidal weathering profile in the Rio Icaos watershed (Puerto Rico)	73
Q. Y. LIU, R. H. WORDEN, Z. J. JIN, W. H. LIU, J. LI, B. GAO, D. W. ZHANG, A. P. HU, C. YANG: TSR versus non-TSR processes and their impact on gas geochemistry and carbon stable isotopes in Carboniferous, Permian and Lower Triassic marine carbonate gas reservoirs in the Eastern Sichuan Basin, China	96
N. IMAE, S. TAYLOR, N. IWATA: Micrometeorite precursors: Clues from the mineralogy and petrology of their relict minerals	116
L. ACKERMAN, L. PITCHER, L. STRNAD, I. S. PUCHTEL, E. JELÍNEK, R. J. WALKER, J. ROHOVEC: Highly siderophile element geochemistry of peridotites and pyroxenites from Horní Bory, Bohemian Massif: Implications for HSE behaviour in subduction-related upper mantle	158
D. F. WIGGERS DE VRIES, G. P. BULANOVA, K. DE CORTE, D. G. PEARSON, J. A. CRAVEN, G. R. DAVIES: Micron-scale coupled carbon isotope and nitrogen abundance variations in diamonds: Evidence for episodic diamond formation beneath the Siberian Craton	176

F. SCHOLZ, C. HENSEN, M. SCHMIDT, J. GEERSEN: Submarine weathering of silicate minerals and the extent of pore water freshening at active continental margins	200
R. NISHIYAMA, T. MUNEMOTO, K. FUKUSHI: Formation condition of monohydrocalcite from CaCl ₂ -MgCl ₂ -Na ₂ CO ₃ solutions	217
N. CHUBAR, T. VISSER, C. AVRAMUT, H. DE WAARD: Sorption and precipitation of Mn ²⁺ by viable and autoclaved <i>Shewanella putrefaciens</i> : Effect of contact time	232
J. DECLERCO, T. DIEDRICH, M. PERROT, S. R. GISLASON, E. H. OELKERS: Experimental determination of rhyolitic glass dissolution rates at 40–200 °C and 2 < pH < 10.1	251
Y. CANDELIER, F. MINOLETTI, I. PROBERT, M. HERMOSO: Temperature dependence of oxygen isotope fractionation in coccolith calcite: A culture and core top calibration of the genus <i>Calcidiscus</i>	264
K. MIN, P. W. REINERS, D. L. SHUSTER: (U–Th)/He ages of phosphates from St. Séverin LL6 chondrite	282
I. VLASTÉLIC, T. STAUDACHER, C. DENIEL, J. L. DEVIDAL, B. DEVOUARD, A. FINIZOLA, P. TÉLOUK: Lead isotopes behavior in the fumarolic environment of the Piton de la Fournaise volcano (Réunion Island)	297

Available online at www.sciencedirect.com

SciVerse ScienceDirect

Geochimica et Cosmochimica Acta is abstracted/listed in *Mineral. Abstr.*, *Biol. Abstr.*, *Chem. Abstr.*, *Curr. Cont.*, *Excerpt. Med.*, *Ocean. Abstr.*, *Pollut. Abstr.*, *Sci. Abstr.*, *Sci. Cit Ind.*, *AESIS*, *Br. Geol. Lit.*, *Deep-Sea Res. & Oceanogr. Abstr.*, *Fuel & Energy Abstr.*, *Geo. Abstr.*, *GoeRef.*, *INIS Atomind.*, *Ind. Sci. Rev.*, *Int. Aerosp. Abstr.*, *E&P Hlth.*, *Mass Spectr. Bull.*, *Org. Geochem.*, *Petrol. Abstr.*, *Sel. Water Res. Abstr.*, *So. Pac. Per. Ind.*, *Soils & Fert.*, *Gas Process. & Ppl.*, *W.R.C. Inf.*, *Meteor. & Geostrophys. Abstr.*, *Off. Tech.* Also covered in the abstract and citation database SciVerse Scopus®. Full text available on SciVerse ScienceDirect®

