

MRS **Advances**

Scientific Basis for Nuclear Waste Management XLI

<https://doi.org/10.1557/adv.2018.362> Published online by Cambridge University Press

MRS Advances: Scientific Basis for Nuclear Waste Management XLI

Associate Editor:

David F. Bahr, *Purdue University*

Principal Editors:

Yingjie Zhang, ANSTO, *Australia*
Daniel J. Gregg, ANSTO, *Australia*

Gregory R. Lumpkin, ANSTO, *Australia*
Eric R. Vance, ANSTO, *Australia*

MRS Advances Editorial Board:

Editor-in-Chief: David F. Bahr, *Purdue University*
Asa Barber, *University of Portsmouth, United Kingdom*
Meenakshi Dutt, *Rutgers University*
Elizabeth L. Fleischer, *Materials Research Society*
Marian Kennedy, *Clemson University*

Marilyn L. Minus, *Northeastern University*
Roger J. Narayan, *University of North Carolina/North Carolina State University*
Ruth Schwaiger, *Karlsruhe Institute of Technology, Germany*
Jeremy Theil, *Mountain View Energy*

Materials Research Society Editorial Office, Warrendale, PA:

Ellen W. Kracht, *Publications Manager*
Susan Dittrich, *Journals Editorial Assistant*

Kirby L. Morris, *Journals Production Assistant*
Eileen M. Kiley, *Director of Communications*

Disclaimer

Authors of each article appearing in this Journal are solely responsible for all contents in their article(s) including accuracy of the facts, statements, and citing resources. Facts and opinions are solely the personal statements of the respective authors and do not necessarily represent the views of the editors, the Materials Research Society, or Cambridge University Press.

MRS Advances (EISSN: 2059-8521) is published by Cambridge University Press, One Liberty Plaza, Floor 20, New York, NY 10006 for the Materials Research Society.

Copyright © 2018, Materials Research Society. All rights reserved. No part of this publication may be reproduced, in any form or by any means, electronic, photocopying, or otherwise, without permission in writing from Cambridge University Press. Policies, request forms and contacts are available at: <http://www.cambridge.org/rights/permissions/permission.htm>. Permission to copy (for users in the USA) is available from Copyright Clearance Center at: <http://www.copyright.com>, email: info@copyright.com.

Purchasing Options:

Premium Subscription- Premium Subscription includes current subscription and one year's lease access to the full MRS Online Proceedings Library Archive for \$7,219.00 / £4,888.00 / €6,647.00. *Subscription-* Subscription with perpetual access to the content subscribed to in a given year, including three years of back-file lease access to content from the MRS Online Proceedings Library Archive. The price for a 2018 subscription is \$3,019.00 / £1,948.00 / €2,625.00. *MRS Members-* Access to *MRS Advances* is available to all MRS members without charge.

Contact Details:

For all inquiries about pricing and access to *MRS Advances*, please get in touch via the following email addresses: online@cambridge.org (for the Americas); library.sales@cambridge.org (for UK, Europe, and rest of world).

cambridge.org/adv

CONTENTS

- Dissolution Kinetics of Synthetic LaPO_4 -monazite in Acidic Media 1133**
Yulia Arinicheva, Stefan Neumeier, Felix Brandt,
Dirk Bosbach, and Guido Deissmann
- Dissolution Behavior of Lead Borate Glass Under Simulated
Geological Disposal Conditions 1139**
Atsushi Mukunoki, Takahiro Kikuchi,
Tamotsu Chiba, Tomofumi Sakuragi,
Toshihiro Kogure, and Tsutomu Sato
- Dissolution of Glass in Cementitious Solutions: An Analogue
Study for Vitrified Waste Disposal 1147**
Colleen Mann, Tjin Le Hoh, Clare L. Thorpe,
and Claire L. Corkhill
- Effect of Carbonate on the Migration Behavior of
Lanthanides in Compacted Bentonite 1155**
Kazuya Idemitsu, Kazuyuki Fujii,
Noriyuki Maeda, Yuki Kakoi, Noriya Okubo,
Yaohiro Inagaki, and Tatsumi Arima
- Digital Autoradiography on C-14-labelled PMMA Impregnated
Rock Samples using the Beaver™ 1161**
Mikko Voutilainen, Juuso Sammaljärvi,
Eveliina Muuri, Jérôme Donnard, Samuel Duval,
and Marja Siitari-Kauppi
- Porosity Distribution in a Heterogeneous Clay-rich Fault Core by
Image Processing of ^{14}C -PMMA Autoradiographs and Scanning
Electron Microscopy 1167**
Ville Nenonen, Juuso Sammaljärvi, Bo Johanson,
Mikko Voutilainen, Emilie L'Hôpital,
Pierre Dick, and Marja Siitari-Kauppi
- Leaching of Nirex Reference Vault Backfill Cement by Clay,
Granite and Saline Groundwaters 1175**
Rita G.W. Vasconcelos, Andres Idiart,
Neil C. Hyatt, John L. Provis,
and Claire L. Corkhill

**Dynamics of Gas Release During Thermal Oxidation of
TBP Solutions in Isopar-M in Two-phase System. 1181**
Elena V. Belova, Zayana V. Dzhivanova,
Boris F. Myasoedov, and Sergey V. Stefanovsky

**Challenges and Solutions for Handling and Characterizing
Alkali-Tc-Oxide Salts 1191**
Jamie L. Weaver, Chuck Soderquist,
Nancy Washton, Paul Gassman,
Eric Walter, Mark Bowden,
Wayne Lukens, and John S. McCloy