SCOPE OF THE JOURNAL

Mineralogical Magazine is an international journal of mineral sciences, published six times a year, which covers the fields of mineralogy, crystallography, geochemistry, petrology, environmental geology and economic geology. The journal has been published continuously since the founding of the Society in 1876 and is a leading journal in its field. As well as research papers the journal also includes book reviews.

SUBMISSION OF MANUSCRIPTS

Authors wishing to submit a paper to Mineralogical Magazine should first consult the Society's Notes for Authors Submitting Papers to the Mineralogical Magazine which can be found on the web site at https://www.cambridge.org/MGM. All manuscripts are to submitted online at http://www.editorialmanager.com/minmag All authors are allowed, free of charge, an e-print of their papers published in the journal.

JOIN THE MINERALOGICAL SOCIETY TODAY

If you are a regular reader of Mineralogical Magazine consider joining the Society and receiving your own copy six times a year at very modest cost. Membership currently starts at £55 per annum. For this, you will receive bimonthly copies of Elements, our international membership magazine (in full colour) on mineralogy, geochemistry and petrology as well as online access to Mineralogical Magazine, Clay Minerals and Elements. You may also opt to pay an additional premium in order to continue receiving paper copies of our journals. Full details on how to join the Society and an application form can be found on the Society's web site at www.minersoc.org. Membership of the Society introduces you to a vibrant community of those interested in the mineral sciences. Through membership of one or more of the Society's eight special interest groups you can take an active part in the Society's numerous scientific meetings and conferences as described on the website.

MINERALOGICAL SOCIETY JOURNALS

Mineralogical Magazine

International journal of mineral sciences which covers the fields of mineralogy, crystallography, geochemistry, petrology, environmental geology and economic geology. This journal is available primarily as an e-journal.

Clay Minerals

International journal of clay minerals and fine particle science, published four times a year, including research papers about clays, clay minerals and related materials, natural or synthetic. The journal includes papers on Earth processes, soil science, geology/mineralogy, chemistry/material science, colloid/surface science and applied science and technology. The journal is available primarily as an e-journal.

COPYRIGHT

For both the paper and electronic versions, copyright of all papers accepted shall be assigned to The Mineralogical Society before publication, except where Crown Copyright is reserved.

Typeset by Nova Techset Private Limited, Bengaluru and Chennai, India Printed by Henry Ling Ltd., Dorchester, Dorset, UK Published by Cambridge University Press, Shaftesbury Road, Cambridge, UK

CONTENTS

REVIEW ARTICLE

JENS GÖTZE, YUANMING PAN and AXEL MÜLLER: Mineralogy and mineral chemistry of quartz: A review	639
ARTICLES	
ANNA GARAVELLI, DANIELA PINTO, DONATELLA MITOLO and UWE KOLITSCH: Thermessaite-(NH_4), (NH_4) ₂ AIF_3 (SO_4), a new fumarole mineral from La Fossa crater at Vulcano, Aeolian Islands, Italy	665
EMIL AARESTRUP, IAIN McDONALD, PAUL E.B. ARMITAGE, ALLEN P. NUTMAN, OLE CHRISTIANSEN and KRISTOFFER SZILAS: The Mesoarchean Amikoq Layered Complex of SW Greenland: Part 2. Geochemical evidence for high-Mg noritic plutonism through crustal assimilation	673
IGOR V. PEKOV, NATALIA V. ZUBKOVA, ATALI A. AGAKHANOV, VASILIY O. YAPASKURT, DMITRY I. BELAKOVSKIY, MARINA F. VIGASINA, SERGEY N. BRITVIN, ANNA G. TURCHKOVA, EVGENY G. SIDOROV and DMITRY YU. PUSHCHAROVSKY: New arsenate minerals from the Arsenatnaya fumarole, Tolbachik volcano, Kamchatka, Russia. XVI. Yurgensonite, K ₂ SnTiO ₂ (AsO ₄) ₂ , the first natural tin arsenate, and the katiarsite–yurgensonite isomorphous series	698
WILSON A. CRICHTON, HARALD MÜLLER and MATTEO LEONI: Synthesis and structure of calumetite-like $SrCu_4(OH)_8Cl_2\cdot 3.5H_2O$	708
JIŘÍ SEJKORA, CRISTIAN BIAGIONI, LUBOŠ VRTIŠKA and YVES MOËLO: Zvěstovite-(Zn), $Ag_6(Ag_4Zn_2)As_4S_{13}$, a new tetrahedrite-group mineral from Zvěstov, Czech Republic	716
ŠTĚPÁN CHLÁDEK, PAVEL UHER, MILAN NOVÁK, PETER BAČÍK and TOMÁŠ OPLETAL: Microlite-group minerals: tracers of complex post-magmatic evolution in beryl–columbite granitic pegmatites, Maršíkov District, Bohemian Massif, Czech Republic	725
CRISTIAN BIAGIONI, JIŘÍ SEJKORA, THOMAS RABER, PHILIPPE ROTH, YVES MOËLO, ZDENĚK DOLNÍČEK and MARCO PASERO: Tennantite-(Hg), $Cu_6(Cu_4Hg_2)As_4S_{13}$, a new tetrahedrite-group mineral from the Lengenbach quarry, Binn, Switzerland	744
ANTHONY M.T. BELL, FRANCIS CLEGG and CHRISTOPHER M.B. HENDERSON: Monoclinic–orthorhombic first-order phase transition in K ₂ ZnSi ₅ O ₁₂ leucite analogue; transition mechanism and spontaneous strain analysis	752
ANATOLY V. KASATKIN, NATALIA V. ZUBKOVA, IGOR V. PEKOV, NIKITA V. CHUKANOV, RADEK ŠKODA, ATALI A. AGAKHANOV, DMITRIY I. BELAKOVSKIY, SERGEY N. BRITVIN and DMITRY YU. PUSHCHAROVSKY: The mineralogy of the historical Mochalin Log <i>REE</i> deposit, South Urals, Russia. Part IV. Alexkuznetsovite-(La), $La_2Mn(CO_3)(Si_2O_7)$, alexkuznetsovite-(Ce), $Ce_2Mn(CO_3)(Si_2O_7)$ and biraite-(La), $La_2Fe^{2+}(CO_3)(Si_2O_7)$, three new isostructural minerals and a definition of the biraite group	772
ASTRID SIACHOQUE, CAIO A. SANTOS and SILVIO R.F VLACH: Amphiboles and phyllosilicates in the A-type Mandira Granite Massif, Graciosa Province, SE Brazil: Textures, composition and crystallisation conditions	784
NIKITA V. CHUKANOV, GERHARD MÖHN, FABRICE DAL BO, NATALIA V. ZUBKOVA, DMITRY A. VARLAMOV, IGOR V. PEKOV, LAURENT JOUFFRET, JEAN-MARC HENOT, PASCAL CHOLLET, YANNICK VESSELY, HENRIK FRIIS, DMITRY A. KSENOFONTOV, ATALI A. AGAKHANOV, SERGEY N. BRITVIN, JOY DESOR, NATALIA N. KOSHLYAKOVA and DMITRY YU. PUSHCHAROVSKY: Oberwolfachite, SrFe ³⁺ (AsO ₄)(SO ₄)(OH) ₆ , a new alunite-supergroup mineral from the Clara mine, Schwarzwald, Germany and Monterniers mine, Rhône, France	808
ELENA S. ZHITOVA, NIKITA V. CHUKANOV, ERIK JONSSON, IGOR V. PEKOV, DMITRY I. BELAKOVSKIY, MARINA F. VIGASINA, NATALIA V. ZUBKOVA, KONSTANTIN V. VAN and SERGEY N. BRITVIN: Erssonite, $CaMg_7Fe_2^{3+}(OH)_{18}(SO_4)_2 \cdot 12H_2O$, a new hydrotalcite-supergroup mineral from Långban, Sweden	817



