

FW  
P59/2m

# Physics and Chemistry of Minerals

NO SUBMISSION FEE  
FOR FULL COLOR ILLUSTRATIONS!



 Springer

## Editors-in-Chief

### C.A. McCammon

Bayerisches Geoinstitut  
Universität Bayreuth  
95440 Bayreuth, Germany  
e-mail: catherine.mccammon@uni-bayreuth.de

### T. Tsuchiya

Geodynamics Research Center  
Ehime University  
2-5 Bunkyo-cho  
Matsuyama 790-8577, Japan  
e-mail: takut@sci.ehime-u.ac.jp

### M. Rieder

Mimoňská 14 / 638  
190 00 Praha 9 - Prosek  
Czech Republic  
e-mail: Milan\_Rieder@JHU.edu

### A. Kavner

Department of Earth and Space Sciences  
University of California, Los Angeles  
595 Charles Young Drive East, Box 951567  
Los Angeles, CA 90095-1567  
e-mail: akavner@ucla.edu

## Founding Editors

S.S. Hafner, C.T. Prewitt and A.S. Marfunin

## Physics and Chemistry of Minerals Volume 41 · Number 4 · April 2014

### ORIGINAL PAPERS

#### **The structure and transformation of the nanomineral schwertmannite: a synthetic analog representative of field samples**

R.A. French · N. Monsegue · M. Murayama · M.F. Hochella Jr. 237

#### **Raman and infrared study of hydroxyl sites in natural uvite, fluor-uvite, magnesio-foitite, dravite and elbaite tourmalines**

C. Fantini · M.C. Tavares · K. Krambrock · R.L. Moreira · A. Righi 247

#### **An EELS study of near edge structures of the oxygen K-edge in spinels**

S. Nyquist · U. Hålenius 255

#### **X-ray single-crystal and Raman study of knorringite, $Mg_3(Cr_{1.58}Mg_{0.21}Si_{0.21})Si_3O_{12}$ , synthesized at 16 GPa and 1,600 °C**

E.A. Bykova · A.V. Bobrov · E.A. Sirotkina · L. Bindi · S.V. Ovsyannikov · L.S. Dubrovinsky · Y.A. Litvin 267

#### **Theoretical investigations of the spin Hamiltonian parameters and local angular variations for the trigonal $V^{3+}$ centers in alum compounds**

Z.-H. Zhang · S.-Y. Wu · X.-F. Hu · M.-Q. Kuang 273

#### **Enhancing dispersion of halloysite nanotubes via chemical modification**

H. Lun · J. Ouyang · H. Yang 281

#### **Infrared spectroscopic properties of goethite: anharmonic broadening, long-range electrostatic effects and Al substitution**

M. Blanchard · E. Balan · P. Giura · K. Béneut · H. Yi · G. Morin · C. Pinilla · M. Lazzeri · A. Floris 289

#### **Observation of pressure-induced phase transition of $\delta$ -AlOOH by using single-crystal synchrotron X-ray diffraction method**

T. Kuribayashi · A. Sano-Furukawa · T. Nagase 303

**Further articles** can be found at [link.springer.com](http://link.springer.com)

**Indexed** in Science Citation Index, Science Citation Index Expanded (SciSearch), SCOPUS, Astrophysics Data System (ADS), Chemical Abstracts Service (CAS), Google Scholar, EBSCO, Academic OneFile, ChemWeb, Current Abstracts, Current Contents/Physical, Chemical and Earth Sciences, EI-Compendex, Gale, Geobase, GeoRef, INIS Atomindex, International Bibliography of Book Reviews (IBR), International Bibliography of Periodical Literature (IBZ), Journal Citation Reports/Science Edition, Materials Science Citation Index, OCLC, SCImago, Summon by Serial Solutions, VINITI - Russian Academy of Science

**Instructions for authors** for *Phys Chem Minerals* are available at [www.springer.com/269](http://www.springer.com/269)