ropy, with polarization colors of light bluish gray to brown. Reflectance percentages in air and in oil are given in 20 nm steps from 400 to 700 nm; representative values for $R_1$ and $R_2$ in air are 43.2, 49.9 (470 nm), 52.0, 58.5 (589), and 55.6, 60.7 (650). \(\text{VHN}_{20} = 346–369\). Electron microprobe analyses, listed for five grains, confirm the probable formula \(\text{Pd}_6\text{AgTe}_4\). J.L.J.

**ROSENHAHNITE**


The mineral from a new locality, the Bazhenovskoye deposit, Urals, Russia, forms colorless tabular crystals, up to 1.5 cm long and showing \{100\}, \{010\}, \{111\}, and \{111\}. An energy-dispersion electron microprobe analysis gave \(\text{SiO}_2 47.87\) and \(\text{CaO} 47.06\), loss on ignition 4.37, sum 99.30 wt%, corresponding to \(\text{H}_{0.81} \text{Ca}_{3.14} [\text{Si}_{2.98} \text{O}_9 (\text{OH})]\). The idealized formula is \(\text{H} \text{Ca}_3 [\text{Si}_3\text{O}_9 (\text{OH})]\). Contents of F, Mg, Al, Mn, Fe, Sr, and Ba do not exceed the \(2\sigma\) uncertainties, and thus were not considered significant. Calcium ranges from 2.97 to 3.57 per 3Si in micro-volumes 5 \(\mu\)m in diameter, and the Bazhenovskoye mineral is more calcic than holotype material. \(D_{\text{ass}} = 2.920(5) \text{g/cm}^3\). Optically biaxial negative, \(\alpha = 1.608(2)\), \(\beta = 1.650(2)\), \(\gamma' = 1.650(2)\), \(2V_{\text{meas}} = \text{“large”}\). By analogy with prehnite, which has a band 1399 cm\(^{-1}\) in its infrared spectrum, the absorption band at 1332 cm\(^{-1}\) in the spectrum of holotype rosenhahnite is cited as evidence for a proton in addition to a Si – OH bond in this mineral. Thermal investigations of 12 to 26 mg samples from Bazhenovskoye and the type locality yield a major endothermic effect near 570 °C, which is most likely associated with the simultaneous loss of the proton and OH bound to Si. Density increases with Ca/Si ratio, whereas a decreases.

**Discussion.** Two contradictory explanations are given for Ca/Si ratio exceeding unity. In the English abstract the authors propose that excess Ca replaces 2H, whereas in the conclusions they suggest the presence of invisible inclusions (size less than 7000 Å) of an organic Ca compound that nonetheless affects density and refractive indices. The presence of CO2 was not detected in the infrared spectra. However, this constituent has been reported in rosenhahnite from Japan (Bull. National Sci. Museum, Tokyo, Ser. C, 10(1), p. 1–8, 1984). E.S.G.

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**ERRATUM**

Description and crystal structure of turtmannite, a new mineral with a 68 Å period related to mcgovernite by Joël Brugger, Thomas Armbruster, Nicolas Meisser, Clivia Hejny, and Bernard Grobety (v. 86, pages 1494–1505, 2001).

Table 3 was missing a line between Atom T18 and O2. That line is:

\[
\begin{array}{cccccc}
O1 & h & 1 & O & 36f & 0.481(2) & 0.096(2) & 0.00498(5) & 0.022(3)
\end{array}
\]

Table 9 had the wrong space group for lines 1 to 3. The space group should be \(R\bar{3}c\).