INTERNATIONAL MINERALOGICAL ASSOCIATION
COMMISSION ON NEW MINERALS, NOMENCLATURE AND CLASSIFICATION

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5 June, 2025

Dear Igor V. Pekov,

Congratulations on your new mineral, 2025-024_VAKHRUSHEVAITE!

The attached summary will appear in my next memorandum to the members of the Commission on New Minerals, Nomenclature and Classification (CNMNC). You should consider the comments of the members when you write your final description.

Although the Commission has no strict rule dealing with publication, I would ask that you ensure that the first published record of your mineral is in the scientific literature.
The CNMNC has decided to announce new minerals (with or without their name, depending upon the authors' wishes) with some data on the CNMNC website, one month after their approval. The text that will appear is attached below.

One of the rules of our Commission is that the description of a new mineral must be published within **two years** of notification of the approval. If publication does not take place during that time, approval of the mineral and its name will be withdrawn.

Proof of receipt of the type specimen(s) by the curator of the collection in which the type specimen(s) have been deposited must be sent to me as soon as possible to ensure approval**.**
The Commission strongly disapproves of the practice of providing specimens of new species to mineral dealers prior to the full description of the new species being published in the scientific literature.

You must be sent a copy of this letter with the manuscript of your description when you submit the paper for publication. This will indicate to the editor of the journal that the mineral and its name have been approved by the CNMNC of the International Mineralogical Association as well as the comments of the CNMNC members.

Please send a reprint of the description to me when it is published.

Best regards,

Ferdinando Bosi

Chairman CNMNC

Encl.

Monthly announcement of new minerals on the CNMNC website and in the *Mineralogical Magazine* and *the European Journal of Mineralogy* with or without their name, with a limited number of data.

The Commission on New Minerals, Nomenclature and Classification decided in January 2010 (Proposal 09-D: the early publication of new mineral names) that additional data would be published one month after the approval date on the CNMNC website. This data will also be published in the *Mineralogical Magazine* and in the *European Journal of Mineralogy*, under the heading of a CNMNC Newsletter.

For your newly approved mineral, the following data will be published in line with the above, unless you wish the mineral name to remain confidential until the full description is published. If this is the case, the name will be removed from the data listed below. **NOTIFY ME BY E-MAIL IF YOU DO NOT WISH TO HAVE THE NAME OF YOUR MINERAL RELEASED PRIOR TO PUBLICATION.**

IMA No. **2025-024**
Vakhrushevaite
$Mg_5Cr(AlSi_3O_{10})(OH)_8$
Symbol
Northern part of the Glavnoe (Main) Saranovskoe deposit, Sarany town, 5 km north of the railway station Laki, Gornozavodskiy district, Perm Krai, Middle Urals, Russia (58°30' N, 58°52' E)
Igor V. Pekov*, Yuriy V. Erokhin, Maria G. Krzhizhanovskaya, Vasiliy O. Yapaskurt, Nikita V. Chukanov, Dmitry I. Belakovskiy, Sergey N. Britvin and Pavel B. Shiryaev
*E-mail: igorpekov@mail.ru
The Cr analogue of clinochlore
Triclinic: $C\bar{1}$; structure determined
a = 5.3375(3), b = 9.2455(6), c = 14.3313(5) Å, α = 90.237(4), β = 97.123(6), γ = 89.978(4)°
14.41(44), 7.15(100), 4.756(66), 3.562(66), 2.592(39), 2.550(75), 2.448(48), 2.390(30)
Type material is deposited in the collections of the Fersman Mineralogical Museum, Russian Academy of Sciences, Leninsky Pr. 18-2, 119071 Moscow, Russia, registration number 6241/1
How to cite: Pekov, I.V., Erokhin, Y.V., Krzhizhanovskaya, M.G., Tapaskurt, V.O., Chukanov, N.V., Belakovskiy, D.I., Britvin, S.N. and Shiryaev, P.B. (2025) Vakhrushevaite, IMA 2025-024. CNMNC Newsletter 86, Eur. J. Mineral., 37, https://doi.org/.....

2025-024
VAKHRUSHEVAITE

	Yes	No	Abstain
Mineral	25		2
Name	27		

Consequently, both the mineral and the name have been **approved**.

COMMENTS ON THE MINERAL:

Those who voted **YES** made the following comments:

1. Hydrothermal mineral in chromitite. Member of the chlorite group.
2. The only good Gladstone-Dale compatibility seems to be worth a comment.
3. I agree that Cr^{3+} must be shown in the ideal formula because it defines the proposed new species belonging to the chlorite group.
4. The authors mention that there is plenty of localities with minerals of a similar chemistry, which could have crystals better suited for a single crystal refinement. Even though it's not required perhaps such a sample could be acquired and a full single crystal refinement could be performed.
5. A table with the corresponding BVS is missing.
6. SCXRD data is absent, but there is refinement of the crystal structure by the Rietveld method.
7. Good description.
8. Name: after late Russian expert on chromite-rich ultramafic complexes, who initiated investigation of this material.
   Occurrence/Paragenesis: fine-grained aggregates with uvarovite and shuiskite-(Cr), as hydrothermal alteration product of chromite in chromitite.
   Chemical Analysis/Formula: OK. H content calculated from stoichiometry.
   Physical Properties: OK, some by analogy with other chlorite species.
   Optical Properties: OK. RI values given to only two decimal places. Is there any tendency for apparent colour to shift depending on colour temperature of illumination ("alexandrite effect")? This is common in purple Cr^{3+} minerals.
   XRD data/Crystal Structure: OK. IIb-4 chlorite polytype.
   Other data: IR spectrum provided.
   Type material location: OK.
   Relationship to other minerals: Cr^{3+} analogue of clinochlore.
9. It is a pity that the structure could not be measured directly for this new chlorite group mineral. Shouldn't this be done using good-quality, abundant material from one of the ten other localities mentioned in the authors' remarks (e.g., "kämmererite from Turkey")?

Those who **NO** made the following comments:

Those who voted **ABSTAINED** made the following comments:

1. Rietveld refinement provides no reliable information on hydrogen positions, which directly impacts the accuracy of the structure-derived formula. Furthermore, in the

absence of a structural representation, the reader is left uncertain about which oxygen atoms might be involved in hydrogen bonding.

2. As acknowledged, Cr(III) does not dominate at any site. Taken as is, the refinement results seem to suggest the ideal formula [$Mg_6Si_4O_{10}(OH)_8$] when dominant occupancy/dominant valence rules are applied to the empirical formula. The analogy to chromio-pargasite is problematic; that C = (Mg_4Cr) in chromio-pargasite and C = (Mg_4Al) in pargasite is a required of valency-imposed double occupancy, which does not appear to be the case here.

COMMENTS ON THE NAME:
Those who voted **YES** made the following comments:

Those who **NO** made the following comments:

Those who voted **ABSTAINED** made the following comments:
