



Geochimica et Cosmochimica Acta

JOURNAL OF THE GEOCHEMICAL SOCIETY
AND THE METEORITICAL SOCIETY

EXECUTIVE EDITOR: MARC NORMAN

ASSOCIATE EDITORS:	JEFFREY C. ALT YURI AMELIN LAWRENCE M. ANOVITZ WOLFGANG BACH MIRYAM BAR-MATTHEWS THOMAS S. BIANCHI JANNE BLICHERT-TOFT JEAN-FRANÇOIS BOILY ANDREW ROSS BOWIE MAUD BOYET Jochen J. BROCKS PETE BURNARD ROBERT H. BYRNE ELIZABETH A. CANUEL JON CHOROVER GEORGE COOPER CHRISTOPHER J. DAUGHNEY NICOLAS DAUPHAS	ANTHONY DOSSETO JAMES FARQUHAR JÉRÔME GAILLARDET JIWCHAR GANOR DANIEL E. GIAMMAR JITENDRA N. GOSWAMI CHRIS M. HALL PETER HERNES GREGORY F. HERZOG EDWARD HORNIBROOK SHICHUN HUANG TREVOR IRELAND JUN-ICHIRO ISHIBASHI ANDREW D. JACOBSON BJØRN JAMTVÆT KAREN JOHANNESSON CLARK JOHNSON DAVID T. JOHNSTON	CHRISTOPHER S. KIM PENELOPE L. KING CHRISTIAN KOEBERL S. KRISHNASWAMI ALEXANDER N. KROT TIMOTHY J. LYONS TOM MCCOLLOM FRANK MCDERMOTT JAMES MCMAHON ANDERS MEIBOM JACK J. MIDDELBURG FREDERIC MOYNIER ALFONSO MUCCI HIROKO NAGAHARA ALEXANDER NEMCHIN MARTIN NOVAK RICHARD PANCOST DIMITRI PAPANASTASSIOU	ANN PEARSON GLEB S. POKROVSKI MARK REHKAMPER W. UWE REIMOLD PETER W. REINERS EDWARD M. RIPLEY CLAIRE ROLLION-BARD YAIR ROSENTHAL SARA S. RUSSELL JAMES RUSTAD NITA SAHAL EDWIN A. SCHAUBLE JACQUES SCHOTT ALEX SESSIONS SILKE SEVERMANN TIMOTHY J. SHAW STEVEN B. SHIREY DAVID L. SHUSTER	JAAP S. SINNINGHE DAMSTÉ CARL STEEFEL BRIAN W. STEWART CLAUDINE STIRLING WEIDONG SUN MICHAEL J. TOPLIS PETER ULMER WIM VAN WESTRENN 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 116

September 1, 2013

Looking Inside: 3D Structures of Meteorites

D. C. HEZEL, J. M. FRIEDRICH, M. UESUGI: Looking inside: 3D structures of meteorites	1
A. TSUCHIYAMA, T. NAKANO, K. UESUGI, M. UESUGI, A. TAKEUCHI, Y. SUZUKI, R. NOGUCHI, T. MATSUMOTO, J. MATSUNO, T. NAGANO, Y. IMAI, T. NAKAMURA, T. OGAMI, T. NOGUCHI, M. ABE, T. YADA, A. FUJIMURA: Analytical dual-energy microtomography: A new method for obtaining three-dimensional mineral phase images and its application to Hayabusa samples	5
M. UESUGI, K. UESUGI, A. TAKEUCHI, Y. SUZUKI, M. HOSHINO, A. TSUCHIYAMA: Three-dimensional observation of carbonaceous chondrites by synchrotron radiation X-ray CT – Quantitative analysis and developments for the future sample return missions ..	17
D. C. HEZEL, P. ELANGOVAN, S. VIEHMANN, L. HOWARD, R. L. ABEL, R. ARMSTRONG: Visualisation and quantification of CV chondrite petrography using micro-tomography	33
E. BEITZ, J. BLUM, R. MATHIEU, A. PACK, D. C. HEZEL: Experimental investigation of the nebular formation of chondrule rims and the formation of chondrite parent bodies	41
S. S. RUSSELL, L. HOWARD: The texture of a fine-grained calcium–aluminium-rich inclusion (CAI) in three dimensions and implications for early solar system condensation	52
J. M. FRIEDRICH, M. L. RIVERS: Three-dimensional imaging of ordinary chondrite microporosity at 2.6 µm resolution	63
J. M. FRIEDRICH, A. RUZICKA, M. L. RIVERS, D. S. EBEL, J. O. THOSTENSON, R. A. RUDOLPH: Metal veins in the Kernouvé (H6 S1) chondrite: Evidence for pre- or syn-metamorphic shear deformation	71
T. MATSUMOTO, A. TSUCHIYAMA, K. NAKAMURA-MESSENGER, T. NAKANO, K. UESUGI, A. TAKEUCHI, M. E. ZOLENSKY: Three-dimensional observation and morphological analysis of organic nanoglobules in a carbonaceous chondrite using X-ray micro-tomography	84
A. W. NEEDHAM, R. L. ABEL, T. TOMKINSON, M. M. GRADY: Martian subsurface fluid pathways and 3D mineralogy of the Nakhla meteorite	96