Rossmanite $\square(Al_2Li)Al_6(Si_6O_{18})(BO_3)_3(OH)_3(OH)$

Crystal Data: Hexagonal. *Point Group*: 3*m*. As columnar crystals to 25 mm, elongated along [0001] with striations parallel to [0001] on prism faces.

Physical Properties: *Cleavage*: None. *Tenacity*: Brittle. *Fracture*: n.d. Hardness = ~7
D(meas.) = 3.00 D(calc.) = 3.06 Nonfluorescent.

Optical Properties: Transparent. *Color*: Pale pink, colorless in thin section. *Streak*: White. *Luster*: Vitreous.
Optical Class: Uniaxial (-). ω = 1.645(1) ε = 1.624(1)

Cell Data: *Space Group*: *R*3*m*. *a* = 15.770(2) *c* = 7.085(1) Z = 3

X-ray Powder Pattern: Hradisko quarry, near Rožná, western Moravia, Czech Republic.
3.950 (100), 2.552 (93), 1.898 (72), 4.181 (58), 2.924 (56), 3.434 (52), 2.019 (34)

Chemistry:

	(1)
SiO_2	38.10
Al_2O_3	44.60
Na_2O	1.43
Li_2O	1.13
B_2O_3	10.88
H_2O	3.70
F	0.20
-O = F	0.08
Total	99.96

(1) Hradisko quarry, near Rožná, western Moravia, Czech Republic; average electron microprobe analysis supplemented by SIMS for Li and B, H_2O by hydrogen-line extraction; corresponding to $^{X}(\square_{0.57}Na_{0.43})^{Y}(Li_{0.71}Al_{2.17})^{Z}Al_6(Si_{5.92}O_{18})(B_{2.92}O_9)(OH)_{3.83}F_{0.10}O_{0.07}$.

Mineral Group: Tourmaline supergroup, *X*-site vacant subgroup.

Occurrence: In lepidolite-subtype zoned pegmatite.

Association: Lepidolite, albite, elbaite, apatite, topaz, beryl, amblygonite-montebrasite, manganocolumbite, cassiterite.

Distribution: From the Hradisko quarry, near Rožná, western Moravia, Czech Republic.

Name: Honors George R. *Rossman* (b. 1945), California Institute of Technology, Pasadena, California, USA for his work on the spectroscopy of the tourmaline minerals and his wide-ranging contributions to mineralogy in general.

References: (1) Selway, J.B., M. Novák, F.C. Hawthorne, P. Černý, L. Ottolini, and T.K. Kyser (1998) Rossmanite, $\square(LiAl_2)Al_6(Si_6O_{18})(BO_3)_3(OH)_4$, a new alkali-deficient tourmaline: description and crystal structure. Amer. Mineral., 83, 896-900. (2) Henry, D.J., M. Novák, F.C. Hawthorne, A. Ertl, B.L. Dutrow, P. Uher, and F. Pezzotta (2011) Nomenclature of the tourmaline-supergroup minerals. Amer. Mineral., 96, 895-913. (3) Kutzschbach, M., B. Wunder, M. Krstulovic, A. Ertl, R. Trumbull, A. Rocholl, and G. Giester (2017) First high-pressure synthesis of rossmanitic tourmaline and evidence for the incorporation of Li at the X site. Phys. Chem. Minerals, 44, 353-363.