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REFERENCES

- ARMSTRONG, C.W. (1969) : The role of replacement processes in the formation of complex lithium pegmatites, *Unpubl. Ph.D. Thesis, Dept. of Geology, Univ. Western Ontario, London, Ontario*.
- BACHINSKI, S.W. & ORVILLE, P.M. (1968) : Experimental determination of the microcline-low albite solvus and interpretation of the crystallization history of perthites, *Progr. Ann. Meeting GSA Mexico City*, 15.
- BAKAKIN, V.V., RYLOV, G.M. & BELOV, N.V. (1969) : Crystal structure of a lithium-bearing beryl (in Russian), *Doklady Acad. Sci. U.S.S.R.*, **188**, 659-662.
- (1970) : X-ray identification of isomorphic varieties of beryl (in Russian), *Geokhimia*, 1302-1311.
- BAMBAUER, H.U., EBERHARD, E. & VISWANATHAN, K. (1967) : The lattice constants and related parameters of "plagioclase (low)", *Schweiz. Miner. Petr. Mitt.*, **47**, 351-345.
- BARRER, R.M. & WHITE, E.A.D. (1951) : The hydrothermal chemistry of silicates. Pt. I. Synthetic lithium aluminosilicates, *Jour. Chem. Soc. London*, 1267-1728.
- BERGGREN, THELMA (1940) : Analyses of the mica minerals and their interpretation. Minerals of the Varuträsk Pegmatite XV, *Geol. Fören. Förh.*, **62**, 182-193.
- BEUS, A.A. (1960) : *Geochemistry of beryllium and genetic types of beryllium deposits* (in Russian), Publ. House Acad. Sci. Moscow.
- & STININ, N.I. (1961) : Geochemistry of niobium and tantalum in the hydrothermal-pneumatolytic process (in Russian), *Geokhimiya*, 209-214.
- BORUCKIJ, B.E. (1966) : Hebronite from the sodium-lithium pegmatites of Siberia (in Russian), *Trans. Miner. Museum Acad. Sci. U.S.S.R.* **17**, 183-189.
- BOURGUIGNON, P. & MÉLON, J. (1965) : Wodginite du Rwanda, *Ann. Soc. Géol. Belgique*, **88**, B 291 - B 300.
- BRISTOL, C.C. (1965) : The quantitative x-ray powder diffraction determinations of minerals in some metamorphosed volcanic rocks, *Unpubl. Ph.D. thesis, Univ. of Manitoba, Winnipeg*.

- BRISTOR, N.A. (1962) : An x-ray powder examination of some pegmatite minerals from southeastern Manitoba, *Unpublished M.Sc. Thesis, University of Manitoba, Winnipeg*.
- BRUSH, G.J. & DANA, E.S. (1880) : On the mineral locality at Branchville, Connecticut, *Amer. Jour. Sci.* (3rd ser.), **20**, 257-285.
- CAMERON, E.N., JAHNS, R.H., McNAIR, A.H. & PAGE, L.R. (1949) : Internal structure of granitic pegmatites, *Econ. Geol. Monogr.*, **2**, 115 pp.
- ČERNÁ, I. (1970) : Mineralogy and paragenesis of amblygonite and montebrasite in the Tanco (Chamalloy) pegmatite, Bernic Lake, Manitoba, *Unpubl. thesis, Univ. of Manitoba, Winnipeg*.
- ČERNÝ, P. & FERGUSON, R.B. (1972a) : The Tanco pegmatite at Bernic Lake, Manitoba. III. Amblygonite-montebrasites, *Canad. Mineral.*, **11**, 643.
- (1972b) : The fluorine content and some physical properties of the amblygonite-montebrasite minerals, (ms. in prep.).
- ČERNÝ, P. (1970) : Compositional variations in cookeite, *Canad. Mineral.*, **10**, 636-647.
- (1972a) : The Tanco pegmatite at Bernic Lake, Manitoba. VII. Eucriptite, *Canad. Mineral.*, **11**, 708.
- (1972b) : The Tanco pegmatite at Bernic Lake, Manitoba. VIII. Secondary minerals from the spodumene-rich zones, *Canad. Mineral.*, **11**, 714.
- & FERGUSON, R.B. (1972) : The Tanco pegmatite at Bernic Lake, Manitoba. IV. Petalite and spodumene relations, *Canad. Mineral.*, **11**, 660.
- & MACEK, J. (1972a) : The Tanco pegmatite at Bernic Lake, Manitoba. V. Coloured potassium feldspars, *Canad. Mineral.*, **11**, 679.
- & MACEK, J. (1972b) : Petrology of potassium feldspars in two Czechoslovak lithium pegmatites, (ms. in prep.).
- & TURNOCK, A.C. (1971a) : Niobium-tantalum minerals from granitic pegmatites at Greer Lake, southeastern Manitoba, *Canad. Mineral.*, **10**, 755-772.
- & TURNOCK, A.C. (1971b) : Pegmatites in southeastern Manitoba, *Geol. Assoc. of Canada, Spec. Paper* **9**, 119-128.
- RIEDER, M. & POVONDRA, P. (1970) : Three polytypes of lepidolite from Czechoslovakia, *Lithos*, **3**, 319-325.
- COMMUCCI, P. (1915) : Sopra la petalite elbana, *Rend. R. Accad. Lincei, Roma, ser. 5*, **24**, 1141 (in Deer et al. 1963a).
- COOMBS, D.S. & FYFE, W.S. (1965) : Analcime — albite equilibria, *Amer. Jour. Sci.*, **263**, 807-819.
- COOPER, D.G. (1964) : The geology of the Bikita pegmatites, *The geology of some ore deposits in Southern Africa*, **2**, 1964, pp. 441-462.
- CROUSE, R.A. & ČERNÝ, P. (1972) : Geology of the Tanco pegmatite at Bernic Lake, Manitoba. I. Geology and paragenesis, *Canad. Mineral.*, **11**, 591.
- DAVIES, J.F. (1955) : Geology and mineral deposits of the Bird Lake area, *Manitoba Mines Branch Publ.*, **54-1**, 44 pp.
- (1956) : Manitoba lithium deposits, *Canad. Mining Jour.*, **77**, April No. 4, pp. 78-79.
- (1957) : Geology of the Winnipeg River area (Shatford Lake-Ryerson Lake), Lac du Bonnet mining division, *Manitoba Mines Branch Publ.*, **56-1**, 27 pp.
- (1958) : The lithium and beryllium pegmatites of southeastern Manitoba, *Trans. C.I.M.M.*, **61**, 230-236.
- , BANNATYNE, B.B., BARRY, G.S. & McCABE, H.R. (1962) : Geology and mineral resources of Manitoba, *Manitoba Branch*, 190 pp.
- DEER, W.A., HOWIE, R.A. & ZUSSMAN, J. (1962) : *Rock-forming minerals*, **3, Sheet silicates**, Longmans London.
- (1963a) : *Rock-forming minerals*, **4 — Framework silicates**, Longmans London.
- (1963b) : *Rock-forming minerals*, **2 — Chain silicates**, Longmans London.

- EVANS, H.T. JR., APPLEMAN, D.E. & HANDWERKER, S.S. (1963) : The least-squares refinement of crystal unit cells with powder diffraction data by an automatic computer indexing method, *Amer. Cryst. Ass. Meeting Cambridge, Mass.*, Abstr. 42.
- ____ & MROZE, M.E. (1966) : Crystal chemical studies of cesium beryl, *Prog. Ann. Meeting GSA San Francisco*, 63.
- FEDIUK, F. (1961) : *Fjodorovova mikroskopická metoda* (Fjodorov's microscopic method, in Czech), NCSAV Prague, 185 pp.
- FEKLITCHEV, V.G. (1964) : *Beryl, morphology, composition, and structure of crystals* (in Russian), Nauka Moscow.
- FERSMAN, A.E. (1940) : *Pegmatites* (in Russian). Selected works Vol. 6, Acad. Sci. U.S.S.R. Moscow 1960.
- FOSTER, M.D. (1960) : Interpretation of the composition of lithium micas, *U.S. Geol. Survey, Prof. Paper* **354-E**.
- FRASER, H.J. (1930) : Paragenesis of the Newry pegmatite, Maine, *Amer. Mineral.*, **15**, 349-364.
- FROHBERG, M.H. (1967) : Presidential address, *Canad. Mineral.*, **9**, 278-281.
- FRONDEL, C. (1962) : *Dana's system of mineralogy*, 7th ed., **3**, *Silica minerals*, Wiley & Sons New York, London.
- GINZBURG, A.I. (1944) : *Zapiski Vses. Mineral. Obshtch.*, 1944, No. 4, quoted in Sosedko & Gordiyenko 1957.
- ____ (1948) : Petalite in the pegmatites of the Kalbinski Range and the processes of its alteration (in Russian), *Trans. Mineral. Museum Acad. Sci. U.S.S.R.*, **1**, 60-69.
- ____ (1950) : Montebrasite and the processes of its alteration (in Russian), *Trans. Miner. Museum Acad. Sci. U.S.S.R.*, **2**, 72-85.
- ____ (1955) : Mineralogical and geochemical characteristics of lithium pegmatites (in Russian), *Trans. Miner. Museum Acad. Sci. U.S.S.R.*, **7**, 12-55.
- ____ (1956) : On some characteristics of tantalum geochemistry and on types of tantalum mineralization (in Russian), *Geokhimiya*, 74-83.
- ____ (1960) : Specific geochemical features of the pegmatitic process, *21st I.G.C. session, Copenhagen, Rept. Pt. 17*, 111-121.
- ____ & GUSHTCHINA, N.S. (1954) : Petalite from the pegmatites of Eastern Transbaikalia (in Russian), *Trans. Mineral. Museum Acad. Sci. U.S.S.R.*, **6**, 71-78.
- GORDIYENKO, V.V. & DENISOV, A.P. (1964) : Influence of the rubidium content on the unit cell constants of muscovite, *Doklady Akademii Nauk SSSR*, **156**, 335-337.
- ____ & KAMENTSEV, I.E. (1967) : On the nature of the rubidium admixture in potassic feldspar, *Geokhimiya*, 478-481 (in Russian).
- GOSSNER, B. & MUSSGNUG, F. (1930) : Über die strukturelle und molekuläre Einheit von Petalit, *Zeits. Krist.*, **74**, 62-65.
- GOUDER DE BEAUREGARD, C., DUBOIS, J. & BOURGUIGNON, P. (1967) : Comportement thermique des columbo-tantalites, *Ann. Soc. Géol. Belgique*, **90**, B 501 - B 518.
- GRICE, J.D. (1970) : The nature and distribution of the tantalum minerals in the Tanco (Chemalloy) mine pegmatite at Bernic Lake, Manitoba, *Unpubl. M.Sc. thesis, Univ. of Manitoba*, 82 pp.
- ____, ČERNÝ, P. & FERGUSON, R.B. (1972) : The Tanco pegmatite at Bernic Lake, Manitoba, II. Wodginite, tantalite, pseudo-ixiolite and related minerals, *Canad. Mineral.*, **11**, 609.
- HAAPALA, I. (1966) : On the granitic pegmatites in the Peräseinäjöki — Alavus area, South Pohjanmaa, Finland, *Bull. Comm. Géol. Finlande*, **224**, 98 pp.
- HEINRICH, E. Wm. (1953) : Chemical differentiation of multigeneration pegmatite minerals (abs.), *Amer. Mineral.*, **38**, 343.
- ____ (1965) : Holmquistite and pegmatitic lithium exomorphism, *Indian Mineral.*, **6**, 1-13.

- (1967) : Micas of the Brown Derby pegmatites, Gunnison County, Colorado, *Amer. Mineral.*, **52**, 1110-1121.
- & COREY, A.S. (1955) : Montebrasite from Eight Mile Park, Fremont County, Colorado, *Amer. Mineral.*, **40**, 1141-1145.
- HEMLEY, J.J. & JONES, W.R. (1964) : Chemical aspects of hydrothermal alteration with emphasis on hydrogen metasomatism, *Econ. Geol.*, **59**, 538-569.
- HENSEN, B.J. (1967) : Mineralogy and petrography of some tin, lithium and beryllium albite-pegmatites near Doade, Galicia, Spain, *Leidse Geol. Med.*, **39**, 249-259.
- HÖLLER, H. (1970) : Untersuchungen über die Bildung von Analcim aus natürlichen Silikaten, *Contr. Miner. and Petrol.*, **27**, 80-94.
- HOWE, A.C.A. & ROWNTREE, J.C. (1967) : Geology and economic significance of the Bernic Lake pegmatite, *Canad. Mining and Metal. Bull.* 1967, 207-212.
- HURLBUT, C.S. Jr. (1962) : Eucryptite from Bikita, Southern Rhodesia, *Amer. Mineral.*, **47**, 557-561.
- & WENDEN, H.E. (1951) : Beryl at Mt. Mica, Maine, *Amer. Mineral.*, **36**, 751-759.
- HUTCHINSON, R.W. (1959) : Geology of the Montgary pegmatite, *Econ. Geol.*, **54**, 1525-1542.
- JAHNS, R.H. & BURNHAM, C.W. (1958) : Experimental studies of pegmatite genesis: melting and crystallization of granite and pegmatite, *Prog. Ann. Meeting G.S.A.*, **88** (abstr.).
- & BURNHAM, C.W. (1969) : Experimental studies of pegmatite genesis: I. A model for the observation and crystallization of granitic pegmatites, *Econ. Geol.*, **64**, 843-864.
- & TUTTLE, O.F. (1963) : Layered pegmatite-aplite intrusives, *Miner. Soc. America Spec. Paper* **1**, 78-92.
- KHVESTOVA, V.A., PAVLOVA, V.N., ALEXANDROV, V.B. & MAXIMOVA, N.V. (1966) : First find of wodginite in the U.S.S.R. (in Russian), *Dokl. Acad. Sci. U.S.S.R.*, **167**, 1135-1138.
- KNORRING, O. von (1968) : On the geochemistry of some niobium-tantalum minerals from African pegmatites, *12th Ann. Rept., Univ. of Leeds Res. Inst. on Afr. Geology*, 50-53.
- , SAHAMA, TH.G. & LEHTINEN, M. (1969) : Ferroan wodginite from Ankole, south-west Uganda, *Bull. Geol. Soc. Finland* **41**, 65-69.
- KORNTOVA, V.A. (1961) : Some observations on the columbite-tantalite mineral group (in Russian), *Trans. Miner. Museum Acad. Sci. U.S.S.R.*, **12**, 36-53.
- KOSTER VAN GROOS, A.F. & WYLLIE, P.J. (1968) : Melting relationships in the system NaAlSi₃O₈-NaF-H₂O to 4 kilobars pressure, *Jour. Geology*, **76**, 50-70.
- KUZMIENKO, M.V. (1960) : Genetic types of niobium and tantalum deposits (in Russian), *Mem. Inst. Mineral., Geochem. & Crystallochem. Rare Elements, Acad. Sci. U.S.S.R.*, **4**, 142-173.
- LANDES, K.K. (1925) : The paragenesis of the granite pegmatites of Central Maine, *Amer. Mineral.*, **10**, 374-411.
- LARSEN, E.S. (1921) : The microscopic determination of the non-opaque minerals, *U.S. Geol. Surv. Bull.* **679**.
- & SHANNON, E.B. (1930a) : Two phosphates from Dehrn; dehrnite and crandallite, *Amer. Mineral.*, **15**, 303-306.
- (1930b) : The minerals from the phosphate nodules from near Fairfield, Utah, *Amer. Mineral.*, **15**, 307-337.
- LAUGHLIN, A.W. (1969) : Excess radiogenic argon in pegmatite minerals, *Jour. Geophys. Res.*, **74**, 6684-6690.
- LAIVES, F. & SOLDATOS (1962) : Plate perthite, a new perthite intergrowth in microcline single crystals, a recrystallization product, *Zeit. Krist.*, **117**, 218-230.

- ____ (1963) : Die Albit/Mikrolin-Orientierungsbeziehungen in Mikroklinperthiteten und deren genetische Deutung, *Zeit. Krist.*, **118**, 69-98.
- LEAVENS, P.B., HURLBUT, C.S. JR. & NELEN, J.A. (1968) : Eucryptite and bikitaite from Kings Mountain, North Carolina, *Amer. Mineral.*, **53**, 1202-1207.
- LEVINSON, Alfred A. (1953) : Studies in the mica group ; relationship between polymorphism and composition in the muscovite-lepidolite series, *Amer. Mineral.*, **38**, 88-107.
- LEILOU, J.G. (1970) : Synthesis and stability relations of wairakite, $\text{CaAl}_2\text{Si}_4\text{O}_{12} \cdot 2\text{H}_2\text{O}$, *Contr. Miner. and Petrol.*, **27**, 259-282.
- LUNDBLAD, B. (1942) : Optical studies of the analyzed micas from Varutråsk, Minerals of the Varutråsk pegmatite XXXII, *Geol. Fören. Förh.*, **64**, 55-60.
- MANDARINO, J.A. & HARRIS, D.C. (1965) : New Canadian mineral occurrences : I. Eu-cryptite, pollucite, rozenite, epsomite, dawsonite, fairchildite and bútschliite, *Canad. Mineral.*, **8**, 377-382.
- MARTIN, R.F. (1969a) : Effect of fluid composition on structural state of alkali feldspars, *Trans. Amer. Geophys. Union*, **50**, 350 (abs.).
- ____ (1969b) : The hydrothermal synthesis of low albite, *Contr. Miner. and Petrol.*, **23**, 323-339.
- MATIAS, V.V. (1961) : New data on lithiophosphate (in Russian), *Geol. mest. red. elementov*, **9**, 42-53.
- ____ & BONDAREVA, A.M. (1957) : Lithiophosphate — a new mineral (in Russian), *Doklady Acad. Sci. U.S.S.R.*, **112**, 124-126.
- MIKKOLA, T. & WIIK, H.B. (1947) : Petalite, a mineral new to Finland, *Bull. Comm. Géol. Finlande*, **140**, 281-285.
- MORSE, S.A. (1968) : Revised dispersion method for low plagioclase, *Amer. Mineral.*, **53**, 105-115.
- Moss, A.A., FEJER, E.E. & EMBREY, P.G. (1969) : On the x-ray identification of amblygonite and montebrasite, *Mineral. Mag.*, **37**, 414-422.
- MROSE, M.E. (1953) : Alpha-eucryptite problem (abstr.), *Amer. Mineral.*, **38**, 353.
- MUNOZ, J.L. (1968) : Physical properties of synthetic lepidolites, *Amer. Mineral.*, **53**, 1490-1512.
- NEL, H.J. (1944) : Pollucite from Karibib, South West Africa, *Amer. Mineral.*, **29**, 443-451.
- NEUVONEN, K.J. & VESASALO, A. (1960) : Pollucite from Luolamäki, Somero, Finland, *Bull. Comm. Géol. Finlande*, **188**, 133-148.
- NICKEL, E.H. (1961) : The mineralogy of the Bernic Lake pegmatite, southeastern Manitoba, *Canada Dept. Mines Tech. Surv., Mines Br., Tech. Bull. TB-20*, 38 pp.
- ____, ROWLAND, J.F. & MCADAM, R.C. (1963a) : Wodginite — a new tin-manganese tantalate from Wodgina, Australia and Bernic Lake, Manitoba, *Canad. Mineral.*, **7**, 390-402.
- ____ (1963b) : Ixiolite — a columbite substructure, *Amer. Mineral.*, **48**, 961-979.
- ORVILLE, P.M. (1967) : Unit-cell parameters of the microcline-low albite and the sardine-high albite solid solution series, *Amer. Mineral.*, **52**, 55-86.
- PARKER, R.L. & FLEISCHER, M. (1968) : Geochemistry of niobium and tantalum, *U.S. Geol. Surv. Prof. Paper* **612**, 43 pp.
- PENNER, A.P. & CLARK, G. S. (1971) : Rubidium-strontium age determinations from the Bird River area, southeastern Manitoba, *Geol. Assoc. Canada Spec. Paper* **9**, 105-110.
- QUENSEL, P. (1937) : Minerals of the Varutråsk pegmatite. VIII. The amblygonite group, *Geol. Fören. Förh.*, **59**, 455-468.
- ____ (1946) : Minerals of the Varutråsk pegmatite XXXVII. A spodumene-quartz symplectite, *Geol. Fören. Förh.*, **68**, 47-51.
- ____ (1956) : The paragenesis of the Varutråsk pegmatite including a review of its mineral assemblage, *Arkiv Miner. Geol.*, **2**, 9-125.

- RAICEVIC, D. (1968) : Concentration of tantalum from the Bernic Lake pegmatite deposit, Manitoba, *Canad. Mining and Metal. Bull.*, 1439-1444.
- RIEDER, M. (1971) : Stability and physical properties of synthetic lithium-iron micas, *Amer. Mineral.*, **56**, 256-280.
- RIMŠÁITE, J. (1968) : Geochemistry, mineralogy, and petrology of poly-mica rocks. *23rd International Geol. Congress Prague, Rept.*, **6**, 45-66.
- RINALDI, R. (1970) : Crystallography and chemistry of Li-Rb-Cs bearing micas from the Tanco (Chemalloy) pegmatite, Bernic Lake, Manitoba, *Unpublished M.Sc. Thesis, University of Manitoba, Winnipeg*.
- _____, ČERNÝ, P. & FERGUSON, R.B. (1971) : The Tanco pegmatite at Bernic Lake, Manitoba. VI. Li-Rb-Cs Micas, *Canad. Mineral.*, **11**, 690.
- ROSSOVSKIJ, L.N. & KLOTCHKOVA, G.N. (1965) : On a find of petalite-microcline pegmatites, *Zap. Vses. Miner. Obshtsch.*, **94**, 507-515.
- ROY, R., ROY, D.M. & OSBORN, E.F. (1950) : Compositional and stability relationships among the lithium aluminosilicates: eucryptite, spodumene, and petalite, *Journ. Amer. Ceram. Soc.*, **33**, 152-159.
- RUCKLIDGE, J.C. & GASPARINI, E.L. (1969) : EMPADR VII — a computer program for processing electron microprobe analytical data, *Univ. Toronto*.
- SČAVNICAR, S. & SABATTIER, G. (1957) : Action de chlorure de lithium sur les feldspaths alcalins. Données nouvelles sur les feldspath-Li, le spodumène-Fe, et l' α -eucryptite, *Bull. Soc. franç. Minér. Crist.*, **80**, 308-317.
- SCHALLER, W.T., STEVENS, R.L. & JAHNS, R.H. (1962) : An unusual beryl from Arizona, *Amer. Mineral.*, **47**, 672-699.
- SEKI, Y. (1966) : Wairakite in Japan, Pt. I, *Jour. Japan. Assoc. Miner. Petr. Econ. Geol.*, **56**, 254-261.
- SENDEROV, E.E. & CHITAROV, N.I. (1966) : Conditions of analcime crystallization (in Russian), *Geokhimiia*, 1397-1412.
- SIMPSON, D.R. (1967) : Effect of pH and solution concentration on the composition of carbonate apatite, *Amer. Mineral.*, **52**, 896-902.
- SELPNEV, Yu.S. (1964) : Geochemical characteristics of the rare-metal granitic pegmatites of the Sayans (in Russian), *Geokhimiya*, 242-253.
- SOLDATOS, K. (1962) : Über die kryptoperthitische Albitausscheidungen in Mikroklin-perthiten, *Norsk Geol. Tidsskrift* **42**, (*Feldspar volume*, 180-192).
- SOLODOV, N.A. (1959) : Some regularities in the distribution of rare elements in distinctly zoned granitic pegmatites (in Russian), *Geokhimiya*, 316-325.
- _____, (1960) : Distribution of alkali elements and beryllium in minerals of one of the zoned pegmatites of the Mongolian Altai (in Russian), *Geokhimiya*, 726-735.
- SOSEDKO, T.A. (1957) : The change of structure and properties of beryl with increasing amounts of alkalis (in Russian), *Mem. All-Union Miner. Soc.*, **86**, 495-499.
- SOSEDKO, A.F. & GORDIYENKO, V.V. (1957) : Eucryptite from a pegmatite in the northern part of the Kola Peninsula, *Doklady Acad. Sci. U.S.S.R.*, **116**, 135-136 (in Russian).
- SMITH, J.V. & YODER, H.S. (1956) : Theoretical and x-ray study of the mica polymorphs; *Mineral. Mag.*, **232**, 209-235.
- STAATZ, M.H. & TRITES, A.F. (1955) : Geology of the Quartz Creek pegmatite district, Gunnison County, Colorado. *U.S. Geol. Surv. Prof. Paper* **265**, 111 pp.
- STANĚK, J. (1954) : Spodumene and bavenite from Jeclov (in Czech), *Acta Musei Moraviae*, **39**, 67-77.
- _____, (1965) : Příspěvky k mineralogii Jihomoravského kraje (in Czech), *Folia Přírodovědecké Fakulty University J.E. Purkyně v Brně*, **6**, 1-39.
- _____, & ČECH, F. (1958) : A new lithium pegmatite from Nová Ves near Český Krumlov (in Czech), *Čas. pro. miner. a geol.*, **3**, 407-410.
- STEWART, D.B. (1960) : The system $\text{LiAlSiO}_4\text{-NaAlSi}_3\text{O}_8\text{-H}_2\text{O}$ at 2000 bars, *Rept. XXI Internat'l Geol. Congress Norden*, Pt. **17**, 15-30.

- ____ (1963) : Petrogenesis and mineral assemblages of lithium-rich pegmatites, *Progr. Ann. Meeting G.S.A.*, 159A (abstr.).
- STRINGHAM, B. (1952) : Fields of formation of some common hydrothermal alteration minerals, *Econ. Geol.*, **47**, 661-664.
- STRUNZ, H. & TENNYSON, CHR. (1966) : *Mineralogische Tabellen*, 4th ed., Leipzig.
- STURDIVANT, J.H. (1930) : The crystal structure of columbite, *Zeits. Krist.*, **75**, 88-108.
- SWANSON, H.E., MORRIS, M.C. & EVANS, E.H. (1965) : *Nat. Bur. Stand. U.S. Monograph 25*, sect. 4, 21-22.
- TAVORI, E. (1952) : The redetermination of the space group of petalite, *Anais Acad. Brasil Cienc.*, **24**, 175-178 (in Deer et al. 1963a).
- TIEN, T.Y. & HUMMEL, F.A. (1961) : Studies in lithium oxide systems : X, lithium phosphate compounds, *Jour. Amer. Ceram. Soc.*, **44**, 206-208.
- TILLING, R.I. (1968) : Zonal distribution of variations in structural state of alkali feldspar within the Rader Creek pluton, Boulder batholith, Montana, *Jour. Petrology*, **9**, 331-357.
- TURNOCK, A.C. (1966) : Synthetic wodginite, tapiolite, and tantalite, *Canad. Mineral.*, **8**, 461-470.
- VARDANYANTS, L.A. (1950) : *The triad theory of twin formation in minerals* (in Russian), Publ. House Acad. Sci. Armenian S. S. R. Yerevan, 106 pp.
- ____ (1951) : *The triad method of plagioclase twin investigation* (in Russian), Publ. House Acad. Sci. Armenian S. S. R. Yerevan, 81 pp.
- VESALO, A. (1959) : On the petalite occurrences of Tammela, SW-Finland, *Bull. Comm. Géol. Finlande*, **184**, 59-74.
- VORMA, A., SAHAMA, TH.G. & HAAPALA, I. (1965) : Alkali position in the beryl structure, *Compt. Rend. Soc. Géol. Finlande*, **37**, 119-129.
- ____ & SIIVOLA, J. (1967) : Sukulait — $Ta_2Sn_2O_7$ — and wodginite as inclusions in cassiterite in the granite pegmatite in Sukula, Tammela in SW Finland, *Compt. Rend. Soc. Géol. Finlande*, **39**, 173-187.
- WHITE, J.S., JR. (1969) : A lithiophosphate occurrence in North Carolina, *Amer. Mineral.*, **54**, 1467-1469.
- WINKLER, H.G.F. (1953) : Tief $LiAlSiO_4$ (Eukryptit), *Acta Cryst.*, **6**, 99.
- ____ (1954) : Struktur und Polymorphie des Eukryptits (Tief- $LiAlSiO_4$), *Heidelb. Beitr. Miner. Petr.*, **4**, 233-242.
- WRIGHT, G.M. (1963) : Geology and origin of the pollucite-bearing Montgary pegmatite, Manitoba, *Geol. Soc. Amer. Bull.*, **74**, 919-946.
- WRIGHT, T.L. & STEWART, D.B. (1968) : X-ray and optical study of alkali feldspar : I. Determination of composition and structural state from refined unit cell parameters and 2V, *Amer. Mineral.*, **53**, 38-87.
- WYLLIE, P.J. & TUTTLE, O.F. (1961) : Experimental investigation of silicate systems containing two volatile components. Part II. Effects of NH_3 and HF, in addition to H_2O on the melting temperature of albite and granite, *Amer. Jour. Sci.*, **259**, 128-143.
- ____ (1964) : Experimental investigation of silicate systems containing two volatile components, Part III. The effects of SO_3 , P_2O_5 , HCl , and Li_2O , in addition to H_2O , on the melting temperatures of albite and granite, *Amer. Jour. Sci.*, **262**, 930-939.
- YODER, H.S. & EUGSTER, H.P. (1955) : Synthetic and natural muscovites, *Geochim. Cosmochim. Acta*, **8**, 225-236.
- ZEMANN-HEDLIK, A. & ZEMANN, J. (1955) : The structure of petalite, $LiAlSi_4O_{10}$, *Acta Cryst.*, **8**, 781-787.