Pegmatites of China: A bibliography

JACOBSON, MARK IVAN
Colorado School of Mines, Geology Museum,
1714 S. Clarkson Street, Denver, CO, 80210
markivanjacobson@gmail.com

China possesses a diversity of pegmatites that span almost all the known types (class-family) of pegmatites. The English literature on these pegmatites is minor for various reasons, language only being one reason but certainly not the only one. Since the start of "reform and opening up" of China by Deng Xiaoping in 1978, the situation has been changing almost yearly. Not only has English language but also Chinese language publications on pegmatites, their location, structure, genesis, age, and mineralogy has been expanding. Most of this material is legally available to non-Chinese.

The bibliography that is associated with this abstract contains all the published literature that I have been able to locate about Chinese pegmatites and some Chinese minerals in general without regard to language or publication origin. This material consists of Chinese and non-Chinese publications, sometimes authored by Chinese scientists and sometimes not. These publications are from scientific journal articles, mineral collector hobbyist magazines, books published by state-owned research institutes, masters and doctorate theses, symposium field trip guidebooks, symposium proceedings, and self-published books by Chinese collectors who want to show off their specimens. Most of the compiled literature was created for domestic audiences not international.

This material was obtained by various means. The numerous used books that typically surround universities sometimes have books of interest. Official Chinese bookstores, some oriented to a general public, some specialized for Chinese scientists will usually have newly published books. Most of the new material can also be purchased online in China. Used scientific books can also be purchased over the internet as can the hobbyist magazines. Most Chinese journal articles can actually be purchased online for ½ an RMB (7 cents US) per page and downloaded. The same articles from non-Chinese vendors is significantly more expensive. The documents that are excluded from this list are the reports in the National Geologic Archives of China (NGAC) in Beijing. These reports are only open to those with special permission from the national government since they contain the basic mapped data with detailed maps and associated reports.

What does this material contain? - some basic descriptions of the pegmatite fields in the Altai mountains, northern Xinjiang (Zou and Li 2006, Luan et al. 1996), a list of all the feldspar and rare-metal pegmatites in the Xinjiang province (Tang et al. 2005), a detailed description of the entire pegmatite field surrounding the Nanping no. 31 pegmatite (Chou and Yang 1985), the muscovite pegmatites of Danba, the unzoned albite-spodumene pegmatites of Ke'eryin and the Complex LCT pegmatites of Jiajika in the Sichuan Province (Li, Wang, Zhang and Fu 2007; Li, Wang, and Fu 2006), the Qinling Mountains pegmatite fields (Chen, et al. 1993) which stretch across Henan, Shaanxi and Gansu provinces, the pegmatite fields on either side of one of the plutons in the Mufushan batholith, Tongcheng County in Hubei (Huang and Hu 2012) and Pingjiang County in Hunan (Li et al 1994), the miarolitic pegmatites in the Inner Mongolia (Wong and Wang 1930; Sun 1933, 1934), the gem pegmatites of Yunnan (Sun et al. 1986, Li 2007), and the NYF pegmatites in Suzhou, Jiangsu (Huang 1949). There are still many more pegmatite fields that have been documented in these and other provinces, so the list above was just to give a feel for what is available.

References Cited

CHEN, Xijing; Shurong WANG, and Xiuyin ZHANG. (1993): *Geological Features and Mineralization of Granitic Pegmatites in Qinling.* Beijing: Publishing House of Geology, 75 p. (in Chinese).

CHOU, Nianming and Yueqing YANG. (1985): *Nanping Pegmatite Field, Fujian Province: Research report on its formation, mineralization and prospecting approach*. Fujian Provincial Bureau of Geology and Mineral Resources and the Chinese Academy of Geological Sciences Institute of Mineral Resources. 236 p. (in Chinese with English abstract).

HUANG, Y. S. (1949): The granite pegmatites of Suchou [Suzhou]. *Bulletin of the Geological Society of China.* v 29, no. 1-4, p. 157-170 (in English).

HUANG, Shiyao and Jinwang HU. (2012): The geological characteristics and prospects for the development and utilization of the feldspar from the granitic pegmatites at Duanfeng Shan, Tongcheng County, Hubei Province. *Western Resources*, p. 122-123 (in Chinese).

LI, Wen. (2007): *A study on the geology, geochemisty and genesis of pegmatites in the Southern Ailaoshan Mountains, Yunnan Province*[, China]. Zhong Shan (Sun-Yat-sen) University, Ph.D. Thesis, 179 p. (in Chinese with English abstract).

LI, Jiankang; Denghong WANG, and Xiaofang FU. (2006): Metallogenic epoch and tectonic implications of Danba pegmatite type muscovite deposit in Sichuan Province, China. *Mineral Deposits,* v. 25, no. 1, p. 95- 100 (in Chinese with English abstract).

LI, Jiankang; Denghong WANG, Dehui ZHANG, and Xiaofang FU. (2007): *Mineralization Mechanism and Continental Geodynamics of Pegmatite Type Deposits in Western Sichuan, China.* Beijing: published by Atomic Energy, ISBN: 978-7-5022-3957-2, 187 p. (in Chinese with English abstract).

LI, Zhaolin ; Yanhua MAO, Lihong LEI, Zhili QIU, and Hecai NIU. (1994): Physicochemical Conditions of the Formation of Beryl and Aquamarine in Mufushan granopegmatite deposit, [near Sandun and Nanjiang towns, Pingjiang county, Yueyang prefecture,] Hunan Province, China. *Chinese Journal of Geochemistry,* V 13, No. 4, p. 326-339 (in English).

LUAN, Shiwei; Yuyuan MAO, Liangming FAN, Xiaobing WU, and Jinhui LIN. (1996): *Rare Metal Mineralization and Exploration in the Keketuohai Area[, Altai Mountains, Xinjiang Province]*. Chengdu: Press of Chengdu University of Science and Technology, 278 p. (in Chinese with English abstract).

SUN, C. C. (1933): Notes on the Precious Stone (Beryl, Etc.) Deposits of Suiyuan[, Inner Mongolia]. *Bulletin of the Geological Society of China*, v. 12, p. 275- 282 (in English).

SUN, C. C. (1934): *Geology of Suiyan and Southwest Chahar*. China Geological survey memoir, Series A, no. 12, 80 p. (in Chinese with English abstract).

SUN, Kexiang; CHEN, Yongan; DENG, Baiqiong; and GAO, Ziying. (1986): *Distribution of gems and their prospects in Yunnan Province: 1984-1986.* Institute of Geology, Yunnan Province, 115 pp. (in Chinese).

TANG, Yanling; Houjun MEI, Keyue PAN, Dequan LIU, Ruhong ZHOU, and others. (2005): *Non-metallic deposits of Xinjiang, China*. Beijing: Geological Publishing House, 289 pp. (in Chinese).

WONG, Wen H.; and S. Wen WANG. (1930): On some crystals of topaz from Mongolia and central China. *Bulletin of the Geological Society of China*, v. 9, no. 2, p. 105-118 (in English).

ZOU, Tianren; and Qingchang LI. (2006): *Rare and rare-earth element deposits in Xinjiang[Province], China.* Beijing: Geological Publishing House, ISBN 9-787116-048, 284 p. (in Chinese with extended English abstract).

China pegmatite references with annotations

Compiled to 9 July 2016 by Mark Ivan Jacobson

Compilation explanations:

Note on Chinese names: Family names are usually single syllable, are written first and capitalized. Given names are usually but not always two syllables. Chinese characters are used intermittently as seemed appropriate. Due to the lack of diversity in Chinese names, given names are not abbreviated.

Missing or implied information in reference titles has been added for completeness. This information is indicated by square brackets [ ].

Note on Chinese pegmatite names: With only a few exceptions, a pegmatite within a particular pegmatite field is named after the pegmatite field followed by its number which was assigned during the original field mapping work. Thus it is correct to refer to the Jiajika pegmatite field with the famous spodumene deposit as the Jiajika pegmatite No. 134. There is no Jiajika pegmatite nor is there a Kangding pegmatite field. Similarly the most famous pegmatite in the Nanping pegmatite field is the Nanping pegmatite No. 31 pegmatite.

The preferred English spelling of pegmatite field names in this compilation is the official Chinese pinyin transliteration. I am aware that pegmatite names that originated from non-Mandarin words and were translated into Mandarin will end up with a different pinyin spelling than the English spelling directly from the non-Mandarin word. The reason for this choice is that for utilizing Chinese language literature, if you do not know the pinyin spelling, there is no hope in recapturing the correct Chinese characters, even though with the pinyin spelling choosing the correct characters is still a challenge, which even native speakers get wrong.

References

Anonymous. 1993. The first discovery of emeralds in China's Yunnan Province. [J] *Jewelry Technology,* No. 4. First discovered in 1990, in China's Yunnan Province, emerald deposit

AN, Yinxiang (安银祥). 2006a. The Geological Characteristics of the Emerald Deposit in Tashen Kuergan [(Taxkorgan) County, Tashendi District], Xinjiang [Province]. *Xinjiang Non-Ferrous Minerals,* V 29, No. 2, p. 9-10 (in Chinese). This locality is next to the border with Tajikistan, so obviously no maps, pictures or figures. This discovery is the first occurrence in China of emerald in carbonate veins, and is not a pegmatite deposit.

AN, Yinxiang. 2006b. Structural Features of the Kelumute Mining District [, Xinjiang Province]. (柯鲁木特矿区帚状构造特征) [J] *Xinjiang Non-Ferrous Metals*, V 29, No. 1, p. 7-8,10 (in Chinese). One map of the district, river with name, scale bar.

AN, Yinxiang. 2000. *Geological Characteristics of the Taxkorgan Emerald Deposit[, Taxkorgan County,] Xinjiang [Province]*. Shanghai Institute of Metallurgy; Materials Physics and Chemistry (Professional) Ph.D. thesis.

BAI, Feng; FENG, Hengyi, ZOU, Sijie and LIU, Jiao. 2011. A Mineralogical study of Spodumene from the Guanpo Pegmatite in [Guanpo town,] Lushi [county, Sanmenxia prefecture,] Henan Province. *Acta Petrologica Et Mineralogica*, V 30, no. 2, p. 281-285. (in Chinese with English abstract). Mention of other minerals and analyses of spodumene. No maps. This locality is probably Pegmatite no. 309, near Guangpo village, which is 9.6 km SW of Lushi town, Lushi county, Sanmenxia prefecture, western Henan Province. The village is perhaps 1 km east of the Sha-anxi Province border.

BAI, Feng; FENG, Hengyi; ZOU, Sijie and LIU, Jiao. 2010. Study on Cymatolite from the Guanpo pegmatite deposits in [Guanpo town,] Lushi [county, Sanmenxia Prefecture], Henan province. [J] *China Non-metallic Mineral Industry Herald*, V 85, No. 5, p. 29-31 (in Chinese with English abstract). No maps. This locality is probably Pegmatite no. 309, near Guangpo village, which is 9.6 km SW of Lushi town, Lushi county, Sanmenxia prefecture, western Henan Province. The village is perhaps 1 km east of the Sha-anxi Province border.

BAI, Wanling (柏万灵).1994.Gem pegmatites in Gaoligongshan, Western part of Yunnan Province. *Mineral Resources and Exploration*, V 8， no. 4, p. 282-287 (in Chinese). No maps, cross sections or diagrams, only chemical compositions.

BAI, Zhixin, XIAO, Liqing and LIU Zongbao. 1992. Geological Characteristics of the Kelumute pegmatite No. 116, Xinjiang[, Province]. *Xinjiang Non-Ferrous Metals,* No. 1, p. 1-4 (in Chinese). No maps, figures or composition tables. Pegmatite no. 112 also mentioned in text.

Belkasmi, M., Cuney, M., Pollard, P.J., and Bastoul, A. 2000. Chemistry of the Ta-Nb-Sn-W oxide minerals from the Yichun rare metal granite (SE China): Genetic implications and comparison with Moroccan and French Hercynian examples. *Mineralogical Magazine*, V 64, No. 3, p. 507-523 (in English).

Beus, A. A. 1956. *Beryllium.* W. H. Freeman and Company, San Francisco. 161 p. (English translated text 1962). Text is valuable because some of illustrations are of pegmatites that are identified in later Chinese publications 30 years later. Map of Keketuohai No. 3 pegmatite showing exploratory drifts on page 135, Figure 39. Figure 10, page 50 is a small scale cross section of the Keketuohai No. 3 pegmatite.

Beus, A. A. 1960. *Geochemistry of Beryllium.* W. H. Freeman and Company, San Francisco. 401 p. (English translated text 1966). Text is valuable because some of illustrations are of pegmatites that are identified in later Chinese publications 30 years later. Figure 29, page 194, Dakalasu No. 1 pegmatite cross section.

BI, Zhonghua. 2009. Cesium Mineralization [pollucite] Characteristics of the Granitic Pegmatite Deposits at Keketuohai [, Xinjiang province]. [J] *Xinjiang Nonferrous Metals*, No. 1, p 9-10 (in Chinese). No maps.

BIN, L. and KUN, S. 2000. Characteristics, formation conditions and distinguishing specialization of inclusions in the aquamarines in Xinjiang. *Acta Petrologica Sinica,* V. 16, No. 4, p. 633-638. (Chinese with English abstract)

Blauwet, Dudley, Quinn, E.P., and Muhlmeister, S. 2005. New emerald deposit [Dafdar or Davdar, Tashikuergan] in Xinjiang, China. *Gems and Gemology*, V 41, p. 56–57 (in English). With a color photograph of an emerald specimen. This is the same locality that has been described as at Tashen Kuergan [(Taxkorgan), Xinjiang Province.

CAO, X. 1984. *The Mineralizing Characteristics of 414 Ta-Nb Deposit at Yichun, Jiangxi [Province]*. Unpublished M. Sc. Dissertation. Geology University of China, 68 p. (in Chinese).

CAO, Zhimin(曹志敏); LI, Youguo (李佑国); REN, Jianguo(任建国); LI, Baohua (李保华); XU, Shijin (徐仕进); WANG, Rucheng (王汝成); ZHENG, Lucheye (正路澈也); JIN, Tianbozhang (金田博彰); and XIAO, Linxiangyi (小林祥一). 2002. Geologic and Geochemical Features of the Volatile-rich Ore Fluid and its Tracing and Dating in the Xuebaoding Beryl-Scheelite Vein Deposit, [Sichuan Province,] China. [J*] Science in China, Series D (Earth Sciences),* V 32, No. 1, p. 64-72 (in Chinese).

CAO, Zhimin, ZHENG, Jianbin; AN, W., et al., 2004. Geochemistry of Xuebaoding alkali granite and its ore controlling effect. *Journal of Ocean University of China*, V 34, No. 5, p. 874-880 (in Chinese with English abstract).

Cerny, P. 1989. Characteristics of Pegmatite Deposits of Tantalum. In: *Lanthanides, Tantalum and Niobium*. Editors: Moller, Cerny, and Saupe. Springer-Verlag, Berlin, Germany. P. 196-239. Discusses Hengshan pegmatite field, Guangning county, Zhaoqing prefecture, Guangdong Prov. Sketch of district. Simplistic pegmatite map, no scale bar or location.

CGQXP Editorial Committee. 1983. *Contribution to the Geology of the Qinghai-Xizang (Tibet) Plateau* (13), (Chinese with English abstracts), 214 pages. Contains two pegmatite articles. The individual references describe the articles.

CHANG, P. S. 1958. Aeschynite from Inner Mongolia, China. *Ti Chih Lun P'ing* [Geological review], V 18, no. 5, pp. 360-364, 383 (in Chinese). Discusses pegmatites in Inner Mongolia.

CHANG, P. S. 1962a. Niobo-aeschynite. *Science Sinica,* V. 11, no. 7, p. 969-976 (in English). Discusses pegmatites in Inner Mongolia.

CHANG, P. S. 1962b. A Thorium-poor monazite. *K'o Hsüeh (Xue) T'ung Pao (Scientia)*, 1962, no. 10, p. 42-44 (in Chinese). Discusses pegmatites in Inner Mongolia.

CHANG, P. S. 1968. Discussion on aeschynite-priorite minerals. *Acta Geologica Sinica*, V. 43, no. 1, p. 90-97 (in Chinese). Discusses pegmatites in Inner Mongolia.

CHANG, Ching (Qing) and TUNG, Wu. 1964. Tantalian Aeschynite. *K'o Hsüeh (Xue) T'ung Pao (Scientia),* 1964, no. 1, p. 71-73 (in Chinese). Discusses pegmatites in Inner Mongolia.

CHE, Xudong; WANG, Rucheng; HU, Huan; ZHANG, Wenlan and HUANG, Xiaolong. 2007. Beryllium Mineralization in the Yichun Topaz-lepidolite Granite, Jiangxi: Associations of Beryllium Phosphate Minerals. *Acta Petrologica Sinica*, V 23, No. 6, p. 1552-1560.

CHEN, Baoquan. 2008. Geological Features of the Nanping Xikeng rare metal pegmatite deposits, Northern Fujian. *Fujian Education of Information Technology*, No. 3, p. 27- 32 (in Chinese). No maps.

CHEN, Fuwen; LI, Huaqin（李华芹); Wang Denghong (王登红); et al. 1999. New geochronological evidences for Yanshanian rock-forming and mineralization in Chinese Altay orogenic belt. Chinese Bulletin of Science (科学通报), v. 44, no. 11, p 1,142-1,148 (in Chinese).

CHEN, Fuwen; LI, Huaqin（李华芹); and LU, Yuanfa. 2002. Temporo-spatial distribution of rare metal and REE [pegmatite] deposits in Xinjiang, Northwest China. *Acta Geologica Sinica,* v. 76, no. 4, p 478-487 (in English). Article contains a list of rare-metal and REE pegmatite fields and their location on a regional map. This map was used as the template for ZOU and LI (2006) plate 1 of Xinjiang province. Also contains age dating of variable reliability for many of the pegmatite fields.

CHEN, Ganfu and YAO, Peng. 2000. 藏东西藏岩的电气石 Tourmaline from Eastern Tibet, Tibet Province. 作者:沈敢富,姚鹏 学术期刊高 校地质学报）*Geological Journal of China Universities* 2000 年第 6 卷第 2 期

CHEN, Guangyuan; LI, Meihua; WANG, Xuefang; SUN, D.S., SUN, C.M.; WANG, Zufu; SU Yuxuan; and LIN, Jiaxiang., 1984. The genetic mineralogy of Gong changling iron mine. *Journal of Mineralogy and Petrology*, special issue, V 4, No. 2, p. 30-34 (in Chinese with English abstract). Liaoning province, LiaoYang prefecture, between Anshan and Benxi cities.

CHEN, Guangyuan; SUN, D.S.; and YIN, H. A. 1987. *Genetic mineralogy and prospecting mineralogy*. Chongqing Press, Chongqing, p. 212-214 (in Chinese).

CHEN, Guojian. 2014. Geological characteristics and gensis of the Nanping granitic pegmatite type Ta-Nb deposit, Fujian Province. Geological Bulletin of China, v 33, no. 10, p. 1550-1561.

CHEN, Jianhua. 2004. Gem Grade Rose-colored Beryl from Qinghe County, Xinjiang [Province]. *Journal of Gems and Gemology*, No. 1, p. 28 (in Chinese). No maps or figures.

CHEN, Jianhua. 2000. Chrysoberyl from Fuyun County [, Xinjiang Province]. [J] *Gems and Gemology*, No. 3.

CHEN, Jianhua. 1997. The Gem Characteristics of the "Ertaibi Yuxi" colored Tourmalines from the Altai region, Xinjiang. [J] *Jewelry Technology*, V 8, No. 3, p. 31-33 (in Chinese). Schematic cross section with 3 colored pictures of colored tourmaline crystals.

CHEN, Jianhua. 1990. Characteristics of gem mineral output from the Altai area, Xinjiang Province. [J] 《珠宝科技》*Jewelry Technology*, V 2, Z1 (supplement Z), p 51-54 (in Chinese).

CHEN, Jianhua； KANG, Xu; and YU, He. 1988. The Characteristics and mineralization in some Lithium-rich pegmatites in the Altai region of Xinjiang. [J] *Xinjiang Non-ferrous Metals*, No. 4, p. 19-26 (in Chinese). No maps or pictures.

CHEN, Jianhua and KANG, Xu. 1985. The Characteristics of multi-colored tourmaline from the granitic pegmatites in the Altai Region, Xinjiang. [J] *Xinjiang Mining and Metallurgy,* No. 1, p. 26-30 (in Chinese). One cross section and some blacklines drawings of crystals.

CHEN, Jianping; CHEN, Yong; ZHU, Pengfei; WANG, Limei; SHANG, Beichuan; ZHAO, Jie. 2011. Digital Ore Deposit Model and its Application: A Case Study of the Prognosis of the Keketuohai No. 3 Pegmatite Dike Concealed Rare Metal Deposit. Geological Bulletin of China, V 30, No. 5, p. 630-641 (in Chinese with English abstract). Contains maps with coordinates and scale bars of the deposit. Confirms numerous drill cores to define the 3D geometry of the pegmatite.

CHEN, Jinduo (陈金 铎). 2014. Mineralization characteristics of the granite pegmatite dyke in Southwest Lushi, Henan Province. *Modern Mining*, Sept, no. 9. p. 100-104 (In Chinese, English abstract).

CHEN, Jinduo; RAO, Minwei; ZHANG, Yingnian; LI, Guojian; and LI, Dejun. 2014. The metallogenic geologic characteristics of pegmatite veins and typical tantalum-niobium ore deposit, Lushi County, Henan [Province]. Conservation and utilization of mineral resources, August, no. 4, p. 13-17 (In Chinese with English abstract). Contains one pegmatite map, same as the one in Lu, et al (2010), figure 4.

CHEN, Jun; LU, Jianjun; CHEN, Weifeng; WANG, Rucheng; NA, Dongsheng; ZHU, Jinchu; ZHANG, Wenlan; and JI Junfeng. 2008. W-Sn-Nb-Ta-bearing Granites in the Nanling Range and Their Relationship to Metallogenesis. [J] *Geological Journal of China Universities*, V 14, No. 4, p. 459-473 (in Chinese with English abstract).

CHEN, Shangdi. 1983. The Rubidium and Cesium geochemistry of rare element bearing granite-pegmatites in Eastern Qinling Range. *Journal of the Chengdu College of Geology,* Chengdu, V 4, p. 49-60 (in Chinese with English abstract). Contains geologic map, but no scale bar, no geographic place names. This paper relates to Lu Xinxiang et al. (2010) paper in the Lushi area.

CHEN, Shihen. 1987. Preliminary exploration and status of rare-metal pegmatite deposits of cassiterite, niobium-tantalite occurrences. *Utilization of Mineral Resources Journal,* p. 50-53 (in chinese). No maps, western Guangning county, Guangdong Province.

CHEN, Shurong and GUO, Yuemin. 1992. Mica characteristics in Fujian pegmatites and their surrounding rocks. *Acta Mineralogica et Petrologica*, V 11, No. 4, p. 356-366 (in Chinese).

CHEN, Wu; and QIAN, Handong. 1999. Origin and Occurrence of Be-Bearing Gem Minerals of Granitic Pegmatites and the Contact zone [J]; *Journal of Gems & Gemology*; V 18, no. 2, p. 1-4. No maps.

CHEN, X. 1982. *On the Geology and Micas of 414 Granite Type Rare-metal Deposit in Jiangxi.* Unpublished M. Sc. Dissertation, Nanjiang University, 135 p. (in Chinese). Yichun Li-Nb granite deposit.

CHEN, Xiangdong. 2008. Geological characteristics of Donghu pegmatite deposit of [Donghu Cun, Jiaowei Town,] Xianyou county [, Putain prefecture] in Fujian province and genetic analysis [J]. *Geology and Mineral Resources of South China*; No. 1, p. 59-64. Contains a geologic map with scale bar but no place names. Jiaowei town (Zhen) is located southeast of Xianyou county seat town.

CHEN, Xiangli; JIN, Yanhui; and XIE, Ciguo. 2003. [niobium rutile] *Acta Mineralogica Sinica*, V 23, No. 4, p. 323-326 (in Chinese).

CHEN, Xijing (陈西京); WANG, Shurong (王淑荣); and ZHANG, Xiuyin(张秀颖).1993. *Geological Features and Mineralization of Granitic Pegmatites in Qinling.* Beijing: Publishing House of Geology, 75 p. (in Chinese). The book, contains p. 5 -regional geologic map, no scale bar, several place names (An-ding, Tianshui, Xian and others (Gansu and Sha-anxi Provinces), p. 9 geologic map of Ningsha-an pegmatite district, with scale bar, two place names, Sha-anxi Province, p. 9 geologic map of the Baoji pegmatite district, scale bar, two place names (Taibai and Baoji), Sha-anxi province, p. 11 geologic map of Shangnan pegmatite district, no scale bars, several place names, Shangnan county, Eastern Sha-an Xi province, p. 13 geologic map, no place names, no scale bar but possible 1 km tick marks along sides, p. 16 geologic map of , p. 17 geologic map of no place names, no geographic features, probably 1 km labeling along sides, p. 17 geologic map of , no place names, no scale bar but apparent 1 km grid lines on map, un-labeled town shown, rivers on map, p. 60 geologic pegmatite map of un-named district, no scale, no place names, only north arrow. Very valuable resource for describing pegmatites in Shaanxi province.

CHEN, Xiling. 1982. On the Distribution of Pegmatites in the East Qinling area. *Journal of Chang'an University (Earth Science edition)* No. 1, p. 13-19 (in Chinese). Contains several maps and cross sections.

CHEN, Xijing. 1981. Pollucite formation conditions and criteria from several pegmatites in China. *Journal of Chang'an University (Earth Science Edition*). p. 47-57 (in Chinese). One possible map but several cross sections of different pegmatites, also sketches showing graphic occurrences of pollucite. Since Chen did lots of work in the Qinling Mts, these pegmatites might be from his area. Pollucite =铯榴石 = seliushi= sometimes translated as cesium garnet.

CHEN, Xijing. 1976. Deep-seated Magmatic differentiation and the formation of granite pegmatites in a Certain District, [Qinling Range,] China. *Geochimica*, V 3, p. 213- 229 (in Chinese with English abstract). Contains a geologic map with pegmatites, 10 km grid labeling on the sides, can be matched up with regional geologic map.

CHEN, Yinhan. 1982. The composition and formation conditions of fluid inclusions in smoky quartz crystals in the Badaling pegmatite [, Hebei Province]. *Acta Mineralogica Sinica*, September, V 3, p. 221-225 (In Chinese with English abstract).

CHEN, Yuchuan; PEI, Rongfu; ZHANG, Hongliang; LIN, Xinduo; BAI, Ge; LI, Chongyou; HU, Yongjia; LIU, Houqun and XIAN, Baiqi; and others. 1989. *The Geology of Non-Ferrous and Rare Metal Deposits related to Mesozoic Granitoids in Nanling*. Geological Memoir Series 4, No. 10, Geological Publishing House, Beijing Region, Ministry of Geology and Mineral Resources. 505 p. Hardcover (in Chinese with English abstract).

CHEN, Zhenghui (陈郑辉); WANG, Denghong (王登红) GONG, Yufei (龚羽飞); CHEN, Yuchuan (陈毓川); and CHEN, Shiping (陈世平). 2006. ^{40}Ar-^{39}Ar Isotope Dating of Muscovite from the Jingerquan Pegmatite Rare Metal Deposits in Hami [City district], Xinjiang [Province], and Its Geological Significance. [J] *Mineral Deposits* (礦床地質), V 25, No.4, p. 470-476 (in Chinese with an English abstract). Article has 2 maps and one cross section of a pegmatite.

CHEN, Zhijun (陈志军), WAN, Shiming, (万世明); LU, Xinbiao (吕新彪); WANG, Wenkui (王文魁). 2002. Study on fluid inclusions in beryl from Pingwu, Sichuan Province. [J] *Geological Science and Technology Information*, V 21, No. 3, p. 65-68 (in Chinese with English abstract).

Chengdu College of Geology, 7th teachers and researchers group in the Second Department. 1974. Pollucite from a rare metal pegmatite in the area of [probably Mufu Shan pegmatite district in Hunan or the district in Tongcheng town, Xianning prefecture, Hubei province] south-middle of China. [J] *Chengdu College of Geology*, p. 53-56 (in Chinese). No maps, lots of sketches of mineral samples showing intergrowth of different minerals with pollucite.

China Bureau of Mineral Resources, Ministry of Geology. 1957. Geochemistry and types of rare-earth minerals deposits in China, related to the mode of occurrence and prospecting. *Ti Chih Chih Shih* [geological knowledge], No. 11, p. 5-12 (in Chinese). Discusses pegmatites in Hai-ch'eng, Liaoning Province and Inner Mongolia.

CHOU, Iming and LI, Jiankang. 2014. Studies of silicate melt inclusions in quartz and crystal-rich inclusions in spodumene from [the] Jiajika granitic Pegmatite Rare-metal deposit, China. Vancouver Convention Centre-West 205/206, Geological Society of America Abstracts with Programs. Vol. 46, No. 6, p. 696.

CHOU, Nianming and YANG, Yueqing. 1985. *Nanping Pegmatite Field, Fujian Province: Research report on its formation, mineralization and prospecting approach*. Published by Fujian Provincial Bureau of Geology and Mineral Resources and Chinese Academy of Geological Sciences Institute of Mineral Resources. 236 p. (in Chinese with English abstract), Hardcover. Based on work done between 1983 to 1985. The above named authors, compiled this book, 9 others are listed as colleague researchers. This book is the most important reference for the Nanping pegmatite field, contains 1;500,000 geologic map, detailed pegmatite maps, a 1:50,000 pegmatite location map with numbered pegmatites, including the most intensively described pegmatite, No. 31. Individual pegmatite cross sections include No. 31. No. 31 is exhibited in an exploded block diagram, and two internal structure cross sections. All the major minerals are described with chemical analyses as were available. Black and white photographs of rock exposures with mineral textures.

Cordua, William S. 1996. A field trip to the Koktokay 3 pegmatite, Altay Mountains, Xinjiang, China. Mineral News, v 12, no. 12, p. 1, 6-7 (English). A positive description of minerals observed on the outcrop and collected during an approved government visit.

DENG, Mengxiang (邓梦祥). 1997. Yunnan Emerald mineral properties. *Mineralogy, Petrology and Geochemistry Bulletin*, No. S1.

DING, Haihong: HU, Huan; ZHANG, Aicheng; NI, Pei; and XU, Shijin. 2010. Study on Metamict Zircon from the Koktokay No. 3 Granitic Pegmatite Vein. [J] *Acta Mineralogica Sinica*, V 30, No. 2, p. 160-167 (in Chinese).

Dyachkov, Boris; Zimanovskaya, N. and Mataibayeva, I. 2013. Rare metal deposits of East Kazakhstan: Geologic position and prognostic criteria. Open Journal of Geology, v. 3, p. 404-409 (in English). Published online at http://www.scirp.org/journal/ojg.

EINFALT, Hans-Christoph; LEIFELD, Dietmar; WU, G. Y.; KNABE, W. and ZHANG, Y. Z. 1996. Tantalum-niobium-tin pegmatites in the Hengshan area, Guangdong Province, P. R. China. *Geowissenschaften*, V 14, no. 7-8, p. 331-332 (In English). ISSN: 0933-0704. This is an abstract of the entire research project edited by Leifeld, D. (1986a-g). See also Hohndorf et al. (1992). Abstract includes a regional geologic map.

FAN, Guang; LI, Guowu; SHEN, Ganfu; XU, Jinsha and DAI, Jie. 2012. Luanshiweiite-2M_1, IMA 2011-102. CNMNC Newsletter No. 13, June, p. 810; *Mineralogical Magazine*, V 76, p. 807-817. A new mica minerals from Pegmatite no. 309, Guangpo village, which is 9.6 km SW of Lushi town, Lushi county, Sanmenxia prefecture, western Henan Province (in English).

FAN, Liangming; MAO, Yuyuan; WAN, Yongwen; and LUAN, Shiwei. 1994. Discovery of eucryptite and (hectorite) swinefordite in no. 3 pegmatite vein, Keketuohai district, Xinjiang, China. *Journal of Mineralogy and Petrology*, V 15, no. 1.

FAN, Tao; and YANG, Shiyu. 2004. Study on the Resources of Gemstones in the Three River [San Jiang] Belt of Northwest Yunnan. [J] *Journal of Kunming University of Science and Technology,* V 29, No. 1, p. 4-7 (in Chinese with an English abstract). Seventeen labeled deposits are shown in a table.

FEHR, T. 1988. Neue Mineralien: Ertixiit. *Lapis,* V 13, No.5, p. 28.

FEN Lian; WANG, Tai-Ping ZHAO, Chan Wai- 2012. Niobium-tantalum ore research progress and Panxi area niobium-tantalum ore causes of [J]. Mineral Deposits (in Chinese), V 31, No. 2, p. 293-308.

FENG, Lianshun. 1973. Preliminary study of Amazonite from a Granitic Pegmatite Somewhere in China. [J] *Geology and Exploration*, V 7, p. 19- 23 (in Chinese).

FENG, M. G.; ZHANG, S. T.; and LU, W. 2000. Geological characteristics of the Chinese Emerald Deposits. *Yunnan Geology*, V 19, p. 37-42 (in Chinese).

Feng, Z. 1992. Pegmatites in Haicheng District, China (in Seventh regional conference on Geology, mineral and hydrocarbon resources of Southeast Asia (GEOSEA VII). Journal of Southeast Asian Earth Sciences (May 1992), 7(4): 272.

FRITZ, Eric A.; ORIGLIERI, Marcus J. and DOWNS, Robert T. 2006. Triploidite from China. *Gems & Gemology*; V 42, No. 2, p. 183 (in English).

FU, Tóngtài; FENG, Jiālín; BING, Lìfū; DUAN, Ruìyán; and YU, Zhìhóng. 1964. Genetic types and distribution of rare-element granitic pegmatites in a segment of the Qinling Mountains. Published by Chinese Academy of Geological Sciences, Institute of Geological Collection, 1986. no. 2, p. 22-23 (in Chinese). No pictures, summary of historic work.

FU, Xianling (傅先良). 2002. Visible, infrared absorption spectral characteristics and coloring mechanism of Yunnan Malipo Emerald [J]; Journal of Gems and Gemology; No. 1 (in Chinese).

FU, Xiaofang; HOU, Lìwěi; WANG, Dēnghóng; YUAN, Lǐpíng; LIANG, Bin, HAO, Xuěfēng, and PAN, Méng. 2014. The results of the mining and mineral investigation of the Jiajika spodumene quarry, Ganzi prefecture, Sichuan Province. *China Geological Survey*, V 1, no 3 (December), p. 36-43 (In Chinese). Map of pegmatite field with some pegmatite numbers-location of x03 pegmatite which is described in another report.

GAN, Yuanming and BING, Lifu. 1962. The internal structure and geochemical characteristics of granitic pegmatites. [J] *Chinese Geology*, No. 10, p. 5-13 (in Chinese).

GAO, Guangming, PENG Guangxiong; and YE, Zhenchao. 2010. Report on remote sensing image processing and interpretation of the Kuermutu and Keketokay Rare Metals Prognosis in Altay Region, Xinjiang [R]. Changsha*: Journal of Central South University* (in Chinese).

GAO, Jianfei; and NING, Tiping. 2011. Silicon and Oxygen isotopic composition of Miarolitic Cavity Granites and garnet-bearing pegmatites in Yunxiao, Fujian Province. *Geologic Review*, V 57, No. 5, p. 670-674 (in Chinese with English Abstract). p. 671, geologic map with scale bar and place names. This is the granite containing the Tongbei miarolitic cavity minerals known for its spessartite on smoky quartz.

GAO, Zhenxi, REN, Kaiwen, JIN Baoyuan and GUO Keyi. 1980. *Minerals in China*. Museum of Geology, Ministry of Geology, Beijing. Shanghai Scientific and Technical Publishers, Shanghai, China. 165 p. (in English). Abundant color pictures of specimens in the Beijing museum collection, localities were generalized to province level and still on exhibit in 2011. Hardcover book.

GAO, Ziying (高子英); LU, Boxi; DUAN, Jianzhong and PAN, Zhangyun. 1993. Granitic pegmatites in western Yunnan. *Yunnan Geology* (云南地质), v. 12, No. 4, p. 367-372 (in Chinese with English Abstract).

Geological Museum of China, Beijing and the Collector's Edge. 2010. *Mineral Treasures of the World.* Geological Publishing House, Beijing, 126 p. (bilingual, in Chinese and English), ISBN 978-7-116-06661-8, Hardcover.

GOSS, Sarah C.; Simon A. Wilde; Fuyuan WU; and Jinhui YANG. 2010. The age, isotopic signature and significance of the youngest Mesozoic granitoids in the Jiaodong Terrane, Shandong Province, North China Craton, *Lithos*, V 120, no. 3–4, p. 309-326 (in English).

Granitoid Research Group of the Nanling Project. 1989. *Geology of Granitoids of the Nanling Region and their Petrogenesis and Mineralization*. Geological Memoir Series 3, No. 10, Geological Publishing House, Beijing Region, Ministry of Geology and Mineral Resources. 471 p. Hardcover (in Chinese with English abstract).

GROAT, L.A., Giuliani, G., Marshall, D.D., and Turner, D. 2008. Emerald deposits and occurrences: A review. [J] *Ore Geology Reviews,* V 34, p. 87-112 (in English). Mentions Xinjiang emerald deposit along western border near Dafdar.

GUO, Jianqiang (郭建强), ZHAO, Yuanlong (赵元龙) 2013. Exploration and planning of a spodumene quarry in Sichuan province. *Sichuan Geology Journal*, no. 1, p. 36-39. (In Chinese).

GUO Keyi and ZHOU, Zheng. 1996. *Mineral Treasures of China*. Geological Publishing House, Beijing. 220 p. Published for the 30th International Geological Congress, held in Beijing. (in English and Chinese). This book is an updating both in specimens and in the supporting text from the "Minerals of China" (1980) book. Good pictures from the Beijing National Museum. Hardcover book.

GUO, Yanjun; WANG, Rucheng; and XU, Shijin (郭延军, 王汝成, 徐士进) 2000. Vibrational spectra of beryl from Xuebaoding, Pingwu, Sichuan. *Geological Journal of China Universities,* V 6, no. 2, p. 201-204.

GǓ, Chénghuì. 2014. Translated title: Spodumene deposits of the southeast portion of the Keeryin pegmatite field, Sichuan province. Official Title: Metallogenic regularity of spodumene deposits in the closely spaced pegmatite area in the southeastern Keeryin pegmatite field, Sichuan province. 四川省 可尔因 伟晶岩田 东南密集区 锂辉石矿 床成矿规律. Contributions to Geology and Mineral Resources Research. (地质找矿论丛), V 29, no. 1, p. 59-65 (In Chinese with English abstract). Excellent paper.

GU, Lianxing; YANG, Hao; YAN, Zhengfu; LIAO, Jingjuan; and WANG, Jinzhu. 1995. Jing'erquan pegmatite field, Xinjiang. *Chinese Journal of Geochemistry, V* 15, No. 1, p. 33-43. not yet able to confirm reference.

GU, Lianxing; ZHU, Jianlin; GUO, Jichun; LIAO, Jinjuan, YAN, Zhenfu, YANG, Hao and WANG, Jinzhu. 1995. Geology and Geneisis of the Mafic-ultramafic complexes in the Huangshan –Jingerquan belt, East Xinjiang. *Chinese Journal of Geochemistry,* V 14, No. 2, p. 97- 116 (in English). Only has a regional geologic map.

GU, Lianxing; ZHANG, Zunzhong; WU, Changzhi; GOU, Xiaoqin; LIAO, Jingjuan; and YANG, Hao. 2011. A topaz- and amazonite-bearing leucogranite pluton in eastern Xinjiang, NW China and its zoning. [J] *Journal of Asian Earth Sciences*, V 42, No. 5, October 2011, p. 885-902 (in English). Mentions three small pegmatites within the granite that contained 1 to 2 cm long

beryl crystals, also provided a list of the minerals within this granite. A scenery photograph of the locality shown as well as index maps with latitude and longitude.

GU, Lianxing; WU, Changshi, ZHANG, Zunzhong; GOU, Xiaoqin, LIU, Sihai; ZHENG, Yuanchuan; and ZHANG, Guanghui. 2007. Geochemistry of the Baishitouquan Topaz-bearing Amazonite Grainte: Zoning and Magma Evolution. *Geological Journal of China Universities*. No. 2 p. (in Chinese with English Abstract).

HATERT, F.; OTTOLINI, L.; WOUTERS, J. and FONTAN, F. 2012. A Structural Study of the Lithiophilite-Sicklerite Series. *The Canadian Mineralogist,* V 50, part 4, (No. 4), p. 843-854 (in English). Sample used in the paper is from the Keketuohai No. 3 pegmatite.

HAN, Tonglin. 1983. The Primary Analysis of the Structures of Grano-Pegmatite fields and pegmatite deposits in an area of west Sichuan [Jiajika pegmatite field] In: CGQXP Editorial Committee. *Contribution to the Geology of the Qinghai-Xizang (Tibet) Plateau (13),* p. 41-53 (Chinese with English abstract). First published map of part of the pegmatite field.

HE, Jianping. 2006. Ore features of a tantalum-columbium deposit in Shananbang, Suzhou. *Jiangsu Geology*, V 30, No. 3, p. 183-186 (in Chinese).

HE, Jinliang. 2004. Ore-forming Geological Conditions and Prospecting Potential for Nb-Ta Mineral Deposits in the Panzhihua-Xichang Region, Sichuan. *Acta Geologica Sichuan*, No. 4.

HE, Jianzhang. 2003. The Comprehensive Utilization of Beryllium Ore from the Keketuohai No. 3 vein[, Xinjiang Province]. [J] *Xinjiang Nonferrous Metals,* 2003, No. 4 (in Chinese).

HE, Ruiling and CAO, Enkui. 1985. The characteristics of stibiobismutotantalate within granite pegmatite in the Guanpo area, Lushi county, Sanmenxia Prefecture, Henan Province. *Geology of Shaanxi*, V 3, No. 2, p. 39-46 (in Chinese).

HE, Xinrong. 2006. On the Exploitation of Spodumene in Jiajika, Sichuan Province. *World Nonferrous Metals.* 2006-01, p. 8-10 (in Chinese). No maps. Article reflects the growing concern that using spodumene for lithium might not be a wise economic decision, that the saline lake deposits are superior.

HE, Yuliang and HUANG, Cenyang. 2012. Mineralization of Rare Metals in the Lushi Pegmatite – A Preliminary Study. Science and Technology Information, No. 28, p. 77-78 (in Chinese). Article has one map. No English abstract.

HEDLAND, A. 2004: Das Scheelit-Beryll-Kassiterit-Fluorit-Vorkommen von Huya-Zibeisha bei Pingwu, Provinz Sichuan, China. *Mineralien Welt,* V 15, no. 6, p. 46-57 (in German).

HSIEH, C. Y. **(**謝家荣= XIE, Jiarong). 1963. A Study of the Tin deposits in China. *Scientia Sinica (Taiwan)*, v. 12, no. 3, p. 373-390 (in English).

HONG, Dawei (洪大卫), GUO, Wenqi (郭文岐), LI, Gejing (李戈晶). KANG, Wei (康炜),; and XU, Haiming (徐海明). 1987. Petrography and origin and evolution of Fujian coastal miarolitic granite belt. Beijing: Beijing Science and Technology Press, 128 p. (in Chinese with

English abstract). Hardcover book. Kuiqi granites near the Gushan intrusion, northeast of Fuzhou on the coast. Lists all the miarolitic granite names in a coastal map. Can be used to identify and confirm the name of the miarolitic granite at Tongbei.

HONG, Dawei (洪大卫); WANG, S. G.; XIE, X. L.; ZHANG, J. S.; amd WANG, T. 2003. Granitoids and related metallogeny of the Central Asian Orogenic Belt. In: Tectonic evolution and metallogeny of the Chinese Altay and Tianshan. MAO, Jinwen; Goldfarb, RJ, Seltmann, R.; WANG, DengH; XIAO, WJ; and Hart, C. (editors). 2003. Proceedings volume of the international Symposium, IGCP-473 project in Urumqi and guidebook of the field excursion in Xinjiang, China. August 9-21, 2003. IAGOD guidebook, series 10. Centre for Russian and Central Asian Mineral Studies, Natural History Museum, London. P. 75-106.

HÖHNDORF, A., EINFALT, H.-CHR., KREUZER, H., LEIFELD, D., MÜLLER, P., WU, G. and ZHANG, Y. 1992: Radiometric Age Determinations on Granites and Sn-Nb-Ta Pegmatites from the Hengshan Area, Guangning District, Guangdong Province, China. In: *Radiometric Dating, China* Geologisches Jahrbuch Heft B 76, p. 39-74.

HU, Huan, WANG, Rucheng; Fontan, F; ZHANG, Aicheng; and CHEN, J. D. 2007. Phosphate minerals from the Nanping pegmatite, SE China. In *Granitic Pegmatites: The State of the Art--International Symposium.* 6th-12th May 2007, Porto, Portugal. Abstract (in English).

HU, Huan, WANG, Rucheng, ZHANG, Aicheng; and XU, Shijin. 2005. Magmatic-hydrothermal evolution of pollucite from No.3 rare metal pegmatite dyke, Koktokay, China. *Geochimica et Cosmochimica Acta*, Abstract from Goldschmidt Conference, V 69, No. 10, p. A13 (in English).

HU, Huan; WANG, Rucheng; ZHANG, Aicheng; and XU, Shijin. 2004. Compositional heterogeneity and magmatic-hydrothermal evolution of pollucite in No.3 rare metal pegmatite dyke of Altai, Xinjiang. *Mineral Deposits*. V 23, No. 4, p. 411-421 (in Chinese with English abstract).

HU, Huan; WANG, Rucheng, ZHANG Aicheng, and XU, Shijin. 2003. Electron-microprobe study of Cs-minerals in the Yashan topaz-lepidolite granite, Jiangxi Province. *Geochimica,* V 32, No. 1, p. 62-74. (in Chinese with English abstract) [probably same as the Yichun deposit]

HU, Rongrong. 2008. *Metallogenic geological setting and metallogenic model of the Yunnan Malipo emerald deposit*. Kunming University of Science, Masters Degree thesis, 90 p (in Chinese).

HU, Weizheng; HUANG, Xiaowen; and XIE, Zhendong. 2006. Geological Characteristics and Prospect Foreground of Spodumene Deposits in the Xigang-Langjing Area [Guangchang county, Fuzhou prefecture], Southern part of the Jiangxi Province; *Journal of East China Institute of Technology*; No. S1 (supplement 1) [NE of Ningdu and N of Shicheng counties], p. 187- 194 (in Chinese with English title). Contains several maps with easting and northing coordinates along its edges. This pegmatite area is the same one described in Hu, Huang and Huang (2005).

HU, Weizheng (胡为正), HUANG, Junping; and HUANG, Xiaowen. 2005. Characteristics and genesis of pegmatite type Nb-Ta spodumene deposit in Xigang, south[ern part of the]

Jiangxi [Province]. [J] *Resources Survey and Environment,* V 26, no. 4, p. 258- 266 (In Chinese with English Abstract). Contains cross sections with scale bar, and a pegmatite map with coordinates, scale bar and place names. This pegmatite field is the same as the one described in Hu, Huang and Xie (2006).

HU, Yuandi. 1965. The mineralogy, geology and geochemical characteristics of an area containing pegmatites. [J] Geology. (Nov) V 23, No. 6, p. 454-462, two B&W plates (in Chinese). Two geologic maps, scale bar, no culture or coordinates. B&W pictures of pocket crystals of smoky quartz, microcline and cleavelandite. Should be useful if the text tells where these pegmatites are located.

HUANG, Aishen. 1987. "A Discussion on the Geochemical characteristics of mineralizing elements of the No. 31 pegmatite vein, [Nanping Pegmatite District,] Fujian Province. *Geology of Fujian.* V 3, No. 6, p. 186-204 (in Chinese with English abstract). no maps.

HUANG, Shiyao (黄世尧) and HU, Jinwang (胡金旺). 2012. The geological characteristics and prospects for the development and utilization of the feldspar from the granitic pegmatites at Duanfeng Shan, Tongcheng County, Hubei Province.*Western Resources*, p. 122-123 (in Chinese). contains a geologic map with the pegmatites, no culture but it does have a scale bar.

HUANG, Jie; ZHENG, Yongfei; ZHAO, Zifu; WU, Yuanbao, ZHOU, Jianbo; and LIU, Xiaoming. 2006. Melting of subducted continent: Element and isotopic evidence for a genetic relationship between Neoproterozoic and Mesozoic granitoids in the Sulu Origin. *Chemical Geology,* V 229. p. 227-256. (in English). Discusses and mentions the Mesozoic, A-type granite, Wulian Shan miarolitic pluton (p. 229-230 with index map) which contains the miarolitic cavities with smoky quartz that have as their locality, Jietou town (Zhen), Wulian county, Rizhao Prefecture, Shandong Province. Jietou is surrounded by a great number of dimension-stone granite quarries. Except for quarrying, this is an argicultural area.

HUANG, J. Q.; REN, J. S.; JIANG, C. F.; ZHANG, Z. K. and QIN, D. Y. 1980. The Geotectonic Evolution of China. Science Press, Beijing. p. 29-31. Discussion of Nanping No. 31 pegmatite.

HUANG, M. H.; BUICK, I. S. and HOU, L. W. 2003. Tectonometamorphic Evolution of the Eastern Tibet Plateau: Evidence from the Central Songpan-Garze Orogenic Belt, Western China. Journal of Petrology (in English), v. 44, no. 2, p. 255-278.

HUANG, Xiaolong; CHEN, Xiaoming and CHEN, X M. 2002. Vertical variations in the mineralogy of the Yichun topaz lepidolite granite, Jiangxi Province, South China: *Canadian Mineralogist,* V 40, no. 4, p. 1047-1068 (in English).

HUANG, Xiaolong; WANG, Rucheng; CHEN, Xiaoming and LIU, Changshi. 2001. Phosphate Minerals from the Yashan F- and P-rich Granite in Yichun, Jiangxi Province: Genetic Implications. *Geological Review* V 47, No. 5, p. 449-458 (in Chinese).

HUANG, Xiaolong; WANG, Rucheng; LIU, Changshi; CHEN, Xiaoming; ZHANG, Wenlan and LAI, Mingyuan. 2000: Study on phosphorus-rich zircon from Yashan topaz-lepidolite granite, Jiangxi Province, South China. *Acta Mineralogica Sinica,* V 20, No. 1, p. 22-27 (in Chinese).

HUANG, Y. S. 1949. The granite pegmatites of Suchou [Suzhou]. *Bulletin of the Geological Society of China.* V 29, no. 1-4, p. 157-170 (in English). About miarolitic pegmatites within an A-type granite within the city limits of Suzhou, Jiangsu province. Maps of localities included but are outdated and need to be overlaid on current areal photographs.

JIANG, Chenghuan and ZHANG, Rufang. 2012. Gem-quality topaz characteristics and prospecting opportunities in northeast Guangxi and southwest Hunan Provinces. *Geological Society of Guangxi,* 9 p. (in Chinese) Two colored pictures of topaz, one page of crystal drawing and an excellent map showing potential gemstone areas. This area seems to be within the Limu mining district. An internet downloaded article.

JIANG, Fengxi and CHEN, Jianhua. 1988. Characteristics of Beryl Gemstones in Granitic Pegmatites, Altai[, Region, Xinjiang Province]. *Xinjiang Non-Ferrous Metals*, No. 1, p. 15-18 (in Chinese). One sketch map of a pegmatite with a quartz core, no scale bar.

JIANG, Shaoyong and WEI, Juying 1989. The Characteristic and Genesis of Aegirine and Riebeckite in Baiyunebo Ore Deposit, Inner Mongolia [J]; *Acta Scicentiarum Naturalum Universitis Pekinesis;* No. 4.

JIANG, Wencheng and DUAN, Huanchun. 2003. The Big Karasu granitic pegmatite zhuī zhuàng (锥状) beryl mineral characteristics，Xinjiang. [J] *Mineral Resources and Geology*, V 17, No. 3, p. 222- 223 (in Chinese). No maps, one table.

JIANG, Xilu. 2007. Atlas of Gems and Minerals in Hunan Province. Changsha, Hunan Province.158 p. (in Chinese). Paperback book. Color pictures of specimens with brief description of the mineral deposits, Pinjiang deposit area described with one pegmatite cross section and a cross section within an underground adit. No scale bars. Pictures of aquamarine, pocket topaz and smoky quartz.

JIE, Ken (杰肯). 2001. Kelumute pegmatite No. 116. [J] *Xinjiang Non-Ferrous Metals,* No. 3, p. 1-6 (in Chinese). Map of district, no scale bar but same map as in An (2006b) which has a scale bar.

KAMITANI, M., OKUMURA, K., TERAOKA, Y., MIYANO, S., and WATANABE, Y. 2007. Mineral Resources Map of East Asia. Geological Survey of Japan.

KANG, Xu; and WANG, Shuzhen. 1992. The Xinjiang Keketuohai granite characteristics [J] *Acta Petrologica Sinica,* No. 4, p. 399-404 (in Chinese).

KANG, Xu (康旭); WANG, Shuzhen (王淑珍); and SHI, Bo (师波). 1992. The Study of the Formation of the Keketuohai Granites, Xinjiang [Province]. [J] *Xinjiang Geology*, V 10, No. 3 (in Chinese).

KELLER, Peter and WANG, Fuquan. 1986. A Survey of the Gemstone Resources of China. *Gems and Gemology* (Gemological Institute of America, California), Spring, V 22, no. 1, p. 3-13 (in English).

KU, Jiangang; LIU, Yu; LIU, Wenyuan; LIU, Shulin, and HE, Kui. 2014. Mineralogical characteristic and comprehensive utilization of pegmatite tourmaline in Lushi, Henan Province. the Chinese Journal of nonferrous Metals, February, v. 24, no. 2 (English abstract, probably Chinese language article).

KUO, C. C. 1953. Study on some rare-earth minerals of Sui-yuan province. *Acta Geologica Sinica,* V 33, no. 2, p. 134-143 (in Chinese). Discusses pegmatites in Inner Mongolia.

KUO, C. C. 1957. Pegmatites in south Inner Mongolia. . K'o Hsüeh (Xue) T'ung Pao (Scientia), 1957, no. 1, p. 20 (in Chinese).

KUO, C. C. 1958a. Genesis and types of Inner Mongolia pegmatites. K'o Hsüeh (Xue) T'ung Pao (Scientia), 1958, no. 3, p. 93-95 (in Chinese).

KUO, C. C. 1958b. Some problems of the study of rare-earth minerals and geochemical researches. Ti Chih Lun P'ing [Geologica Review], V 18, no. 5, p. 338-350 (in Chinese). Discusses pegmatites in Inner Mongolia.

KUO, C. C. 1959. Jiningite – a new variety of thorite. K'o Hsüeh (Xue) T'ung Pao (Scientia), 1959, no. 6, p. 206-207 (in Chinese). Discusses pegmatites in Inner Mongolia.

KUO, C. C. and CHANG, Ching. 1957. Study on the thorium minerals in China. K'o Hsüeh (Xue) T'ung Pao (Scientia), 1957, no. 3, p. 92 (in Chinese). Discusses pegmatites in Inner Mongolia.

KUO, C. C.; CHANG, Ching; and Li, M. W. 1957. Age of the pegmatites in south Inner Mongolia. *K'o Hsüeh (Xue) T'ung Pao (Scientia*), 1957, no. 12, p. 377-378 (in Chinese).

KUO, C. C. and Chung, T. C. 1957a. Study on toddite of Inner Mongolia, China. *Ti Chih Lun P'ing* [Geologica Review], no. 6, p. 6-9 (in Chinese). Discusses pegmatites in Inner Mongolia.

KUO, C. C. and Chung, T. C. 1957b. Sinicite – a new uranium mineral. K'o Hsüeh (Xue) T'ung Pao (Scientia), 1957, no. 12, p. 378 (in Chinese). Discusses pegmatites in Inner Mongolia.

LEE, K. Y. 1971. Some Rare-element mineral deposits in mainland China. *U. S. Geological survey bulletin* 1312-N, p. N-1 to N-33. (in English, uses Giles-Wade transliteration of Chinese). Discusses mostly Inner Mongolian pegmatites.

LEE, Wah S. 1916. Bibliography of the Geology of China; with an outline of the Geological Features and Statement of the Problems Connected with the Geology of China. MA. Thesis, Stanford University, CA., 425 p. Typewritten in English, poor quality ink ribbon so many letters are not clear or visible.

Leifeld, D. (editor). 1986a. Metallogenese und Nutzbarkeit Tantal-Niob-Zinn-führender Pegmatite des Hengshan-Gebietes, Kreis Guangning, Provinz Guangdong, VR China : Abschlußbericht; Contract RG-8313-5 Teil 1 Geologisch-strukturelle Kartierung 1:10000 und Aspekte zu einem metallogenetischen Modell im Tantal/Niob-Erzgebiet Hengshan. Computer file. Hannover: Bundesanstalt für Geowissenschaften und Rohstoffe (In German). Translated title:

Metallogenesis and usability of Tantalum-Niobium tin bearing pegmatites of Hengshan district, Guangning , Guangdong Province , PRC : final report ; Contract RG - 8313-5 ***Part 1*** *Geological and structural mapping 1:10,000 and aspects to a metallogenetic model in tantalum / niobium rocks around Hengshan.*

Leifeld, D. (editor). 1986b. Metallogenese und Nutzbarkeit Tantal-Niob-Zinn-führender Pegmatite des Hengshan-Gebietes, Kreis Guangning, Provinz Guangdong, VR China. By Vorexploration Bilong : Abschlußbericht; Contract RG-8313-5 ; Teil 2A: Geologischer Teil. Hannover: Bundesanstalt für Geowissenschaften und Rohstoffe (In German). *Translated title: Metallogenesis and usability Tantalum-Niobium tin bearing pegmatites of Hengshan area, Guangning, Guangdong Province, PRC: final report; Contract RG-8313-5;* ***Part 2A****: Geological part*. IV, 89 p. with 9 attachments.

Leifeld, D. (editor). 1986c. Metallogenese und Nutzbarkeit Tantal-Niob-Zinn-führender Pegmatite des Hengshan-Gebietes, Kreis Guangning, Provinz Guangdong, VR China. By Vorexploration Bilong : Abschlußbericht; Contract RG-8313-5 ; Teil 2B: Technischer Teil. V, 51 p. with 17 attachments. Hannover: Bundesanstalt für Geowissenschaften und Rohstoffe (In German). Translated title: *Metallogenesis and usability Tantalum-Niobium tin bearing pegmatites of Hengshan district, Guangning, Guangdong Province, PRC ByVorexploration Bilong: final report; Contract RG-8313-5;* ***Part 2B:*** *Technical Part*

Leifeld, D. (editor). 1986d. Metallogenese und Nutzbarkeit Tantal-Niob-Zinn-führender Pegmatite des Hengshan-Gebietes, Kreis Guangning, Provinz Guangdong, VR China : Abschlußbericht; Contract RG-8313-5 ; Teil 3: Detailprospektion Cunxin. VI, 108 p. with 15 attachments. Hannover: Bundesanstalt für Geowissenschaften und Rohstoffe (In German). Translated title: *Metallogenesis and usability Tantalum-Niobium tin bearing pegmatites of Hengshan-territory circle Guangning, Guangdong Province, PRC: final report; Contract RG-8313-5;* ***Part 3.*** *Detailed prospect examination.*

Leifeld, D. (editor). 1986e. Metallogenese und Nutzbarkeit Tantal-Niob-Zinn-führender Pegmatite des Hengshan-Gebietes, Kreis Guangning, Provinz Guangdong, VR China : Abschlußbericht; Contract RG-8313-5 ; Teil 4: Vorprospektion Tong'ao. II, 21 p. with 6 attachments. Hannover: Bundesanstalt für Geowissenschaften und Rohstoffe (In German). Translated title: *Metallogenesis and usability Tantalum-Niobium tin bearing pegmatites of Hengshan-territory circle Guangning, Guangdong Province, PRC: final report; Contract RG-8313-5;* ***Part 4:*** *preliminary prospecting.*

Leifeld, D. (editor). 1986f. Metallogenese und Nutzbarkeit Tantal-Niob-Zinn-führender Pegmatite des Hengshan-Gebietes, Kreis Guangning, Provinz Guangdong, VR China : Abschlußbericht; Contract RG-8313-5 ; 5: Aufbereitungsversuche (Arbeiten in Auftragsvergabe). Bundesanstalt für Geowissenschaften und Rohstoffe (In German). Translated title: *Metallogenesis and usability Tantalum-Niobium tin bearing pegmatites of Hengshan-territory circle Guangning, Guangdong Province, PRC: final report; Contract RG-8313-5;* ***Part 5****: processing tests (working in procurement*)

Leifeld, D. (editor). 1986g. Metallogenese und Nutzbarkeit Tantal-Niob-Zinn-führender Pegmatite des Hengshan-Gebietes, Kreis Guangning, Provinz Guangdong, VR China : Abschlußbericht; Contract RG-8313-5 ; Teil 6: Bericht über die Anwendbarkeit von Prospektions- und Explorations methoden auf Selten-Element-Pegmatite im Hengshan-Gebiet.

Hannover: Bundesanstalt für Geowissenschaften und Rohstoffe (Federal Institute for Geosciences and Natural Resources), v. 1, 131 p. with 21 attachments (In German). Translated title: *Metallogenesis and usability Tantalum-Niobium tin bearing pegmatites of Hengshan-area, Guangning, Guangdong Province, P. R.China: Final report; Contract RG-8313-5;* ***Part 6****: Report on the application of prospecting and exploration methods for rare-element pegmatites in the Hengshan area*

LENG, Chengbiao; WANG, Shouxu; GOU, Tizhong; LU Lina; and LIU, Hongjie. 2007. A Review of the Research on the Koktokay No.3 Granitic Pegmatite Dyke, Altai, Xinjiang. *Geology and Mineral Resources of South China.* No. 1, p. 14-20 (in Chinese with English abstract). Also published in 20th conference in Chinese with English abstract. Contains redrafted poor quality geologic cross section.

LENG, Chengbiao; ZHANG, Xingchun; GOU, Tizhong; LU Lina; and LIU, Hongjie. 2007. The Review of the Koktokay No.3 Granitic Pegmatite Dyke, Altai, Xinjiang. p. 1-9 (in Chinese with English abstract). Contains redrafted poor quality geologic cross section.

LI, Fuping; PENG, Guangju; LU, Zongliu; and CHEN, Dajing. 2004. China's Tourmaline Distribution, Geological Characteristics and their Outlook for Utilization. [J*] Mineral Resources and Geology*, V 18, No. 5, p. 493-497 (in Chinese with English abstract). No maps or pictures.

LI, Haifu. 1991. Gems of Inner Mongolia [J] *Jewelery Technology*, No. 2.

LI, Hua; CHANG, Jingzhou; CHANG, Weiguang; YUE, Wei; and DENG, Fuyun. 2004. *An Introduction to the Geology and minerals of Yunnan Province*. Yunnan China-English University, Inner Park, Kunming, Yunnan, 257 p. (in Chinese with English titles). Hardcover book.

LI, Jiankang. 2006. *Mineralizing Mechanism and Continental Geodynamics of Typical Pegmatite Deposits in Western Sichuan, China*. China University of Geosciences, Beijing, Ph.D. thesis. 225 p. Most useful work for all of Sichuan, has detailed maps of Ke'eryin and Jiajika pegmatite fields and lists all the pegmatite districts in Sichuan.

LI, Jiankang (李建康), and CHOU, Iming. 2014. An Occurrence of H_2 in silicate melt inclusions in quartz from granite of Jiajika granitic pegmatite deposit, China. 11th International GeoRaman Conference., St. Louis, Missouri. (abstract in English), 2 p.

LI, Jiankang (李建康), LIU, Shanbao (刘善宝); WANG Denghong (王登红); and FU, Xiaofang (付小方). 2007. Metallogenic epoch of Xuebaoding W-Sn-Be deposit in northwest Sichuan and its tectonic tracing significance. *Mineral Deposits*, V 26, no. 5, p. 557-562. (in Chinese with English abstract).

LI, Jiankang (李建康); XIAO, W.; WANG, K.; SUN, G.; and GAO, L. 2003. Neoproterozoic-Paleozoic tectonostratigraphy, magmatic activities and tectonic evolution of eastern Xinjiang, NW China. In: Tectonic evolution and metallogeny of the Chinese Altay and Tianshan. MAO, Jinwen; Goldfarb, RJ, Seltmann, R.; WANG, DengH; XIAO, WJ; and Hart, C. (editors). 2003. Proceedings volume of the international Symposium, IGCP-473 project in Urumqi and guidebook of the field excursion in Xinjiang, China. August 9-21, 2003. IAGOD guidebook,

series 10. Centre for Russian and Central Asian Mineral Studies, Natural History Museum, London, p. 31-74.

LI, Jiankang (李建康); WANG, Denghong (王登红); and FU, Xiaofang (付小方). 2006. 四川丹巴伟晶岩型白云母矿床的成矿时代及构造意义 Metallogenic epoch and tectonic implications of Danba pegmatite type muscovite deposit in Sichuan Province, China. *Mineral Deposits,* V 25, no. 1, p. 95- 100 (in Chinese with English abstract).

LI, Jiankang (李建康), WANG, Denghong; and FU, Xiaofang. 2007. The Mineralizing Fluids of The Danba Muscovite-type Pegmatite Deposits, Sichuan. [J] *Acta Geologica Sinica*, V 81, No. 7, p. 986-994 (in Chinese).

LI, Jiankang, WANG, Denghong; ZHANG, Dehui; and FU, Xiaofang. 2006a. The discovery of silicate daughter mineral-bearing inclusions in the Jiajika pegmatite deposit, western Sichuan, and its significance. *Ore Deposits*, p. 141-144 (In Chinese with English abstract).

LI, Jiankang, WANG, Denghong; ZHANG, Dehui; and FU, Xiaofang. 2006b. The discovery and significance of silicate mineral-rich inclusions in pegmatite from the Jiajika deposit, southern Sichuan province. *Mineral Deposits (supplement)*, p. 131-134 (In Chinese). Probably the same article as the one above.

LI, Jiankang, WANG, Denghong, ZHANG, Dehui and FU, Xiaofang. 2006c. Ar40/Ar39 ages of the Ke'eryin pegmatite type rare metal deposit, Western Sichuan and its tectonic significance. *Acta Geologica Sinica*, V 80, no. 6, p.843-848 (in Chinese with English abstract).

LI, Jiankang; WANG, Denghong; ZHANG, Dehui; and FU, Xiaofang. 2006d. 四川甲基卡伟晶岩型锂多金属矿床成矿流体来源研究 The Source of Ore-Forming Fluid in Jiajika Pegmatite Type Lithium Polymetallic Deposit, Sichuan Province. *Acta Petrologica et Mineralogica* [Yanshikuang Wuxue Zazhi], V 25, No. 1, p. 45-52 (in Chinese).

LI, Jiankang; WANG, Denghong; ZHANG, Dehui; and FU, Xiaofang. 2007. *Mineralization Mechanism and Continental Geodynamics of Pegmatite Type Deposits in Western Sichuan, China.* Publisher: Atomic Energy. Beijing. ISBN: 978-7-5022-3957-2. 187 p. (in Chinese with English abstract). Softcover book of his PhD. Thesis.

LI, Jiankang; CHEN, Zhenghui; and WANG, Denghong. 2008. Ore-forming epoch and tectonic tracing of typical pegmatite deposit in western Sichuan Province, China. The 33rd International Geological Congress, Oslo, August 6-14, 2008 (Abstract only, in English).

LI, Jiankang; WANG, Denghong; CHEN, Yuchuan. 2013. The ore-forming Mechanism of the Jiajika Pegmatite [field] – Type Rare Metal Deposit in Western Sichuan Province: Evidence from Isotope Dating. Acta Geologica Sinica (English Edition). v. 87, no. 1, p. 91-101. paper reproduces field map, unreliable scale bar, no coordinates with only two pegmatites named. Pegmatite types may not match original thesis map but translated pegmatite types might be useful. First paper to actually mention other minerals from the pegmatite field: beryl, thorite, cyrtolite variety zircon, manganisicklerite [incorrect name for sicklerite], spodumene, khlopinite [a discredited mineral name of titanian samarskite-(Y)] and kymatolith (cymatolite - a term for an albite-muscovite intergrowth that is pseudomorphous after spodumene). Other minerals that

can be inferred from this are: purpurite, lithiophilite, and eucryptite. Paper uses different methods of age dating which give different ages to infer a cooling history of the parental granite and its pegmatites.

LI, Kaizhi; TAUG, Houguang; and XIA, Tongqing. 1982. Allanite in Granite-pegmatite at Pontzgou, Yongdeng, Gansu Province. [J] *Mineral Deposits*, June, No. 2, p. 28-34 (in Chinese with English abstract). No maps.

LI, Pu. 1969. Absolute ages of pegmatites and granites in parts of Inner Mongolia and Nanling, China as determined for their micas by Potassium-Argon method. [J] *International Geology Review,* V 11, No. 4, p. 448-453.

LI, Qiang. 2001. Yunnan Malipo emerald gem characteristics. *Gems and Gemology Magazine*, No. 2. (in Chinese).

LI, Qiaojiang. 2009. China's Aquamarine Gemstone Countryside. In: *Xinjiang Humanities Geography* [Cultural Geography of Xinjiang], 8 p. (in Chinese). Color magazine article with several aquamarine crystal pictures, and two pictures of the Keketouhai no. 3 quarry pit.

LI, Qingchang. 2010. The Secret Gem [Keketuohai] No. 3 secret deposit. [J] *Xinjiang Gemstones*. [Xinjiang you se jin shu] No. S2 (supplement), p. 76-82 (in Chinese). No maps.

LI, Renke and ZHANG, Xuming. 1995. Characteristics of Ta-Nb-Be Granite Pegmatite Deposit in some Area of [Maoantan pegmatite field within Quanzhou ore field, Quanzhou Co., Guilin Prefecture,] Guangxi [J]; *Geology and Prospecting*; v 31, no. 6, p. 15-22 (in Chinese with three sentence English abstract). p. 16 and 18, Geologic map, no scale bar, no place names, no culture.

LI, Shiqiang and QIN, Jianxiong. 2011. Preliminary Analysis of Current Situation of [the Danba Muscovite pegmatites] Mine Park in Sichuan Province. *Jiangxi Science*, V 29, no. 2, (April), 5 p. (in Chinese).

LI, Shiqiang and ZHOU, Xiaoping. 2006. Metallogenic characteristics and prospecting orientation of rare metals in Altay Region, north Xinjiang. [J] *Xinjiang Non-Ferrous Metals*, V 29, no. 2, p. 5-8 (in Chinese).

LI, Shunxing and CHEN, Jianhua. 1998. Chrysoberyl discovered in Fuyun County[, Xinjiang Province.] [J] *Jewelry Technology*, No. 4 (in Chinese).

LI, Taide; and CHENG, Jian. 2004. Geological Characteristics of the Kelumute Lithium-Tantalum-Niobium Deposit No. 228 Vein, Fuyun County[, Xinjiang Province.] *Mineral Resources and Geology,* V 18, No.5， p. 427-231 (in Chinese). 1 sketch map of pegmatite with a scale bar, geology on map, no culture- pegmatite district given as E 89 degrees, 5', 30" to 89 degrees, 7' and 00" by N 47 degrees, 54' and 30" to 47 degrees, 56' and 15". Another newspaper account gives this pegmatite district location as 77 km northeast of Altay City at between E 89 degrees, 5' and 16" to E 89 degrees, 7 min and 15 sec AND N 47 degrees, 54 min, 38 sec to 47 degrees, 55 min and 20 sec. The paper stated that there are 76 pegmatite veins in the district.

LI, Wen. 2007. *A study on the geology, geochemisty and genesis of pegmatites in the Southern Ailaoshan Mountains, Yunnan Province*[, China]. Zhong Shan (Sun-Yat-sen) University, Ph.D. Thesis, 179 p. (in Chinese with English abstract). maps- page 8- geologic map of 1990, page 11- geologic map at 1:200,000 scale, page 14- map of Yuanying county, Honghe prefecture, page 15- geologic map of the county, page 25 –detailed geologic map with coordinates – also in 1986 paper, low resolution photographs of pegmatites and pocket minerals， many geologic sketch cross sections of thin pegmatites.

LI, Wen; LI, Zhaolin and SHI, Guiyong. 2001. Study on the source of pegmatite fluids in Ailaoshan, Yunnan[, Province]. [J] *Bulletin of Mineralogy, Petrology and Geochemistry*, V 20, no. 4, p. 266-270 (in Chinese with English abstract).

LI, Wen; LI, Zhaolin; and MAO, Yanhua. 1999. A Study on Mineralogic and Physicochemical Characteristic of Beryls and Aquamarines in Pegmatites of Different Origin. [J] *Bulletin of Mineralogy, Petrology, and Geochemistry*, V 18, No. 4, p. 423-428 (in Chinese with English abstract). Article compares Mufushan and Ailaoshan pegmatites.

LI, Y. Q.; and YAN, X. Z., 1991. Bureau of geology & mineral resources of Jiangxi Province. China University of Geosciences Press, Wuhan, p. 95-96 (in Chinese).

LI, Zhaolin; LI, Wen; JI, Junfeng; WANG Yinxi; and SHI Guiyong**.** 2007. Study on the origin and rock-forming simulation experiments of aquamarine-bearing pegmatites of Ailaoshan, Yunnan, China. *Acta Petrologica Sinica*, V 23, no. 1, p 39-52 (in English). Regional geologic map, scale bar and coordinates at edges provided. Regional mineral locality map provided with coordinates. Also colored pictures of beryl.

LI Zhaolin (李兆麟), MAO Yanhua, LEI Lihong, QIU Zhili and NIU Hecai 1994: Physicochemical Conditions of the Formation of Beryl and Aquamarine in Mufushan Granopegmatite Deposit, [near Sandun and Nanjiang towns, Pingjiang county, Yueyang prefecture,] Hunan Province, China. *Chinese Journal of Geochemistry,* V 13, No. 4, p. 326-339 (in English). On p. 327 is a geologic map with roads and place names, no scale bar. Place names of Pingjiang, Meixian, Xinsheng, Sandun, Nanjiang, Yuetian, Zhongdong and Mufu Shan.

LI Zhaolin (李兆麟); YANG, Rongyong; and LI, Wen. 1999. Pegmatite fluids of different origins and their implications for Mineralization. Chinese Journal of Geochemistry, v. 18, no. 1, p. 9 - 17 (in English).

LI, Zhaolin; ZHANG, Jinzhang; WU, Qizhi; and OUYANG, Zhonghui 1983. Geological and Geochemical Characteristics of a Certain [Nanping no. 31] Pegmatite Ore Field of Rare Metals in Fujian Province [J] *Mineral Deposits*, V 2, p. 49-58 (in Chinese with English Abstract). Good detailed geologic map, scale bar provided, river across the map, 218 deposit district labelled. Pegmatite zonation map provided. Two page English abstract.

LI, Zhaolin; ZHANG, Wenlan; LI, Wen, ZHAI, Wei; and SHI Guiyong**.** 2000. Electron microprobe study on the melt inclusions in Pegmatite Minerals from Ailaoshan and Keketuohai Pegmatite Deposits. *Geological Journal of China Universities*, V 6, no. 4, p 509-522 (in Chinese with English abstract). No maps.

LI Zhaolin; ZHANG Wenlan; YANG, Rongyong, LI, Wen and ZHAI, Wei. 1999. Analysis of chemical composition of melt inclusion of beryl in pegmatite and discovery of zinc-spinel by electronic probe. *Chinese Science Bulletin*, V 44, no. 21. p. 204-210 (in English).

LI, Zhenzhen; TIAN, Shihong; HOU, Zengqian; SU, Aina; LI, Jiankang; and YANG, Zhusen. 2010. The Lithium isotopic characteristics of the Jiajika rare-metal deposit in Sichuan, China. (abstract), Goldschmidt Conference, Knoxville, Tennessee, June 13-18, p. A600. (in English).

LIAO, Yuanan and YIAO, Xueliang. 1992. Evolutionary feactures and minerogenetic relations of Peraluminous Granites from Jinchuan [Ke'eryin Granite and pegmatite field, Maerkang county], Western Sichuan. *Mineralogy and Petrology*, V 13, No. 1, p. 12- 22 (in Chinese with English Abstract). one map of the eastern half of the district. The map in Li Jiankang (2006) is better.

LIANG, Ting (梁 婷). 2001. Coloring mechanism of the Yunnan Emerald. [J] *Gems and Gemology,* No. 4.

LIN, Jinhui, CAO, Zhimin; LIU, Jing; LI, Youguo; ZHANG, Yiyun; and YING, Sancong. 2000. Mineral Spectroscopic Studies of Beryls from Xuebaoding, Sichuan. [J] *Acta Petrologica et Mineralogica [Yanshikuang Wuxue Zazhi*], V 19, No. 4, p. 369-375 (in Chinese with English abstract).

LIN, Jinhui; CAO, Zhimin; LIU, Jing; LI, Youguo; ZHANG, Yiyun; and YING, Sancong. (林金辉, 曹志敏, 刘菁, 李佑国, 张以云, 应三丛) 2000. Xuebaoding Beryl Genesis. [J] *Mineralogical*, No. 4 (in Chinese).

LIN, Yaomin. 1987. Characteristic of the A-Type Granite Belt in the Coastal Region of Fujian and their Tectonic Significance [J]; *Geotectonica Et Metallogenia*; 1987-04 (in Chinese).

LIN, Yin; Pollard, P.J.; HU, Shouxi, and Taylor, R.G. 1995. Geologic and geochemical characteristics of the Yichun Ta-Nb-Li deposit, Jiangxi Province, South China. *Economic Geology*, V 90, No. 3, p. 577-585 (in English). Index geologic map not tied to any location, scale bar, no culture.

LIN, Yuchuan; SU, Qinglin; WANG, Su; and PAN, Zhaolu. 1988. Wodginite occuring in Guangdong Province. *Acta Mineralogica Sinica,* V 8, No. 4, (in Chinese with English abstract). no map; mentions Guangning granite; probably from Guangning pegmatite district.

LIN, Yunhuai and CHEN, Shiyang. 1985. Granite deposits in the Gannan area. *Geology and Prospecting,* V 21, No. 3, p. 23-31 (in Chinese).

LIU, Changshi; HUANG, Xialong; WANG, Rucheng; YIN, Lin; CHEN, Xiaoming; and CHEN, Peirong. 1998. Some high-P-Subtype and low-P-subtype F-rich Granites in South China. Chinese Journal of Geochemistry, v. 17, no. 4, p. 320 - 330 (in English).

LIU, Congqiang and ZHANG, Hui. 2005. The lanthanide tetrad effect in apatite from the Altay No. 3 pegmatite, Xingjiang, China: an intrinsic feature of the pegmatite magma. [J] *Chemical Geology,* V 214, No. 1/2, p. 61-77 (in English).

LIU, Falu and CHEN Jihui. 1982. Nb-Kupletskite in an Alkali pegmatite in Huili, Sichuan province. *Acta Mineralogica Sinica,* V 2, No. ?, p. 137 - 141. (in Chinese with English abstract).

LIU, Feng; ZHANG, Zhixin; LI, Qiang; QU, Wenjun and LI, Chao. 2012. New Age constraints on the Kokotokay pegmatite No. 3, Altay Mountains, Xinjiang: Evidence from molybdenite Re-Os dating. *Mineral Deposits*, V 31, No. 5, p. 1111-1118 (in Chinese with English abstract).

LIU, Feng; ZHANG, Zhixin; LI, Qi; ZHANG, Chao and LI, Chao. 2014. New Precise Timing Constraint for the Keketuaohai No. 3 Pegmatite in Xinjiang, China, and Identification of its Parental Pluton. *Ore Geology Reviews*, v. 56, no. 10, p. 209-219 (in English).

LIU, Feng; CAO, F.; ZHANG, Zhixin. 2014. Chronology and geochemistry of the granite near the Keketuohai No3 pegmatite in Xinjiang. *Acta Petrologica Sinica*, V. 30, No. 1, p. 1-15.

LIU, Guanghua. 2006. *Fine Minerals of China*. AAA Minerals AG. Switzerland. 365 p. (in English). Hardcover book. locality listing at end of book, covers all mineral localities including pegmatites.

LIU, Guanghua. 2005. China: *An Emerging Source of World-Class Beryl*. In: Beryl and its Color Varieties. Lapis International, LCC, USA. Staebler, G. and others, Editors. p. 64-75 (in English). Hardcover.

LIU, Guobin. 1981. Gem Minerals of China. *Journal of the Gemological Society of Japan,* V 8, no. 1-4, p. 5-15.

LIU, Guobin and GUO, Jiugao. 1985. Growth processes and the origin of colour-banding tourmaline from Xinjiang, [China]. [J] *Acta Mineralogica Sinica*, V 5, No. 3, p. 199-207 (in Chinese with English abstract).

LIU, Guobin and LU, Huanzhang. 1986. Fluid inclusion study of gem tourmaline from Xinjiang, China. *Chinese Journal of Geochemistry*, V 5, no. 3, p. 234-240 (in Chinese and English). Only first 2 pages in data file.

LIU, Hao; WANG, Chan; YAO, Ming, DENG, Jianghong and MIAO, Bingkui. 2014. Nb, Ta Rare metal evolution in South China. Acta Geologica Sinica, v. 88, supplement 2, (English edition). Paper 16.

LIU, Jiabing; LI, Yulin; and HUANG, Shuixing. 1985. The Study of the Composition of the Veins No. 56 and 58 from a Niobium-Tantalum Mine Somewhere [adjacent to Nanping] in Fujian Province and the Analysis of Occurrence of Nb, Ta and Sn. *Geology of Fujian*, Vol. ?, No. 3, p.35-54 (in Chinese with English abstract). No maps.

LIU, Jiao. 2011. *Mineralogy and Lithium Extraction Technology Study of Spodumene from Caijiagou in [Guanpo town,] Lushi [County, Sanmenxia Prefecture,] Henan Province.* 河南卢氏蔡家沟锂辉石矿物学特征及提锂工艺实验研究。China University of Geosciences, Beijing. M.S. thesis, 72 p. (in Chinese with English abstract). Thesis has numerous pictures of spodumene and one picture of the underground tunnel entrance.

LIU, Jun; PENG, Xiuhong; HUANG, Shizong; and XIANG, Zhilei. 2013. Geochemical Characteristics of pegmatite from Baima, Miyi, Sichuan [Province]. Acta Geologica Sichuan, no. 2, p. 251-256.

LIU, W; LIU, C. Q. and MASUDA, A. 1997. Complex trace-element effects of mixing-fractional crystallization composite processes: applications to the Alaer Granite Pluton, Altay Mountains, Xinjiang, Northwestern China. *Chemical Geology*, v. 135:1-2, p. 103-124 (in Chinese).

LIU, Yan; DENG, Jun; CAI, Keqin; ZHOU, Yan; WANG, Qingfei; ZHOU, Yinghua;, GAO, Bangfei; LI, Dexiu; XU, Fuyu; and ZHU, Yuerong. 2005. Mineralogical characteristics of beryl in Pingwu County, Sichuan Province, Southwest China. [J], *Earth Science Frontiers*, (China University of Geosciences and Peking University, Beijing), V 12, No. 2, p. 324-331. (in Chinese with English abstract). Article has 2 crystal drawings from *Rocks & Minerals*, and colored pictures which include a colored tourmaline with gem quartz from Pingwu. Colored tourmaline has never been observed from the Pingwu deposit – the specimen may have had the green tourmaline glued on.

LIU, Yan; DENG, Jun; LI, Guowu; and SHI, Guanghai. 2007. Structure Refinement of Cs-rich Na-Li Beryl and Analysis of Its Typomorphic Characteristics of Configurations: *Acta Geologica Sinica*, No. 1.

LIU, Yan; DENG, Jun; SUN, Daisheng; and ZHOU, Yinghua. 2007. Morphology and Genesis Typomorphism of Minerals in W-Sn-Be Deposit of Huya, Sichuan. [J] *Journal of the China University of Geosciences,* V 32， No. 1, p. 75-81.

LIU, Yan; GAO, Yan; HE, Mingyue; and CAI, Keqin. 2003. Mineralogical characteristic of Keketuohai cat's eye aquamarine in Xinjiang and its exploitation. *Geology and Prospecting*, V 39, No. 3, p. 25-30 (in Chinese).

LIU, Yan; HE, Mingyue; ZHANG, Dalin; YU, Xiaoyan; and PAN, Zhaolu. 2001. Gemology of beryl from Pingwu, Sichuan Province [J]; *Journal of Gems & Gemology*; 2001-03

LIU, Yan, ZHANG, Bin; and YU, Xiaoyan. 2001. The mineralogical characteristics and its prospecting applications of beryl in Pingwu, Sichuan. [J], *Geology and Prospecting*, V 37, no. 2, p. 55-57 (in Chinese).

LIU, Yongxian (刘永先), FAN, Hongbin, and LIANG, Ting 1997. Characteristics and Exploitation of Yunnan Emerald [J*] Utilization of Mineral Resources*, No. 6, p. 22- 26 (in Chinese with a two sentence English abstract). no maps.

LIU, Yongxian. 1984. Geochemical characteristics of the Be-mineralization in the granitic pegmatite of the Eastern Qinling Mountains. *Mineral Deposits*, September, No. 3, p. 109-118 (in Chinese with English abstract). no maps or figures.

LIU, Youhua; LI, Kangdong; and TU, Jinfei. 2011. Geological characteristics and genesis of Huangshan niobium (tantalum) deposit in Geyuan, Jiangxi province. *Resources Survey &*

Environment, V 32, No. 4, p. 291-298 (In Chinese with English Abstract). With maps on p. 292, regional district geological map with scale bar, place names, p. 295, detailed geologic map, scale bar, place names, p. 296, close-up pegmatite map, scale bar, no place names.

LIU, Zhenggao and PENG, Gong. 1980. Precious stones from rare-metal pegmatites. *Xinjiang Non-Ferrous Metals*, No. 3. p. 81 (in Chinese). Half page write-up. No pictures or tables.

LU, Deshi. 1993. Classification of granitic pegmatites in Luobei [county, Hegang Prefecture, Heilongjiang province] and metallogenetic regularity of rare metals. *Geology and Exploration* (地质与勘探), V 29, no. 6, p. 8-12 (in Chinese with two sentence English abstract). p. 9 pegmatite geologic map, no scale bar, no culture, place names on map. The pegmatites in Proterozoic rocks are located 12 to 20 km north to due northnortheast of Luobei city. Three east flowing rivers are on the map.

LU, Huanzhang and WANG, Zhonggang. 1997. *Geology and fluid inclusion studies on Keketuohai No. 3 rare-element pegmatite, Xinjiang, China*. Proceeding 30th International Geological Congress, Mineralogy, V 16, p. 277-297, published by VSP, Utrecht, The Netherlands (in English). Hardcover book.

LU, Huanzhang; WANG, Zhonggang; and LI, Yuansheng. 1997. Magma-Fluid Transition and the Genesis of Pegmatite Dike No.3, Altay, Xinjiang, Northwest China. *Chinese Journal of Geochemistry*, V 16, No. 1, p. 43-52 (in English).

LU, Huanzhang (卢焕章); WANG, Zhonggang (王中刚); and LI, Yuansheng (李院生). 1996. Transition of magma-fluids and genesis of the No.3 pegmatite in Xinjiang. *Bulletin of Mineralogy* (矿物学报) or *Acta Mineralogica Sinica*, V 16, No. 1, p. 1-7 (in Chinese with English abstract).

LU, Huanzhang and WANG, Zhonggang. 1993. Mineralization, fluid and melt inclusion studies on No. 3 pegmatite of Keketuohai, Xinjiang, China. Abstract in GAC-MAC annual meeting proceeding, Canada (in English).

LU, Ruiying. 1991. A Fluid Inclusion Study on the Dafangshen Rare Metal No. 3 Pegmatite, Haicheng, Liaoning [Province] and its prospecting significance. *Journal of Geoscience*, China University of Geosciences, V 5, no. 2, p. 174-183 (in Chinese with English abstract).

LU, Xinxiang; ZHU, Zhaohui; GU, Demin; ZHANG, Huamian; WU Mei; and WU, Yan. 2010. East Qinling granite pegmatite rock geological mineralization characteristics. [J]， *Geological Review*, V 56, No. 1, p. 21-30 (in Chinese with English abstract). Lots of maps which are the same as in an earlier publication but the individual pegmatite maps are new, no scale bars. An important paper. This paper contains geologic maps, without a scale bar of two individual pegmatites at Guanpo (no, 1 and 3), that contain pollucite zones.

LU, Xinxiang; CHANG, Qiuling; and DONG, You. 1999. Resource of Gems and Jades in Henan Province and the Development Trends in 21st Century [J]. *Conservation and Utilization of Mineral Resources*, No. 5, p. 46-49 (in Chinese).

LÜ, Zhenghang; ZHANG, Hui; TANG, Yong and GUAN, Shenjin. 2012. Petrogenesis and magmatic-hydrothermal evolution time limitation of Kelumute No. 112 pegmatite in Altay, Northwestern China: Evidence from zircon U-Pb and Hf isotopes. *Lithos,* V 154, December, p. 374-391 (in English). Article contains a detailed geologic map of the No. 112 pegmatite.

LÜ, Zhenghang. 2013. Magmatic-hydrothermal evolution and implication for [the] origin of [the] Kelmute No. 112 pegmatite, Xinjiang. University of Chinese Academy of Sciences, Ph.D. thesis, 211 p. (In Chinese with English abstract). Thesis available online with detailed geologic map.

LÜ, Wei. 2003. The sustainable development strategies of the Malipo Beryl Mine. *Resource Development & Market*, V 19, No. 2，p. 90-91 (in Chinese with three sentence English abstract). No pictures or maps.

LÜ, Wei; ZHANG, Yong; and WANG, Yue. 2002. The Sustainable Development Strategy of the Malipo [emerald] beryl mine, [Yunnan province]. [J] *Journal of the Yuxi Teachers' College*, V 18, No. 3, p. 34- 35 (in Chinese with two sentence English abstract). No maps or pictures.

LUAN, Shiwei (栾世伟). 1979. Some Geochemical features of a rare element-bearing granite pegmatite in the Eastern Qinling Range [J]. *Geochimica*, December, no. 4, p. 323-330 (Chinese with English abstract). No maps or cross sections.

LUAN，Shiwei. 1979. Discussion on the genesis of granitic pegmatites in Eastern Qinling. Pegmatite [Shaanxi Province]. [J] *Bulletin of Chengdu College of Geology*, No. 3, p 34-48 (in Chinese). Pegmatite cross sections, no scales bars but pegmatite names given.

LUAN, Shiwei (栾世伟); MAO, Yuyuan (毛玉元), FAN, Liangming (范良明)，WU Xiaobing; and LIN, Jinhui. 1995. Rare Metal Mineralization and Exploration in the Keketuohai Area. Chengdu: *Chengdu University of Science and Technology Press*, p. 174-196 (in Chinese with English abstract).

LUAN, Shiwei (栾世伟); MAO, Yuyuan (毛玉元), FAN, Liangming (范良明)，WU Xiaobing; and LIN, Jinhui. 1996. *Rare Metal Mineralization and Exploration in the Keketuohai Area*. Chengdu: Press of Chengdu University of Science and Technology, 278 p. (in Chinese with English abstract). Hardcopy. This is the second most famous book on the Keketuohai no. 3 pegmatite, especially written and published for the Beijing 1996 international geologic congress held there. The first most important book was by WANG, et al. (1981). Several other mineral and geology books were published for this meeting including the field trip to Keketuohai No. 3 which ended up with Gene Foord and others under hotel arrest for a short time. This book has the best pegmatite map, but no scale bar, page 134. This book also has an abundance of pegmatite district maps, geologic maps and other pegmatite cross sections.

LUO, Yihua (罗怡华) and CHENG, Yashu (覃亚树). 2006. Characteristics of the Geological Structures of the Haoxi Niobate-Tantalate Mineral Deposits in Guangning County [Zhaoqing prefecture,] of Guangdong Province. (广宁厚溪铌钽矿床的地质构造特) *Geology and Mineral Resources of South China* (華南地質與礦産), Vol. 2006, No.4, p. 33-38. (in Chinese with English Abstract). p. 34 good quality geologic map, scale bar but no culture except for one lake.

LUO, Yihua (罗怡华); QIN, Yashu (覃亚树). 2007. The Geological Characteristics and Prospecting Orientation of the Dongtou-nan [South Dongtou] Nb-Ta Deposit in Guangning County, [Zhaoqing prefecture,] Guangdong Province. *Geology and Mineral Resources of South China* (華南地質與礦産), Vol 2007, No. 3, p. 43-48. (in Chinese with English abstract). contains p. 44, regional geologic map with scale bar and place names, one river, p. 45 detailed geologic map with pegmatite field south of Dongtou town. Excellent detail.

MA, Linying and CHEN, Jianhua. 2000. The Discovery of Aquamarine Gemstones from the Jingerquan Mining District, Hami City District, Xinjiang Province (新疆哈密镜儿泉矿区发现海蓝宝石) [J], *Journal of Gems and Gemology,* V 2, No. 3, p. 61-62 (in Chinese). No maps, some black and white mineral pictures. Hami City is the prefecture/district just west of the Gansu Province border.

MA, Zhesheng; SHI, Nicheng; and YE, Danian. 2005. Mineralogy and crystal structure determination of Mg-fillowite. *Science in China, Series D*, V 48, No. 5, p. 635-646 (in Chinese). Found in a muscovite-bearing pegmatite in the Altay area, Xinjiang province.

MAO, Jinwen; Goldfarb, R. J., Seltmann, R.; WANG, Denghong; XIAO, W. J.; and Hart, C. (editors). 2003. Proceeding volume of the international Symposium, IGCP-473 project in Urumqi and guidebook of the field excursion in Xinjiang, China. August 9-21, 2003. IAGOD guidebook, series 10. Centre for Russian and Central Asian Mineral Studies, Natural History Museum, London (in English).

MAO, Jingwen, Seltmann, Reimar, and Goldfarb, Richard J. 2004. Conference Report: Mineral Resources of Chinese Altay and Tianshan: Metallogeny and Related Tectonic Processes – a Field workshop of IGCP-473. held in Xinjiang, China, August 9-21, 2003. (in English). *Episodes*, v. 27, no. 1, p. 44-47.

MARSHALL, D.; XUE, Guang; LOUGHREY, Lara and ULLRICH, T. 2009. Nanjiang River Beryl Pegmatites, Yunnan Province, China: Fluid Inclusions, Ar-Ar nd ^{18}O Studies. *Estudos Geologicos (Brazil),* V 19, No. 2, p. 207-211. Abstract (in English). From the 4th International Pegmatite Symposium abstracts.

Michelou, Jean Claude and Pardieu, Vincent. 2009. A Glimpse of the New Fine Emerald Deposit at Xinjiang's Davdar Mine. *InColor*, Spring issue, at www.gemstone.org, p. 26- 31 (in English). Numerous color pictures of scenery and emeralds.

Nanjing University, Department of Geological Studies. 1981. *The Timing of Granitic Intrusion and Related Mineralization in Southern China.* Xinhua Bookstore, Beijing. 395 p. (in Chinese) Hardcover book. 26 B&W photographs as plates, 1 regional geological map.

NI, Yunxiang; and HUGHES, John M. 1996. The crystal structure of nanpingite-$2M_2$, the Cs end-member of muscovite. *American Mineralogist*, V 81, p. 105-110 (in English).

NI, Yunxiang; YANG, Yueqing; and WANG, Wenying. 1993. Palermoite –bertossaiate in Nanping granitic pegmatites, Fujian. *Acta Mineralogica Sinica*. V 13, No. 4, p. 346- 353 (in Chinese with English abstract).

NI, Yunxiang; and YANG, Yueqing. 1992. Vayrynenite (red manganese beryllium phosphate) - A rare beryllium mineral. *Acta Petrologica et Mineralogica*, V 11, No. 3, p. 252-257 (in Chinese with English abstract). A rare mineral found in the pegmatite No. 31, Xiyuantou town, Nanping pegmatite field.

NI, Yunxiang; and YANG, Yueqing. 1990. Augelite discovered for the first time in China. *Acta Mineralogica Sinica*, V 10, January, No. 1, p. 85-90 (in Chinese with English abstract).

NI Yúnxiáng (倪云祥); YANG, Yuèqīng (杨岳清); GUO, Lìhè (郭立鹤); ZOU, Tiānrén (邹天人); and LIN, Yuèyīng (林月英).1989. The triphylite - lithiophilite series minerals in China [J]. *Acta Petrologica et Mineralogica*, V 8, no. 2, p. 144 – 155 (in Chinese with English abstract). Only 6 localities known at this time in China; 4 in the Xinjiang province districts, Nanping pegmatite district, Fujian, and the Shanxian pegmatite, Shanxi;

NIE, Xiaoliang; YI, Wenping; and LI, Mu. 2014. Geological Characteristics and Metallogenic Model of Heyuan Spodumene Deposit, South Jiangxi Province. *Advances in Geosciences (Earth Science Frontier),* V 4, No. 1, p. 44-50 (In Chinese with English abstract). Article contains one geologic location map, a detailed pegmatite field map and a great pegmatite cross section.

NIU, Hecai; SHAN, Qiang; and LIN, Maoqing. 1997. Fluid-melt and fluid inclusions in Mianning REE deposit, Sichuan, Southwest China. *Chinese Journal of Geochemistry*, V 16, no. 3, p. 256-262 (in English).

NIU, Hecai; SHAN, Qiang; and LIN, Maoqing. 1996. A Study on inclusions in minerals from Mianning REE Deposit in Sichuna Province. *Geochimica*, V 25, no. 6, p. 559- 567 (in Chinese with English abstract).

OMORI, K. 1958. Some Pegmatite Minerals from Southern Inner Mongolia. *Science Reports of the Tohoku (Imperial) University*, Series 3 (Sendai), V 6, p. 25-38. Described and cited in Sinkankas (1984) book: *Emeralds and other Beryls*.

Ottens, Berthold. 2008. *China: Their Minerals and localities*. Christian Weise Verlag, Munchen, Germany. ISBN 978-3-921656-74-7, 551 p. (in German).

Ottens, Berthold. 2006. Smaragd aus Dayakou. [Emerald from Dayakou]. *Lapis*, V 31, No. 4, p. 13-20 (in German).

Ottens, Berthold. 2005. Xuebaoding, Pingwu County, Sichuan Province, China. *The Mineralogical Record*, V 36, No. 1, p. 45-57 (in English).

Ottens, Berthold. 2003. Minerals of China. In *The 30th Annual Rochester Mineralogical Symposium, April 3-6, 2003. Abstract and Program Book*. (in English). He emphasizes that no historical tradition exists in China of mineral collecting by notable “elites” as was common in Europe.

PAN, Liling, ZHU, Jianhua and LI, Yuyu. 2002. Lithium resources and the progress of their exploitation techniques [J] *Multipurpose Utilization of Mineral Resources*, V 2, p. 28-32 (in Chinese with English abstract).

PENG, Dong; WANG, Mingguang; XIE, Yunxi; CHEN, Shangpin; and CAO, Jun. 2005. Metallogenic prognosis of Nb and Ta in the Xiao Jin – Lixian areas, [Aba prefecture,] Sichuan [Province]. *Geology and Prospecting*, V 41, no. 4, 33-38. (in Chinese with English abstract).

PENG, Guangxiong, YE, Zhenchao, GAO, Guangming, FENG, Deshan and XIONG, Yun. 2011. Pegmatite remote sensing extraction and metallogenic prediction in Azubai area, Xinjiang. *Transactions of Nonferrous Metals Society of China*. V 21, p. 543-548 (in English). Regional index map, locations- one spodumene mine located with coordinates.
PENG, Mingsheng. 1985. Spectrographic characteristics of Altay aquamarine, Xinjiang. Acta Mineralogica Sinica, v. 5, p. 140-145 (in Chinese).

Pirajno, Franco; Seltmann, Reimar; YANG, Tongqiang. 2011. A Review of mineral systems and associated tectonic settings of northern xinjiang, NW China. Geoscience Frontiers, China Univeristy of Geosciences, Beijing, v. 2, no. 2, p. 157-185. (in English)

Pirajno, Franco 2013. The Geology and Tectonic Settings of China's Mineral Deposits. Springer, Germany, ISBN 978-94-007-4443-1, 679 p. (English). Rare metal pegmatites in Xinjiang discussed in Chapter 6.3.8, p. 470.-474. Has a table that lists 20 districts in Xinjiang. Section is based on only 2 reports – WANG, et al (2003) and ZHU, et al. (2006) with reciting of WANG (2007).

QIN, Kezhang; GUO, Zhenglin; SHEN, Maode; TANG, Dongmei; ZHOU, Qifeng; WANG, Chunlong; GUO, Xuji; TIAN, Ye; and DING, Jiangang. 2013. Types, intrusive and mineralization ages of pegmatite rare-element deposits in Chinese Altay. *Xinjiang Geology*, V. 31, (Supplement): p. 1–7 (in Chinese with English abstract).

QIU, Ruizhao, PENG, Songbai; and DU, Shaohua. 1997. Genesis of Granitic Nb-Ta deposit in Xianghualing area and the role of the supercritical fluid in the process of rock-forming and mineralization. *Hunan Geology*, v 16, no. 2, p. 92-97.

QIU, Ruizhao, ZHOU, Su; CHANG, Hailiang; DU, Shaohua and PENG, Songbai. 1998. The Evolution of the Li-bearing micas from the Xianghualing Granites and their ore-prospecting significance in Hunan. *Journal of Guilin Institute of Technology*, v. 18, no. 2, p. 145-153. (in Chinese with English abstract).

QU, Gang (曲刚). 2007. Mineralogy of Yunnan Emerald and Research directions. [D]; *China University of Geosciences* (Beijing); 2007

QU, Min; GUO, Jinghui; LAI, Yong; PENG, Peng; and LIU, Fu. 2012. Origin and geological significance of the 1.81 Ga hyalophane-rich pegmatite veins from the high-pressure granulite terrain in the Central Zone of the North China Craton. Earth Sciences in China, v. 55, no. 2 (February), p. 193-203 (in English).

QU, Min. 2015. Mineralogical and gemological study of aquamarine from Keketuohai in Aletai of Xinjiang. Chinese Geology University (Beijing), MS thesis (in Chinese).

RAO, Can; Hatert, F.; WANG, Rucheng; GU, XP; BO, F. Dal; and Dong, CW. 2015. Minjiangite, $BaBe_2(PO_4)_2$, a new mineral from [the] Nanping No. 31 pegmatite, Fujian Province, southeastern China. *Mineralogical Magazine*, v 75, no. 5, p. 1195-1202.

RAO Can; WANG Rucheng; and HU, Huan. 2009. Electron-Microprobe Compositions and Genesis of Beryls from the Nanping No.31 Granitic Pegmatite (Fujian Province, Southeastern China) [J]; (高校地質學報) *Geological Journal of China Universities*; V 15, no. 4, p. 496-505.

RAO, Can; WANG, Rucheng; and HU, Huan. 2011. Paragenetic Assembleges of Beryllium Silicates and Phosphates from the Nanping No. 31 Grantitic Pegmatite Dyke, Fujian Province, Southeastern China. *Canadian Mineralogist*, October, V. 49 no. 5, p. 1175-1187 (in English).

RAO, Can; WANG, Rucheng; HU, Huan; and ZHANG, Wenlan. 2009. Complex Internal Textures in Oxide Minerals from the Nanping No. 31 Dyke of Granitic Pegmatite, Fujian Province, Southeastern China. *Canadian Mineralogist,* October 2009, vol. 47 no. 5, 1195-1212. (in English). P. 1197, a geologic map of Nanping No. 31 pegmatite with scale bar, place name locations of Nanping and the village of Xiyuantou . p. 1198 has a cross section.

RAO, Can; WANG, Rucheng; ZHANG, Aicheng; and HU, Huan. 2012. The courundum + tourmaline nodules related to hydrothermal alteration of spodumene in the Nanping No. 31 Pegmatite Dyke, Fujian Province, Southeastern China. *Canadian Mineralogist,* v. 50, 1623-1635. (in English).

RAO, Can; WANG, Rucheng; HATERT, Frederic; and BAIJOT, Maxime. 2014. Hydrothermal transformations of triphylite from the Nanping No. 31 pegmatite dyke, Southeastern China. *European Journal of Mineralogy* (in English), v. 26, p. 179-188.

RAO, Can; WANG, Rucheng; HATERT, Frederic; GU, Xianping; OTTOLINI, Luisa; HU, Huan; DONG, Chuanwan; BO, Fabrice Dal; and BAIJOT, Maxime. 2014. Strontiohurlbutite, $SrBe2(PO_4)_2$, a new mineral from Nanping No. 31 pegmatite, Fujian Province, Southeastern China. *American Mineralogist* (in English), v. 99, p. 494-499.

REN, Kaiwen; JIN, Baoyuan; and GUO, Keyi. 1980. Minerals in China. See entry under GAO, Zhenxi. Hardcover book.

RONG, Jiashu; FENG, Mingyue; SUN, Zhifu; XU, Zhiyang; XIE, Hongjie. 1997. Pegmatite – type Uranium Mineralization and Regional Zonation of Pegmatite Swarm in North Qinling. *Dixue Yanjiu Journal*, V 29, no. 30, p. 76-88 (in Chinese with English abstract). Includes cross section of pegmatite zonation, no maps.

RUAN, Qingfeng; ZHANG, Liangju; ZHANG, Changlong; LEI, Wei; RAO, Can; LIAO, Baoli; and ZENG, Weilai. 2008. Genesis and characteristics of beryl. *Mineral Resources and Geology,* V 22, No. 3, p. 265-269 (in Chinese with English abstract). No maps.

RUI, Xingjian; and WU, Yujin. 1984a. Genesis of granitic rocks in the Altai region of Xinjiang, northwest China. In; Xu Keqin and TU Guangzi, editors. *Geology of granites and their metallogenetic relations*. Beijing: Science Press, p. 277-292 (In English). This is the English version of RUI and WU (1984b).

RUI, Xingjian; and WU, Yujin. 1984b. The origin of the granites in Altai, China. In; Xu Keqin and TU Guangzi, editors. Geology and mineralization of granites. Nanjiang: Jiangsu Science and Technology Publishing House, p. 180-190 (In Chinese). This is the Chinese version of RUI and WU (1984a).

Schwartz, M. O. 1992. Geochemical criteria for distinguishing magmatic and metasomatic alibite-enrichment in granitoids – examples from the Ta-Li granite Yichun (China) and the Sn-W deposit Tikus (Indonesia). *Mineralium Deposita*, v. 27, p. 101-108.

Shellnutt, J. Gregory and ZHOU, Meifu. 2007. Permian peralkaline, peraluminous and metaluminous A-type granites in the Panxi district, SW China: Their relationship to the Emeishan mantle plume. *Chemical Geology*, v 243, p. 286-316 (English).

SHEN, Weizhou; LING, Hongfei; LI, Huming, LI, Wuxian and WANG, Dezi. 2000. The Thermal History of the Miarolitic Granite at Xincun, Fujian province, China. *Chinese Science Bulletin*, v. 45, no. 21, p. 1991-1995. (probably in Chinese).

SHEN, Zhijun (申志军); XIE, Linglin (谢玲琳); QUAN, Zhengyu (权正钰). 2003. 湖南省主要稀有稀土金属矿床特征 Characteristics of the main rare-metal and rare-element deposits in Hunan Province. *Hunan Geology journal*, V 22, no. 1, p. 30-33, 63 (in Chinese with three sentence English abstract). Describes pegmatites at Chuanzhiyuan mine area, Pingjiang county, Hunan. p. 31 has a pegmatite zoning map but no scale bar, no culture. Lists by names 8 deposits, has sketches of 3.

SHI, Qingqin (史清琴). 2003. Aquamarine deposits of Guangdong. *Journal of Gems and Gemology,* V 5, No. 1, p. 20 (in Chinese).

Shmakin, B. M. 1992. New data on geochemistry and mineralogy of the rare-metal pegmatites of the Koktogay deposit (Sinczyan, P. R. China). *Geokhimiya*, p. 821-833 (in Russian).

Solodov, N. A. 1962. *Internal Structure and Geochemistry of Rare-Element Granitic Pegmatites.* Academy of Science, Moscow, USSR (in Russian). Book. Contains the cross section and map of the Keketuohai No. 3 pegmatite which was first called the Mongolian Altai No. 3 pegmatite.

Solodov, N. A. 1960. Distribution of Alkali Metals and Beryllium in the Minerals of a Zoned Pegmatite in the Mongolian Altai [of Xinjiang Province, China]. [J] *Geochemistry* (English translation-Ann Arbor), V 8, p. 874-885. This appears to be the first occurrence of the geologic map and vertical cross section of the Keketuohai No. 3 pegmatite in China before the location of this pegmatite was revealed. This cross section and map have been reused numerous times with successive degrading in map quality. This map contains one drafting mistake that left out the lepidolite unit, which later maps restored but decreased the map quality. The map is dated as being drawn in 1952. No scale bar but grid lines are present that represent 50 m intervals.

Solodov, N.A. 1960. Distribution of Alkali Elements and Beryllium in the Minerals of One of The Zoned Pegmatites of the Mongolian Altai. *Geokhimiya*, p. 726-735. (in Russian). Original version of translated version cited above.

SU, Aina (苏媛娜), TIAN, Shihong (田世洪), HOU Zengqian (侯可军), LI Jiankang (李建康), LI, Zhenzhen; HOU, Kejun: LI, Yanhe; HU, Wenjie; and YANG, Zhusen. 2011. Lithium Isotopes and Its Application to the Jiajika Pegmatite type lithium polymetallic deposit in Sichuan. *Geoscience* 2011, Volume 25, Issue 2, p. 236-242.

SU, Wenning; PENG, Houzhai, YU, Shushen. 1983. Granitic mixed pegmatite and its mineralization in an area of West Yunnan [Alioshan area]. In: CGQXP Editorial Committee. *Contribution to the Geology of the Qinghai-Xizang (Tibet) Plateau (1*3), p. 31-40 (Chinese with English abstract).

SU, Youqing. 1984. Xikeng Tantalum pegmatite deposits and their formation, Fujian Province. *Geological and Geochemical Journal*, p. 53-55. (in Chinese). No maps.

SU, Xiǎofēn; ZHANG, Zhìguì; and ZHOU, Kāicàn. 2009. Cassiterite characteristics, mineralization, and paragenesis from Pingwu[, Sichuan Province]. 《中国非金属矿工业导刊》*China Non-metallic Minerals Industry Herald*, 2009 年第 04 期

SUN, C. C. 1934. *Geology of Suiyan and Southwest Chahar*. China Geological survey memoir, Series A, no. 12, 80 p. (in Chinese with English abstract). Discusses pegmatites in Inner Mongolia.

SUN, C. C. 1933. Notes on the Precious Stone (Beryl, Etc.) Deposits of Suiyuan[, Inner Mongolia]. *Bulletin of the Geological Society of China*, V 12, p. 275- 282 (in English).

SUN, Dazhong (孙大中). 1959. Granitic pegmatites and its rare element mineral - geochemical studies, northern Shanxi Province. 山西省北部某地花岗伟晶岩及其稀有元素矿物—地球化学研究, *Hefei University of Technology* (Natural Science), p. 77- 97 (in Chinese).

SUN, Kexiang (孙克祥). 1996. Geological features of gem-stone deposits in Yunnan (云南宝石成矿地质特征). *Yunnan Geology* (云南地质), V 15, no. 1, p. 81-90 (in Chinese).

SUN, Kexiang. 1993. Gem-bearing pegmatites in the Pre-Cambrian series of Yunnan. *Yunnan Geology*. V 12, No. 1, p. 92-100 (in Chinese with English Abstract).

SUN, Kexiang; CHEN, Yongan; DENG, Baiqiong; and GAO, Ziying. 1986. *Distribution of gems and their prospects in Yunnan Province: 1984-1986.* Institute of Geology, Yunnan Province, 115 pp. (in Chinese). The book in my possession is a photocopy of the original book. The original contained color pictures. A few were missing/torn out from original. Lots of crystal cavity cross sections and pegmatite cross sections. A fold-out geologic map with scale bar, coordinates and localities, 1 cm = 2 km (p. 39).

SUN, Tao; CHEN, Peirong; ZHOU, Xinmin; WANG, Rucheng and WANG, Zhicheng. 2002. Strongly Peraluminous Granites in Eastern Nanling Mountains, China: Sudy on muscovites. *Geological Review*, v. 48, no. 5, p. 5180525. (in Chinese with English abstract).

SZE, Y. T. 1957. Geochemistry and mineralogy of the pegmatites in north Inner Mongolia. *K'o Hsüeh (Xue) T'ung Pao (Scientia),* 1957, no. 3, p. 91-92 (in Chinese).

TANG, Xuelian; MA, Hongling; and YU, Jie. 2010. A Study of the Heat Treatment Process on Dark Tourmaline from Yunnan. [J] *Superhard Material Engineering*, V 22, No. 1. (in Chinese with English abstract). Blue-black, dark blue, and green tourmaline from Yunnan was subjected to heat. Heat lightens the tourmaline and makes blue-black become green in three hours.

TANG, Yanling; MEI, Houjun; PAN, Keyue; LIU, Dequan; ZHOU, Ruhong; and others. 2005: *Non-metallic deposits of Xinjiang, China* [Zhongguo Xinjiang Fei Jinshu Kuangchuang]. Geological Publishing House (Beijing), 289 pp. (in Chinese). Hardcopy book. Numerous maps and mineral pictures. Excellent resource.

TANG, Yong; ZHANG, Hui. 2015. Lanthanide tetrads in normalized rare element patterns of zircons from the Koktokay No. 3 granitic pegmatite, Altay, NW China. *American Mineralogist*, v 100, p. 2630-2636 [in English].

TANG, Yong; ZHANG, Hui; and SU, Guizhen. 2013. Phosphorus in alkali feldspars as an indicator for prospecting for pegmatite-type rare-metal ore deposits in Altay, NW China. *Geochemistry: Exploration, Environment, Analysis*, v. 13, p. 3-10. (in English).

TANG, Yong; ZHANG, Hui; LIU, Wenzheng; LÜ, Zhenghang; CHEN, Yang; and LIU, Yunlong. (in review 2015). Precise zircon U-Pb and molybdenite Re-Os dating of the Askaetor Be deposit in Altay, NW China. Probably submitted to Canadian Mineralogist.

TELITI, Abudureheman and YANG Bingbin. 1999. Deposit characteristics of granitic pegmatite with gem beryl (aquamarine and emerald) from Altay, Xinjiang [J]. *Xinjiang Non-ferrous Metals,* V 2, p 1-9 (in Chinese).

TIAN, Ye; QIN, Kezhang; ZHOU, Qifeng; and Paterson, Greig. 2015. Structural control on the shape of intrusions in the Koktokay ore district, Chinese Altai, north western China. *Journal of Structural Geology*, pre-publication comy (In English).

TONG, Xunyuan; plus 3 more authors. 2010. Jinchuan spodumene pegmatites. *China deposits industry*. August 19, 2010. p. B-1 (in Chinese).

TU, Haikui. 1996. The pegmatite distribution, gem resources and metallogenic potential of the Qinling area[, Sha'anxi and Gansu Provinces]. *Journal of Geologic Building Materials* (建材地质), V 3, p. 27-30 (in Chinese with English abstract).

VLASOV, K. A. 1952. Textural-paragenetic Classification of Granitic Pegmatites. *Izvestiya ANSSSR, Geological Series No. 2* (in Russian). This is the earliest publication that is reported to have described the Keketuohai No. 3 pegmatite.

WANG, Chunlong; Kezhang QING, Qifeng ZHOU, and Dongmei TANG. 2014. Contribution of Multiple Magmatism to the Formation of Li-Be-Nb-Ta Pegmatites: Evidence from Zircon U-Pb Ages in the Kelumute-Jideke Pegmatite Field, Northwestern China. *Acta Geologica Sinica* (English Edition), V. 88, No. Supplement 2, p. 468–469 (abstract).

WANG, Chung Yu. 1912. *Bibliography of the Mineral Wealth and Geology of China*. Charles Griffin & Co., LTD., London and J. B. Lippincott Co., Philadelphia. 63 p. (in English).

WANG Denghong, CHEN Yuchuan, ZHOU Tianren, XU Zhigang, LI Huaqing, CHEN Wen, CHEN Fuwen, and TIAN Feng. 2000. 40Ar/39Ar dating for the Azubai Rare Metal gem deposit in Altay, Xinjiang—New evidence for Yanshanian mineralization of rare metals. *Geological Review,* V 46, No. 3, p. 307−311 (in Chinese with English abstract).

WANG, Denghong (王登红); CHEN, Yuchuan (陈毓川); and XU, Zhigang (徐志刚). 2001. Chronological Study of Caledonian Metamorphic Muscovite Pegmatites in the Altay Mountains, Northwestern China, and its Significance. *Acta Geologica Sinica,* V 75, No. 3, p. 419-425 (in Chinese). No maps.

WANG, Denghong (王登红); CHEN, Yuchuan (陈毓川); and XU, Zhigang (徐志刚). 2003. Ar^{40}/Ar^{39} Isotope dating on muscovites from Indosinian rare metal [pegmatite] deposits in Central Altay, northwestern China (矿物岩石地球化学通报), *Bulletin of Mineralogy, Petrology and Geochemistry,* v. 22, No. 1, p. 14-17 (in Chinese with English abstract, bilingual references list).

WANG, Denghong (王登红); CHEN, Yuchuan (陈毓川); XU, Zhigang (徐志刚); LI, Tiande; and FU, Xujie. 2002. *Metallogenetic series and regularity of mineralization in central Altay, northwestern China*. Beijing: Atomic Press, 493 p. (in Chinese).

WANG Denghong, and FU, Xiaofang. 2013. A breakthrough peripheral to lithium ore prospecting, Jiajika, Sichuan Province (四川甲基卡外围锂矿找矿取得突破). *Rocks and Mineral analysis,* v. 32, no.6 (December), p. 987 (in Chinese).

WANG Denghong (王登红); LI, Hongyang (李红阳); and ZOU, Tianren (邹天人). 1998. Types of rare metal deposits in Altay and its relation with orogenic process. *Mineral Deposits* (矿床地质) (supplement), p. 25-28 (in Chinese with English abstract).

WANG, Denghong (王登红); WANG, Ruijiang; LI, Jiankang; ZHAO, Zhi; YU, Yang; DAI, Jingjing; CHEN, Zhenhui; LI, Dexian; QU, Wenjun; DENG, Maochun; FU, Xiaofang; SUN, Yan; and ZHEN, Guodong. 2013. The progress in the strategic research and survey of rare earth, rare metal and rare-scattered elements mineral resources. *Geology in China,* v 40, no. 2, p. 361-370 (in Chinese with English abstract). Contains a picture of the lake in the Jiajika pegmatite field and a map showing the other pegmatite and non-pegmatite rare metal and REE deposits in Sichuan province.

WANG, Denghong; LI, Jiankang; and FU, Xiaofang. 2005. $^{40}Ar/^{39}Ar$ Dating for the Jiajika pegmatite-type Rare Metal Deposit in Western Sichuan and its Significance. *Geochimica* [Diqiu Huaxue] V 34, no. 6, 541-547 (in Chinese with English abstract). Contains geologic map of district with scale bar, no culture or coordinates.

WANG, Denghong; XU, Zhigang; ZOU, Tianren, CHEN, Yuchuan, and WANG, Longsheng. 2003. Major types and regional metallogeny of rare metal deposits in the Altay mountains, Xinjiang (in English). In: MAO, Jinwen; Goldfarb, RJ, Seltmann, R.; WANG, Denghong; XIAO,

WJ; and Hart, C. editors of *Tectonic Evolution and Metallogeny of the Chinese Altay and Tianshan, International Association on the Genesis of Ore Deposits*, Centre for Russian and Central Asian Mineral Studies, Natural History museum, London, pp. 117-130. Article is a review of the major pegmatite districts in Xinjiang that produce rare metal ores and associated minerals. These authors are major pegmatite researchers in China.

WANG Denghong, YANG, Jianmin; YAN, Shenghao, et al. 2001. A special orogenic-type rare earth element deposit in Maoniuping, Sichuan, China: Geology and geochemistry. *Resource Geology,* V 51, no. 3, p. 177-188.

WANG, Denghong; ZOU, Tianren; XU, Zhigang; YU, Jinjie; and FU, Xiaofang. 2004. Advances in the study of using pegmatite deposits as a tracer of the orogenic process. *Advances in Earth Sciences,* V 19, No. 4, p. 614-620 (in Chinese with English abstract). No maps, references in Pinyin and English. Table of pegmatite ages with names.

WANG, Dezi; PEN, Yaming; and YUAN, Pu. 1986. Petrology, geochemistry and genesis of Kuiqi granite batholith. *Chinese Journal of Geochemistry*, V 5, No. 2, p. 97-107 (in Chinese with English abstract).

WANG, Fuquan (王福泉). 1979. Precious Stones found in China. *Lapidary Journal*. V 33, No. 3, p. 694-696 (in English).

WANG, Fuquan (王福泉). 2006. Yunnan, Xinjiang: First choice for a gem mine (云南新疆:找宝石矿的首选地). *Geologic Prospecting Herald*, May 30, no. 3, (in Chinese).

WANG, Jinjun; TAO, Xiaofeng; and WANG, Wujun. 2005. Color Characteristics of Green Tourmaline from Xinjiang. [J] *Acta Petrologica et Mineralogica*, V 24, No. 4, 4 p. (in Chinese with English abstract).

WANG, Lianxun; MA, Changqian, ZHANG, Chao, and MARK, Michael A. 2014. Genesis of leucogranite by prolonged fractional crystallization: A case study of the Mufushan complex, [Hunan province], South China. Lithos, October, p. 147-163 [in English].

WANG, Lijin. 1993. Gem Resources in Xinjiang. [J] *Jewelry Technology*, V 5, No. 2, p. 50 (in Chinese).

WANG, Lingquan; GUO, Ru; WANG, Junqiang, FU, Yang and FU, Zhiguo. 2011. The East Qinling rare metal deposit ore – form and distribution characteristics – Taking several deposits in Henan, Lushi and Nanzhao areas as an example. *China Molybdenum Industry*. V 35, no. 4, p. 18-21 (in Chinese with English abstract). No maps.

WANG, P., PAN, Z. L., and WENG, L. B., 1982, 1984, 1987. Systematic mineralogy (the first, second and third volumes).Geological Publishing House, Beijing, p. 541-542 (in Chinese).

WANG, Quanwei; compilier with WANG, Kangming and 8 more authors. 2008. *The Granites of Western Sichuan (Kawanishi) and its Metallogenic Series.* Geological Publishing House, Beijing, 305 p. (in Chinese). Hardcover book. Covers the areas west of Danba. Jiajika granite is illustrated and discussed on pages 290-294, with a map of pegmatite district and cross section. The Jiajika Granite is numbered 83.

WANG, Rang. 2011. Geological characteristics and genesis of the aquamarine deposit, Tongbai Gu County, Henan Province. (河南桐柏固县镇蓝晶石矿矿床地质特征及成因研究). Jilin University, Changchun, Jilin Province, MS thesis, 64 p.

WANG, Rucheng, CHE, Xudong; ZHANG, Wenlan; ZHANG, Aicheng; and ZHANG, Hui. 2007. Compositional features of beryl from Koktokay No.3 pegmatite (Altai, NW China): From variations between internal zones in pegmatite to micro-scale heterogeneity in crystals. In *Granitic Pegmatites: The State of the Art-- International Symposium*. 6th-12th May 2007, Porto, Portugal. Extended Abstract (in English).

WANG, Rucheng; CHE, Xudong; ZHANG, Wenlan, ZHANG, Aicheng and ZHANG, Hui. 2009. Geochemical evolution and late re-equilibration of Na-Cs-rich beryl from the Koktokay 3 pegmatite (Altai, NW China). *European Journal 0f Mineralogy,* V 21, p. 795-809 (in English). Standard Keketuohai No. 3 index map with standard generalized pegmatite cross section but with a scale bar.

WANG Rucheng, HU, Huan, ZHANG, Aicheng; XU, Shijin; and WANG, Dezi. 2003. Yttrium zoning in garnet from the Xihuashan granitic complex and its Petrological implications. *Chinese Science Bulletin.* V 48, No. 15, p. 1611-1615 (in Chinese).

WANG Rucheng, HU, Huan, ZHANG, Aichang, HUANG, Xiaolong, and NI, Pei. 2004. Pollucite and the cesium- dominant analogue of polylithionite as expression of extreme Cs enrichment in the Yichun topaz-lepidolite granite, southern China. *Canadian Mineralogist*, V 42, p. 883-896 (in English).

WANG Rucheng; HU, Huan; ZHANG, Aicheng ; FONTAN, Francis; ZHANG, Hui; and Philippe De PARSEVAL. 2006. Occurrence and late re-equilibration of pollucite from the Koktokay 3 pegmatite, Altai, Northwestern China. *American Mineralogist*. V 91, No. 5-6, p. 729-739 (in English).

WANG Rucheng, HU, Huan, ZHANG Aicheng, Fontan Francis, De Parseval P, and JIANG, S. Y. 2007. Cs-dominant polylithionite in the Koktokay3 pegmatite, Altai, NW China: in situ micro-characterization and implication for the storage of radioactive cesium. *Contribution of Mineralogy and Petrology,* 153, p. 355-367 (in English).

WANG, Rucheng; FONTAN, Francois; XU, Shijin; CHEN, Xiaoming and MONCHOUX, Pierre. 1997. The association of columbite, tantalite and tapiolite in the Suzhou granite, China. *Canadian Mineralogist*, V 35, p. 699-706 (in English). See Wang et al. 1996 for the geologic basemap that can be converted into a real map for describing these pegmatites in granite.

WANG, Rucheng; FONTAN, Francois; XU, Shijin; CHEN, Xiaoming; and MONCHOUX, Pierre. 1996. Hafnian zircon from the apical part of the Suzhou granite, China. *Canadian Mineralogist*, V 34, p. 1001-1010 (in English). Contains the geologic basemap that can be converted into a real map for describing these pegmatites in granite.

WANG, Rucheng; XU, Shijin; ZHU, FONTAN, Francis and LIN, Chengyi. 1997. Tantalite in Suzhou Granite: Mineralogy and Geological Implications. *Chinese Journal of Geochemistry*, v. 16, no. 4, p. 353- 358 (in English).

WANG, Rucheng; ZHAO, Guangtao; WANG, Dezi; LU, Jianjun and XU, Shijin. 2000. Differentiation and accumulation of fluids in A-type granites: Evidence from accessory mineral study. *Chinese Science Bulletin*, V. 45, No. 17, p. 1609-1613 (in English). States green arvedsonite crystals to 3 cm are found in the miarolitic cavities, in the roof pegmatitic facies of the A-type granite, named Laoshan Granite, Qingdao, Shandong province. This granite might become a future source of rare microminerals of sphene, aegirine, zircon, fergusonite, ilmenite, pyrochlore, manganocolumbite, and xenotime. No maps.

WANG, Rucheng; ZHU, Jinchu; XU, Shijin; and ZHOU, Fengying. 1992. Ta mineralization in the Suzhou granite. *National Key Laboratory Mineralization of Nanjing University, Year Book,* p. 20-24 (in Chinese).

WANG, S. Wen. 1933. A Crystallographic Study of Topaz, Beryl and Smoky Quartz from Fanchih District, N. Shansi. *Bulletin of the Geological Society of China*, V. 12, No. 1-2, p. 437-452 (in English). Fanchih = Fanqi?, Shansi=Shanxi

WANG, S. Wen. 1933. A Study on the Orthoclase Crystals and Twins of Chiaocheng, Shansi. *Bulletin of the Geological Society of China*, V. 12, No. 1-2, p. 453-457 (in English). Shansi = Shanxi Province. Chiaocheng = Xiaocheng? Or Xiaoqing

WANG, S. Wen. 1931. Crystals of Beryl from Tachingshan [Taqingshan] Mountain, Suiyuan Province [Inner Mongolia]. *Bulletin of the Geological Society of China,* V. 11, No 1, p. 65-74 (in English).

WANG, Shi., Editor. 1999. *A Book of Gem Jade Resources in China.* Beijing: Science and Technology Press, 415 p. (in Chinese with one English introduction paragraph). Hardcover book. With 100 colored plates. Better translation title: "A Book of Gemstones, Jade and other Ornamental Stone Resources in China." Introduction indicates that this book should be considered a reference manual.

WANG, Shusheng. 2009. *Metallogenic Characteristics and Prospecting Potential around the Limu tin mine, Gongcheng County, Guangxi Province*. Guilin University of Technology, Guilin, Guangxi. Master's thesis, 59 p. (in Chinese with English abstract). Thesis contains regional and detailed geologic maps that identify the area. Available to read online.

WANG, Shuzhen (王淑珍); KANG, Ku; and LI, Lan. 1994. A study of inclusions in gem-bearing pegmatites in the Altai area, Xinjiang. *Journal of Xinjiang Institute of Technology*. V 15, No. 3, p. 203-210.

WANG, Shuzhen; WANG Yuanlong; LIAO, Youwei; KANG; Xu and CHEN, Jianhua. 1994. On the mineralogy of Chrysoberyl in an Altai granitic pegmatite, Xinjiang. *Mineral Resources and Geology,* V8, no. 3 (1994, June), p. 208-212 (in Chinese with two sentence English abstract).

WANG, Shuzhen; WANG, Yuanlong; LIAO, Youwei; KANG, Xu; and CHEN, Jianhua. 1994. Chrysoberyl in a Granitic Pegmatite in the Altai area, Xinjiang [J] *Xinjiang Institute of Technology*, V 15, No. 2, p. 142-149 (in Chinese with English abstract). Contains two sketch maps with scale bar. Mentions chrysoberyl in pegmatite No. 307. Available to read online.

WANG, Shuzheng（王淑珍, KANG, Xu（康旭, WANG, Yuanlong（王元龙, et al. 1993. Granitic pegmatite deposits in Altay, China. Mineral Deposits（矿床地质）,no. 12, Supplement), p. 135-146 (in Chinese).

WANG, Tao; TONG, Ying; Jahn, Borming; ZOU, Tianren;, WANG, Yanbin; HONG, Dawei and HAN, Baofu. 2007. SHRIMP U–Pb Zircon geochronology of the Altai No. 3 Pegmatite, NW China, and its implications for the origin and tectonic setting of the pegmatite. In: *Ore Geology Reviews*, Volume 32, Issues 1-2, September 2007, p. 325-336 (in English). Contains redrawn geologic maps with latitude and longitude and a scale bar on the detailed maps.

WANG, Tao; HONG, Dawei; JAHN, Borming; TONG, Ying; WANG, Yanbin; HAN, Baofu; and WANG, Xiaoxia. 2006. Timing, petrogenesis and setting of Paleozoic synorogenic intrusions from the Altai Mountains, northweat China: Implications for the tectonic evolution of an accretionary orogen. Journal of Geology, v. 114, p. 735-751.

WANG, Wenkui; ZHAO, Shanrong and NIU, Xinxi. 1990. Crystal morphology of Aegirine in Kuiqi Miarolitic Granite, Fuzhou. *Geology of Fujian*, p. 43-60 (in Chinese with English abstract).

WANG Wenying; YANG, Yueqing; CHEN, Chenghu; and ZHU, Jinghuang. 1999. Study on the Nb and Ta-minerals from the Granitic Pegmatites in Nanping, Fujian Province; *Geology of Fujian*, v. 20, no. 3., p. 113-133 (in Chinese with English abstract). No maps, sketch of a wodginite crystal.

WANG, Xianjue; NIU, Hecai; and GUO, Guozhang. 1998. The tracking study of Nb and Ta in the magmatic evolutionary process for the Pegmatite Vein [Keketuohai] No.3, Altay, China. [J] *Geochimica*, No. 1 (in Chinese).

WANG, Xianjue. 1980. The evolution of alkali elements and the division of geochemical stages at a certain pegmatitic vein [Keketuohai] No. 3, Xinjiang, China. *Geochimica*, No. 2 (in Chinese).

WANG, Xianjue, ZOU, Tianren, XU, Jianguo; YU, Xueyuan, and QIU, Yuzhuo. 1981. *The Study of pegmatite minerals from the Altai Region.* Science Press, Beijing, 140 p. (in Chinese). This is the first classic book-length report on the geology and mineralogy of the Keketuohai No. 3 pegmatite. The cross section map without scale is on page 5 but is not the best in print cross section. The best are in either Luan, et al. (1996), p. 134 or Zou, et al. (1986), p. 35. The extensive mineralogy of these pegmatites is superbly done in this book.

WANG, Yong; LU Qingtian; MENG Guixiang; YAN Jianyong; YANG Yueqing; and ZHAO Jinhua. 2009. Alkali Feldspar Granite of Dongqiyishan, Inner Mongolia and Its Metallogenesis [J]; *Acta Geologica Sinica*; No. 10

WANG, Yuhua and YU, Fushun. 2005. Flotation of Spodumene and beryl with a new collector. Journal of Central South Univerisity of Science and Technology, 36, no. 5 (October), p. 807- 811 (in Chinese with an English abstract).

WANG, Zhihui (王志辉). 1979. The first discovery of bismutotantalite in rare metal granitic pegmatite in eastern Qinling [J] *Bulletin of Chengdu College of Geology* (成都地质学院学报), 1979， No. 2, p. 77-80 (in Chinese). No maps.

WEI, Xiguo. 1994. The Spodumene Flotation Process at the Maerkang Deposit, Maerkang County, Aba Prefecture, Sichuan. *Xinjiang Non-Ferrous Metals*, No. 4.

WENG, Zhehan; JOWITT, S. M. MUDD, G. M., and HAQUE, N. 2013. Assessing rare earth element mineral deposit types and links to environmental impacts. (Applied Earth Science) *Transactions Institute of Mining and Metallurgy Bulletin*, v. 122, no. 2, p. 83-96 (in English).

WHITE, J.S., and RICHARDS, R.P. 1999. Chinese Beryl Crystal Mimic Twinning. *Rocks & Minerals*, 74, p. 318 (in English).

WONG, Wen H. and WANG, S. Wen. 1930. On Some Crystals of Topaz from Mongolia and Central China. *Bulletin of the Geological Society of China*, V. 9, No. 2, p. 105-118 (in English).

WU, Baiqing. 1994. Geology of the Rare Metal Deposits, Northern Xinjiang. *Xinjiang Geology*, V 12, No. 1, p. 63-66 (in Chinese). No maps, figures or tables.

WU, Changnian. 1994. *Geochemical evolution and mineralization of no. 3 pegmatite vein in Keketuohai, Xinjiang.* Ph.D. thesis, Nanjing University, Nanjing, 132 p. (in Chinese with English abstract).

WU, Changnian; ZHU, Jinchu; LIU, Changshi; YANG, Shenzu; ZHU, Bingyu; and NING, Guangjin. 1994. A Study on the inclusions in spodumenes from Altai pegmatites, Xinjiang. *Geotectonica Et Metallogenia,* V 18, No. 4, p. 351-361 (in Chinese). Mentions the Keketuohai No 3 pegmatite, the Qinghe County No. 92 pegmatite and the Kelumute No. 112 pegmatite.

WU, Changnian; ZHU, Jinchu; LIU, Changshi; YANG, Shengzu; NING, Guangjin; and ZHU, Bingyu. 1995. The Physico-chemical conditions of Formation of Beryl in the Kuwei pegmatite, Altay, Xinjiang. [J], *Acta Mineralogica Sinica*, V 15, No. 3, p. 347-351 (in Chinese with English Abstract). No maps, cross section or crystal pictures.

WU, Changnian, ZHU, Jinchu; LIU, Changshi; and XIONG, Xiaolin. 1995. Compositional Analysis of Fluid-Melt inclusions from an Altai Pegmatite[, Xinjiang Province] (阿尔泰伟晶岩中流体熔融包裹体成分的研究). *Geochimica*, V 24, no. 4, p, 351-358 (in Chinese)..

WU, Feibao; and LI, Zongyu. 1986. Geological characteristics and initial understanding of the ore-forming processes in the Tengchong tin belt, Yunnan. *Geology and Prospecting*, V 22, No. 8, p. 20-26 (in Chinese).

WU, Feibao and LI Zongyu. 1986. Baohuashan Nb-Ta-Li mine, Yunnan. *Geology and Prospecting,* V 22, no. 8, p. 20-26 (in Chinese).

WU, Fuyuan; LIN, Jingqian; Wilde, Simon A.; ZHANG, Xiao'ou; and YANG, Jinhui. 2005. Nature and significance of the Early Cretaceous giant igneous event in eastern China. *Earth and Planetary Science Letters.* V 223, p. 103-119 (in English).

WU, Kelung; YAN, Bingquan; LU, Zhenqiu; and LIU, Jinquan. 1982. The general features of the miarolitic (potash) granites in Fujian province and the preliminary discussion on their origin. *Geology of Fujian*, V. 1982, No. 4, p. 1-28 (in Chinese with English abstract).

WÚ, Shìzé. 2013. *Gems and Minerals of Yunnan*. Yunnan Science and Technology Press, Kumming, Yunnan, softcover, 221 pages (in Chinese). ISBN 978-7-5416-7046-6.

WU, Zengfu. 2005. *Mineral Treasures*. Shenyang Prefecture. 142 p. (in Chinese). Paperback. A mineral guidebook with colored pictures of minerals from Chinese localities.

WU, Zengfu. 2007. *Mineral Treasures and their deposits*. Beijing. 154 p. Paperback. A mineral identification book. Uses same pictures as the 2005 edition but pictures are larger sized with less text. Printed in Beijing.

XIA, Hongyuan; LIANG, Shuyi; and XIE, Weiyin. 1983. The genetic series of mineral deposits of W, Be, Sn, Li, Ta, Nd in southern China – viewed in the light of certain areas. *Mineral Deposita*, V 1, p. 41-50 (in Chinese with English abstract).

XIA, Jianming; and CHEN, Bangjian. 1999. Material Composition of Niobium and Tantalum-Rich Granite and Study of Tantalum's Occurrence State in Suzhou of Jiangsu Province (苏州富铌钽花岗岩的物质组成及钽的赋存状态研究)]. Jiangsu Geology (江苏地质), v. 23, no. 4, p. 236-240.

XIAO, Chaoyang. 2003. Characteristics and genesis of Hupei pegmatite (瑚珮伟晶岩) Nb-Ta deposit in Pingjiang [county], [Yueyang prefecture,] Hunan [province]. *Geology and Mineral Resources of South China*; No. 2, p. 63-67 (in Chinese with English Abstract). p. 63, geologic map with scale bar but no culture. Map has real coordinates- Northing 3,193,000 and Easting 28,471,000 probably meaning zone 28 projection, Beijing 1954 datum. One cross section, scale bar, good graphics. Pegmatites are external to the Mufushan granite and within the Banxi schist

XIAO, Zhaoyang (肖朝阳); and LIU, Jieqing (刘洁.清). 2003. 连云山上石含锂铍钽铌矿床地质特征及找矿前景 Geological traits of the Li- Be-Ta-Nb-bearing deposits in Shangshi, Lianyun Mountain [Hunan province] and its prospecting foreground. [J] *Hunan Geology*, V 22, no. 1, p. 34-37 (in Chinese with English Abstract).

XING, Shijun. 2003. Geological Character and prospecting orientation of Nb-Ta and Rare-earth metals deposit in South Jiangxi. *Mineral Resources and Geology,* V 17, No. 97, p. 447- 450 (in Chinese with English title). No maps.

XU, Cheng; HUANG, Zhilong; QI, Liang; XIAO, Huayun, LI, Wenbo; and LIU, Congqiang. 2001. Source and evolution of ore-forming fluids of Maoniuping Rare-earth deposit – evidence

from REE geochemistry of fluorites. *Geology and Prospecting*, V 37, no. 5, p. 24-28 (in Chinese with English Abstract).

XU, Cheng; HUANG, Zhilong; QI, Liang; XIAO, Huayun; LI, Wenbo; and LIU, Congqiang. 2001. Factors affecting the REE patterns of fluorites in Maoniuping RE deposit, Sichuan Province. *Acta Mineralogica Sinica*, V 21, no. 3, p. 557-559 (in Chinese with English Abstract).

XU, Keqin and TU, Guangchi, Editors. 1984a. *Geology of Granites and their Metallogenetic Relations: Proceedings of the International Symposium held at Nanjing University, Nanjing, China, October 1982*. Science Press, Beijing, 954 p. (in English). Hardcover book. This is the English version of the Chinese proceedings of 56 individual articles.

XU, Keqin and TU, Guangchi, Editors. 1984b. *Geology and Mineralization of Granites: Proceedings of the International Symposium held at Nanjing University, Nanjing, China, October 1982*. Nanjiang: Jiangxu Science and Technology Publishing House (in Chinese). This is the Chinese version of the English proceedings of 56 individual articles.

XU, Meihui (许美辉). 1997. Basic characteristics of the shell source (壳源型= keyuanxing) miarolitic granite, Sha (Sandy) county, Fujian Province. *Geology of Fujian*, V 16, No. 2, p. 51 - 60. Discusses the granite of Yunxiao County which produces spessartite and smoky specimens. P. 52 has areal geologic map, scale bar, and two towns on map in Sha County.

XU Tóngtài (付同泰); CHEN, Jiālín (冯家麟); BING, Lìfū (邴力夫); DUAN, Ruìyán (段瑞炎); and YU, Zhìhóng (于志鸿). 1984. Genetic types and distribution of Qinling segment of rare metal pegmatites. 秦岭东段稀有金属花岗伟晶岩的成因类型及其分布规律 **(**1964), p. 31-32

XU, Ying (徐莺); YANG, Lei and LIU, Feiyan. 2013. Reseach into mineral processing at a spodumene quary, Sichuan Province. *Multipurpose Utilization of Mineral Resoruces*, no. 5, p. 43-46 (in Chinese).

XUE, G., Marshall, D., ZHANG, S., Ullrich, T.D., Bishop, T., Groat, L.A., Thorkelson, D.J., Giuliani, G., and Fallick, A.E. 2010. Conditions for Early Cretaceous emerald formation at Dyakou [sic], China: Fluid inclusion, Ar-Ar and stable isotope studies. *Economic Geology*, v. 105, p. 339-349 (in .English).

YAN, Chen; XU, Quancheng; ZHANG, Haijun; WEI, Renmou; WANG, Yali; ZHANG, Dinghua; ZHU, Anqi; HUANG, Yunyu; SUN, Jiaqi; and LI, Junmin. 1985. *The Granites of Shaanxi Province*. Jiaotong University Press, Xi'an, Sha'anxi Province, 321 p. (in Chinese with an English Introduction and table of contents). Book has several excellent geologic maps of all the granite bodies with coordinates and place names.

YAN, Yuanning and GUO, Keyi. 2007. "Guanshang Kuangwu pian" *Ornamental Minerals.* Beijing, 74 p (in Chinese). Softcover book with lots of colored pictures of non-jade, non-gem minerals. This book is one in a series of 5 books. The others are 1) Strange rocks (viewing rocks), 2) Gemstones, 3）Jade and semi-precious polishable minerals, and 4) Fossils. 32 rmb price per book.

YAN, Yuanning and GUO, Keyi. 2007. "BaoShi pian" *Gemstones.* Beijing, 74 p (in Chinese). Paperback book with lots of colored pictures of faceted gems and un-facted gem minerals. This softcover book is one in a series of 5 books. 32 rmb price

YAN, Yuanning and GUO, Keyi. 2007. "Yushi Caishi pian" Jade and other polished and carved semi-precious stones. Beijing, 74 p (in Chinese). Paperback book with lots of colored pictures of faceted gems and un-facted gem minerals. This softcover book is one in a series of 5 books. 32 rmb price

YAN, Yunxiu and YE, Xusun. 1983. A preliminary study on the origin and metallogenetic characteristics of Mesozoic granites in Guangxi, China. Geochemistry, v 2, no. 3, p. [in English].

YANG, Bingbin. 1984. A Preliminary Study of the Gem Mineralization in Granite Pegmatite at Altai, Xinjiang [province, China]. *Acta Mineralogica Sinica*, V 6, No. 2, p. 188-191 (in Chinese with English abstract). Also published in 1982, *Xinjiang Non-Ferrous Metals*, No. 2. No maps.

YANG, Geng and CAO, Jun. 2006. Features and assessment of Mining Heritage Landscape Resources in Danba Muscovite mine Park, Sichuan. (四川地质学报) Sichuan Geology or *Sichuan Acta Geologica*, V 26, no. 1, p. 39-42 (in Chinese).

YANG, Hanchen; YI, Xianrui; YI, Shuangting; SONG, Jianzhong; and MIN, Yaoming. 1986. *Xinjiang's Gems and Jades.* Xinjiang People's Publishing House, Urumqi, Xinjiang. 164 p (in English). Book is English translation of Chinese original publication. Abundant color pictures of polished rocks and colored gemstones. Excellent reference.

YANG. Jingwei. 2012. "Baoyushi Kuangchan Yuanliao" *Semi-precious and Precious Minerals* (conventional translated title:"Mineral Raw Materals of Gem-jade.") Beijing, 366 p. (in Chinese). Paperback book, No color pictures. No maps or cross sections. Discusses and describes all the various minerals that are used for maunfacturing polished and carved objects. Note: the first translated meaning of the word "Yu" in Chinese is jade but the second translated meaning is for all materials that can be polished for manufacturing art objects.

YANG, Jiechua; PENG, Jiantang, ZHAO, Junhong; FU, Yazhou; YANG, Chen and HONG, Yinlong. 2012. Petrogenesis of the Xihuashan Granite in Southern Jiangxi Province, South China: Constraints from Zircon U-Pb Geochronology, Geochemistry and Nd Isotopes. *Act Geological Sinica* (English Edition), v. 86, no. 1, p. 131-152.

YANG, Yueqing; GUO Yunquan; CHOU Nianming; CHEN, Chenghu; and CAI, Ghaofa. 1988. The REE Geochemistry of the Nanping Granitic Pegmatite Ore Fields in Fujian Province. *Chinese Academy of Geological Sciences, Institute of Geological Collected Works*.

YANG, Yueqing, NI, Yunxiang, WANG, Liben, and WANG, W. 1988. Nanpingite, a new cesium mineral [J]. *Acta Petrologica et Mineralogica Sinica*. V 7, no. 1, p. 49-58. (in Chinese with English abstract)

YANG, Yueqing, NI, Yunxiang, GUO, Yongquan, QIU, Nianming, CHEN, Chenghu, CAI, Chaofa, ZHANG, Yaping, LIU, Jiabing; CHEN, Yuexian; and Zhang Yaping. 1988. Petrogenetic and Metallogenetic characteristics of the Xikeng Granitic pegmatites, Fujian Province. [J]

Chinese Journal of Geochemistry. V 7, No. 2, p. 120-135 (English). This is a translation of the YANG, et al. paper from 1987, as described below.

YANG, Yueqing, NI, Yunxiang; GUO, Yongquan; QIU, Nianming, CHEN, Chenghu; CAI, Chaofa; ZHANG, Yaping; LIU, Jiabing; CHEN, Yuexian; and Zhang Yaping. 1987. Rock-Forming and Ore-Forming Characteristics of the Xikeng Granitic Pegmatites in Fujian Province [J]; *Mineral Deposits*; V 6, No. 3, p. 10-21. (in Chinese with English Abstract). p. 11 best geologic map of district, no scale, one place name, p. 12 only geologic map of No. 31 pegmatite, most complex in field with scale bar, from an underground mine, p. 14, geologic cross section of the pegmatite with scale bar.

YANG, Yueqing (杨岳清); WANG, Wenying (王文瑛); CHEN, Chenghu (, 陈成湖); and ZHU, Jinghuang (朱锦煌). 2006. Study on the cassiterite from the Granitic pegmatites in Nanping, Fujian Province [J]; *Geology of Fujian*; V 25, no. 2., p. 75-81 (in Chinese with English abstract). No maps.

YANG, Yueqing; WANG, Wenying; LIN, Guoxin; ZHU, Jinhuang; and CHEN, Chenghu. 2003. Study on the Potash feldspars from the Granitic Pegmatites in Nanping, Fujian Province. *Geology of Fujian,* V 22, no. 1, p. 1-12 (in Chinese with English abstract). No maps.

YANG, Yueqing; WANG, Wenying; NI, Yunxiang*;* CHEN, Chenghu; and ZHU, Jinghuang. 1998. Mineralogical Study of Beryl in the Granitic Pegmatite from Nanping, Fujian Province. *Geology of Fujian*; V. 17, no. 2, p. 68-78 (In Chinese). No maps.

YANG, Yueqing; WANG, Wenying; NI, Yunxiang; CHEN, Chenghu; and ZHU, Jinghuang. 1997. Study on the Micas in Granitic Pegmatite and Their Wall Rocks in Nanping, Fujian Province [J]; *Geology of Fujian*; 1997-02

YANG, Yueqing; WANG, Wenying; NI, Yunxiang; CHEN, Chenghu and ZHU, Jinghuang. 1995. Study on the spodumene in the Granitic Pegmatite in Nanping, Fujian Province. *Geology of Fujian,* V 14, no. 2, p. 95-108 (in Chinese with English Abstract). No maps or cross sections, only thin section drawings.

YANG, Yueqing and WANG, Wenying. 1995. Ta-Nb-Sn mineralization in the Nanping granitic pegmatite*,* Fujian, China. *Scientica Geologica Sinica,* V 4, p. 193–209.

YANG, Yueqing, WANG Wenying, NI, Yunxiang, CHEN, Chenghu; and ZHU, Jinghuang. 1995. Study on the pollucite in granitic pegmatites in Nanping, Fujian Province [J], *Geology of Fujian,* V 14, No. 2: p. 109-117 (in Chinese with English abstract). No maps.

YANG, Yueqing; WANG Wenying; Ni Yunxiang; Chen Chenghu; and ZHU, Jinghuang. 1995. A Study on Montebrasite in the Nanping Granitic Pegmatite [J]; *Geology of Fujian*; 1995-01

YANG, Yueqing; WANG ,Wenying; NI, Yunxiang; CHEN, Chenghu; and ZHU, Jinghuang. 1994. Phosphate Minerals and Their Geochemical Evolution of Granitic pegmatite in Nanping, Fujian Province. *Geology of Fujian*; V 13, No. 4, p.215-226 (in Chinese with English abstract). No maps.

YANG, Yueqing; WANG Wenying; NI Yunxiang; GUO, Yongquan; ZHANG, Yaping; and CHEN, Chenghu. 1989. Nb, Ta-Minerals in Nanping Pegmatites and their Geochemical Evolution. *Bulletin of the Institute of Mineral Deposits, Chinese Academy of Geological Sciences,* V , No. 1, p. 55-68 (in Chinese with English abstract).

YANG, Yueqing (杨岳清); WANG, Yong (王勇); LU, Qingtian (吕庆田); and ZHAO, Jinhua (赵金花). 2010. Characteristics of Tourmalines from Nanping Granitic Pegmatites in Fujian Province. 岩石礦物學雜誌, *Acta Petrologica et Mineralogica*, Vol.29, No.3 (2010/05/25), p. 235-242 (in Chinese with English abstract). No maps.

YANG, Zhuming; SONG, Renkui; TAO, Kejie; and ZHANG, Peishan. 2003. Columbite-tantalite minerals from Nanping granitic pegmatites, South China: compositional trends and genetic implications: *Neues Jahrbuch für Mineralogie Monatshefte*, no. 8, pp. 363-373. (in English). No maps.

YANG, Zhusheng, DUAN, Huimin and WANG, Xiujing. 2007. Geological Features and Range of Reconnaissance of Nb-Ta deposits in the Panzhihua- Xichang Region, Sichuan Province. V 27, No. 4, p. 248- 254 (in Chinese with 4 sentence English abstract). one geologic map of the areas with coordinates and place names.

YE, Song (叶松); QI, Lijian(亓利剑); LUO, Yongan (罗永安); ZHOU, Kaican (周开灿), and PEI Jingcheng (裴景成). 2001. Relationship between the rare-metal contained granitic intrusions and beryl mineralization in Pingwu, Sichuan, China. *Geological Science and Technology Information*, V 20, No. 2, p. 65-70 (in Chinese with English abstract).

YI, Shuangting; NIN, Guangjin and YANG, Hanchen. 1989. *Rare Metals Deposits and Minerals in Altai, China.* Xinjiang People's Publishing House, 210 p. (in Chinese).

YIN, Huixi; CHEN, Jianhua; YANG, Bingbin; and DOU, Hong. 1994. *Compendium of Choice Mineral Specimens from the Granitic Pegmatites of China's Altai Region*. Xinjiang Science & Technology Publishing House, Xinjiang, 104 p. Excellent book with color pictures.

YIN Lin; P. J. Pollard, HU, Shouxi and R. G. Taylor. 1995. Geologic and geochemical characteristics of the Yichun Ta Nb Li deposit, Jiangxi Province, South China. *Economic Geology and the Bulletin of the Society of Economic Geologists.* V 90, no. 3, p. 577-585. (in English), deposit map with no location but already identified location from satellite photos, regional geologic map and place names in text.

YIN, Rong; WANG, Rucheng; ZHANG, Aicheng; HU, Huan; ZHU, Jinchu; RAO, Can; and ZHANG, Hui. 2013. Extreme fractionation from zircon to hafnon in the Koktokay no. 1 pegmatite, *American Mineralogist*, v. 98, p. 1714-1724 (In English).

YIN, Rong; WANG, Rucheng; ZHANG, Aicheng; HU, Huan; ZHU, Jinchu; RAO, Can; and ZHANG, Hui. 2015. Chemical evolution and late-stage re-equilibration of Zr-Hf-U-bearing columbite group minerals in the Koktokay No. 1 granitic pegmatite, altai, northwestern China. *Canadian Mineralogist*, v. 53, p. 461-478 (In English).

YUAN, Xiaojun, WANG, Chuanli, and HE, Jianping 2004. Characteristics and exploration prospecting of the super-large Shananbang Tantalum deposit, Suzhou. *Geology & Prospecting*, V 40, no. 1, p. 31-35 (In Chinese with English abstract). Contains geologic map, scale bar, no coordinates buth has named mt peaks.

YUAN, Zhongxin and BAI, Ge. 2001. Temporal and Spatial distribution of Endogenic rare and rare earth mineral deposits in China. *Mineral Deposits*, V 20, No. 4, p. 347-354 (in Chinese with English Abstract). Contains list of rare-earth deposits in China. Maps of jiajika pegmatite field, Sichuan; p. 352, geologic map of Nanping pegmatite field, Fuijian with scale bar but no place names; p. 351 geologic map of Panxi rift.

YUAN, Zhongxin; BAI, Ge; YU, Shimei; LI, Shuangbao; and GUO, Yongquan. 1988. *Geological Characteristics of Lingshan Granites in Jiangxi Province and their Petrogenesis and Mineralization*. Published in Beijing, China, 84 p.（in Chinese with English abstract). p. 6 has geologic map.

YU, Huaikui. 1996. Regional distribution of pegmatites in the Qinling area and its potential for gem mineralization. (秦岭地区伟晶岩分布特征与宝玉石资源成矿远景区的讨论) (建材地质) Geologic Materials, v 85, Sept. p. 27-30 (in Chinese with a partial English abstract). no maps or pictures.

ZENG, Lingjiao; JIN, Jingfu; and LAI, Shenghua. 1998. The genesis of Guangshigou U-bearing granite-pegmatite. *Kuangwu Yanshi,* V 18, No. 2, p. 12-17. (in Chinese)

ZENG, Shaojin, ZHANG, Pengyuan and PAN, Yichang. 1992. *A Record of Geology and Mineral Resources in Henan.* [M] Zhengzhou: China Prospect Publishing House (in Chinese)

ZENG, Q. F., 1986. Conditions for hydrothermal mineralization. Beijing Science and Technology Press, Beijing, p. 69-70 (in Chinese).

ZENG, Xinghong; HU, Yuhua; and PENG, Dayong. 2012. Geological Features and Genesis of the Sīyuēwǔ lithium, niobium, and tantalum deposits, Rangtang [壤塘县, Zamtang or Ndzamthang] County, [阿坝州, Aba Prefecture,] Sichuan Province [corrected title, English abstract title is wrong]. Sichuan Non-Ferrous metals 《四川有色金属》, no 6, p. 18-21 (in Chinese with English abstract). geologic map with scale bar and coordinates.

ZHANG, Aichang, WANG Rucheng, JIANG, Shaoyong, HU, Huan, and ZHANG Hui. 2008. Chemical and textural features of tourmaline from the spodumene-subtype Koktokay No.3 pegmatite, Altai, Northwestern China: A record of magmatic to hydrothermal evolution. *Canadian Mineralogist,* V 46, No 1, p. 41-58 (in English).

ZHANG, Aicheng; WANG, Rucheng; LI, Yiliang; HU, Huan; LU, Xiancai; JI, Junfeng; and ZHANG, Hui. 2008. Tourmalines from the Koktokay No.3 pegmatite, Altai, NW China: spectroscopic characterization and relationships with the pegmatite evolution. *European Journal of Mineralogy*, V 20, No 1, February 2008, p. 143-154 (in English). Generalized geologic cross section of Keketuohai No. 3 pegmatite.

ZHANG, Aichang; WANG, Rucheng; HU, Huan; and ZHANG, Hui. 2004. Occurrences of foitite and rossmanite from the Koktokay No.3 granitic pegmatite dyke, NW China: A record of hydrothermal fluids. *Canadian Mineralogist,* 42, 873-882 (in English).

ZHANG Aichang; WANG Rucheng; Hu, Huan; ZHANG, Hui; ZHU, Jinchu; and CHEN, X M. 2004. Chemical evolution of Nb-Ta oxides and Hf-rich zircon from the Koktokay No.3 granitic pegmatite, Altai, Northwestern China. *Mineralogical Magazine*, V 68, no. 5, p. 739-756. (in English).

ZHANG, Aichang; WANG, Rucheng; HU, Huan; ZHANG, Hui; ZHU, Jinchu; and XIE, Lei. 2004. The Complex Zonation of Columbite-group Minerals from Koktokay No.3 Granitic Pegmatite Dyke, Altai, NW China: Petrological Implication. *Acta Geologica Sinica*. V 78, No. 2, p. 181-189 (in Chinese with English abstract).

ZHANG, Aichang; WANG Rucheng; XIE, Lei; and HU, Huan. 2003. Hafnian zircon from the Koktokay No.3 granitic pegmatite, Altai, NW China. *Acta Mineralogia Sinica*. V 23, no. 4, p. 327-332. (in Chinese with English abstract).

ZHANG, Aichang. [张爱铖], WANG Rucheng [王汝成], and HU, Huan. [胡欢]. 2003. Tapiolite from the Koktokay No.3 rare element granitic pegmatite dyke, Altai, Xinjiang Autonomous Region. [J] *Geological Journal of China Universities*. V 9, No. 2,: p. 268-272 (in Chinese with English abstract).

ZHANG, Chaoda. 1994. Study on the flotation of spodumene and beryl in Jiajika Sichuan Rare Metals Mine. Sichuan Nonferrous Metals Journal, v. 1, p. 22-26.

ZHANG, Chenghua and JI, Guolian. 1983. Granitic Pegmatite Zoning and Its Prospecting Significance. [J] *Geology and Exploration Journal*, p. 22-28 (in Chinese). Unlabeled maps of Jiajika pegmatite field and two others, three cross sections and one individual pegmatite map of pegmatite No. 308.

ZHANG, Dongliang; PENG, Jiantang; COULSON, Ian M.; HOU, Linhui and LI, Shijie. 2014. Cassiterite U-Pb and muscovite ^{40}Ar-^{39}Ar age constrains on the timing of mineralization in the Xuebaoding Sn-W-be deposit, Western China. *Ore Geology Reviews*, v. 62, p. 315-322 (in English).

ZHANG, Enshi; ZHANG, Wenhuai; and LIU, Wei. 1987. On the Formation Mechanism of Keketuohai Pegmatite, Xinjing, China [J]; 1987-04

ZHANG, Hui, and LIU, Congqiang. 2001a. Tetrad effect of REE in apatites from pegmatite No.3, Altay, Xijiang and its implications. [J] *Geochimica*; 2001-04

ZHANG, Hui, and LIU, Congqiang. 2001b. Sr/Eu ratio in apatites as a recorder of fluid exsolution from pegmatite-forming melt. (Abstract only) Eleventh Annual V. M. Goldschmidt Conference, paper 3314 (In English). This abstract discussed the summary of the previous paper above.

ZHANG, Jīnfù (张金富); ZHOU, Cúnhuì (周存会); and HU, Chángshòu (胡长寿). 2003. Gemstone mineralization and structural features of the Ailaoshan trend, Yunnan Province. 云南哀牢山构造带的宝石成矿特征. Gems and Gemology (宝石和宝石学杂志), v 5, no. 3, p. 27-30 (In Chinese).

ZHANG, Jintong. 1989. The Limu Nb-Ta-W-Sn deposit in Guangxi. In: CHEN, Yuchuan (editor) Geology of nonferrous and rare metal deposits relating with Mesozoic granite in Nanling district. Geological Publishing House, Beijing, p. 130-140. (in Chinese with English abstract).

ZHANG, Jinyang; MA, Changqian; and SHE, Zhenbing. 2012. An Early Cretaceous garnet-bearing metaluminous A-type granite intrusion in the East Qinling Orogen, central China: Petrological, Mineralogical and Geochemical constraints. *Geoscience Frontiers*, China university of geoscience, Beijing, v. 3, no. 5, p. 635-646 (in English).

ZHANG, Liangchen; LIU, Dequan; and TANG, Yanling Deng. 1990. *Mineral Resources in Xinjiang.* Published by Xinjiang People's Publishing, and Hong Kong Cultural and Education. 328 p. (in traditional Chinese characters). Extensive book with much detail.

ZHANG, Liangju. 1996. Gemological Characteristics of Tourmaline. *Guilin Institute of Technology*. No. 3.

ZHANG, Liangju (张良钜); LAN, Yan (兰延). 1999. Geological and gemological characteristics of Yunnan Emerald. [J] *Acta Mineralogica Sinica*, V 19, No. 2, p. 189-197 (in Chinese with English abstract). No maps, one cross section showing mineralogical zoning.

ZHANG, Ling and LIN, Desong. 2004. Current situation of Rare Metal Resources in China. *Geology and Prospecting*, V 40, no. 1, p. 26 - 30 (In Chinese with English abstract).

ZHANG, Peishan; YANG, Zhuming; TAO, Kejie; and YANG, Xueming.1996. *Mineralogy and Geology of Rare Earths in China*. Science Press (Beijing), pp. 226. Only discusses Keketuohai No. 3 pegmatite.

ZHANG, rubai. 1974. Exploration and formation characteristic of an area of spodumene pegmatites. *Geochemistry*, v. 3, p. 182-191 (In Chinese).

ZHANG, Rubai. 1981a. The discovery of manganosicklerite from an Altai pegmatite. *Chinese Science Bulletin (Kexue Tongbao)*，No. 1, p. 40-42 (or V 26，No. 4, p. 334-337). (in Chinese).

ZHANG, Rubai. 1981b. The discovery of gahnite and lithiophilite in an Altay pegmatite. [J] *Geological Review*, V 27, No. 1, p. 1-7.

ZHANG, Rubai. 1983. Thorium-rich monazite in the Altai Pegmatite No. 202 [, Xinjiang Province]. *Acta Mineralogica Sinica*, No. 4, p. 313-317 (in Chinese with English abstract).

ZHANG, Rubai. 1985. Petalite from a lithium pegmatite in [Tongcheng County, Xianning Prefecture,] Hubei [province*]*. *Science Bulletin,* V 11, p. 852-854 (in Chinese). No maps.

ZHANG, Rubai. 1995. Mg-sarcopside, a new variety of sarcopside group. *(Kuangwu Yanshi) Journal of Mineralogy & Petrology*, V 15, No. 2, p. 6-10, (in Chinese)

ZHANG, Rubai. 1998. Aquamarine gemstones from the Danba [pegmatite] District, Sichuan [province]. *China Gems & Jades*, V 29, p. 42 (in Chinese with English-Chinese title). No pictures or maps.

ZHANG, Rubai (张如柏); FAN, Liangming (范良明); LIU, Jíyín (刘集银), and CHEN, Guānghuì (陈光惠). 1984. Pollucite from a lithium pegmatite in [Tongcheng county, Xianning Prefecture,] Hubei. (科学通报) *Science Bulletin –Chengdu University of Technology*, No. 8, p. 1 (in Chinese). No maps.

ZHANG, Rubai; HAN, Fengming; and DU, Chongliang. 1985. Ertixiite - A New Mineral from an Altay Pegmatite Mine, Xinjiang, China. *Chinese Journal of Geochemistry*, V 4, no. 2, p. 192-195 (in English). No maps. The four included references are citations of other rare minerals from the Altay region.

ZHANG, Rubai; TIAN, Huixin; PENG, Zhizhong; MA, Zhesheng; HAN, Fengming; and JING, Zebei. 1980. A New Mineral – [from] a Mountain Deposit: $(Nb, Ta, U, Fe, Mn)_4O_8$ [ashanite]. *Chinese Science Bulletin (Kexue Tongbao),* V 25, No. 14, p. 648-650 (in Chinese).

ZHANG, Rubai; and XIE, Weixing. 1984. Triplite from the 414 mine district, Jiangxi. *Journal of Mineralogy and Petrology*, V 5, no. 1, p. 89-93.

ZHANG, Rubai; ZHANG,Yuyu; and GONG, Xiasheng. 2005. $Fe^{3+}{}_2Sn_3O_9$, an unnamed mineral of the Kyzylkumite group. *Journal of Mineralogy and Petrology,* V 26, No. 2, p. 11-14.

ZHANG, Rubai (张如拍); ZHOU, Ruibo (周瑞波); DU, Longliang (杜崇良) and WANG, Siying (王思映). 1991. Chrysoberyl found at Danba [Sichuan Province]. [J], No. 4, p. 319-320 (in Chinese).

ZHANG, Shìtāo; FENG, Mínggāng; HU, Róngróng; DU, Chen; and ZHANG, Yàhuī (张世涛, 冯明刚, 胡荣荣, 杜晨, 张亚辉). 2011. The Malipo emerald geological features and the sustainable use of research. *The Mineral Journal*, 2011-S1

ZHANG, Shitao, FENG, Minggang; WANG, Houqiang, LU, Wei, and YANG, Ming. 1999. Geological features and the genesis of Emerald deposit in Malipo County, Yunnan Province, China. *Geological Science and Technology Information*. V. 18, no. 1, p. 30 -54.

ZHANG, Xiaohui; MAO, Qian; ZHANG, Hongfu; and Wilde, Simon A. 2008. A Jurassic peraluminous leucogranite from Yiwulüshan, Western Liaoning, North China craton: age, origin and tectonic significance. Geological Magazine, v. 145, no. 3, p. 305-320 (in English).

ZHANG, Xinglong; WANG, Jiabing and SHEN, Bochun. 1987. A study on the nature of A-type granites in Suzhou, Jiangsu Province. *Acta Petrologica Sinica*, May, no. 2, p. 1-14 (in Chinese with English abstract.)

ZHANG, Xinglong; WANG, Jiabing and SHEN, Bochun. 1988. A study on A-type granites in Suzhou, Jiangsu Province. *Geochemistry*, May, no. 2, p. 1-14 (in English).

ZHANG, Xuekai. 1993. Quality Tourmaline-producing areas in Yunnan and its Characteristics. [J] *Jewelry Technology/China Lapidary*, V 15, No. 1, p. 60-61.

ZHANG, Yongmei; GU Xuěxiáng; CHENG, Wénbīn; HUANG, Zhìquán, LI, Fúliàng, YANG, Wěilóng, and YANG, Yáng. 2011. Geochronology of the Ural Mountains, Inner Mongolia region, granitic pegmatite. p. 143-144 (in chinese).

ZHANG, Yongwen. 1997. Xinjiang Gems. *Gems of China*, No. 1, p. 60-62.

ZHANG, Yuyu (张玉玉) and ZHANG, Rubai (张如柏). 2008. The Discovery of Spodumene in Petalite Pegmatite, Tongcheng [county, Xianning Prefecture], Hubei [province], *China Journal of Mineralogy and Petrology* (礦物岩石), V 28, no. 3, p. 37-40. Also numerous census reports in the China Geological Archives- about the Huanglong Mai Wo area pegmatites, Mai Wo community, Tongcheng county. No maps.

ZHANG, Zhilan. 1984. The discovery of a six-layered Cs-rich lepidolite in Qinling Mountain pegmatites. Published by the Chengdu College of Geology, Chengdu, Sichuan province (available from HowNet).

ZHANG, Zhilan; ZHANG, Rubai; and TIAN, Huixin. 1979. Alteration of Spodumene in the rare-metal granite-pegmatites of the Qinling Mountains in a district. *Chengdu University of Technology (Natural Science)*, No. 4, p. 27-44 (in Chinese). No maps.

ZHAO, Chezhong. 1997. Gem Resources of the South Sector of San Jiang region [in Yunnan Province]. [J] *Geological Exploration for Non-Ferrous Metals,* V 6, No. 2, p. 121-128 (in Chinese with English abstract). Gemstone locality map with scale bar and place names.

ZHAO, Guangtao; WANG, Dezi and CAI, Qinchen. 1997. The geochemistry and genesis of the Laoshan Granitoids, Shandong Province. *Geological Journal of China Universities*, V 3, no. 1, p. 1-15 (in Chinese with English abstract). Geologic index map with scale bar and place names.

ZAO, M. Y. editor. 1978. 1:200,000 regional [geological] survey report at the Fuyun Area, P. R. C., 230 p. (In Chinese).

ZHAO, Qiyuan. 1960. Preliminary study of Inner Mongolia and some minerals in their pegmatites. Beijing *College of Geology*, V 2, p. 12-21 (in Chinese). Or *China University of Geosciences.*

ZHAO, Shanrong and WANG, Wenkui 1994. The Morphology and Surface Microtopography of Aegirine and Arfvedsonite in Miarolitic Cavities of the Kuiqi Granite, Fujian [J]; 1990-04.

ZHAO Shiqin (赵仕钦) 2006. (广宁县深坑铌钽矿床地质特征及找矿标志) Geological characteristic and prospecting signs of the Guangning pit niobium-tantalum deposit. (西部探礦工程), *West-China Exploration Engineering*, 2006, Vol 8, no. 10, p. 156-157. (in Chinese).

ZHAO, Xianjun (赵献军); YAN, Changjiang (殷长江); WANG, Fang (王芳); TIAN, Jiangtao (田江涛) ; QU, Fengying (曲风英); and GU, Jindian (贾金典). 2012. The characteristics and formation of the Jingerquan (Jinger Springs) spodumene pegmatite deposit, Hami Prefecture, Xinjiang Province. [J] *China Science and Technology Review*, V 22, No. 2, p. 277-278. (in Chinese).

ZHAO, Xize. 1995. Development of gem mineral deposits in Shaanxi Province. (Jiancai dizhi) *Geologic Building Materials*, V 79, No. 2, p. 20-37 (in Chinese). p. 22, Locality map, place names, scale bar, rivers.

ZHAO, Yùxiáng; ZHAO, Guāngmíng; and ZENG, Yìfū. 2015. Geological Features and Genetic Model for the Granitic Pegmatite Type (Jiajika Type) Li Deposits in West Sichuan Province - By the Example of the Jiajika Li Deposit. *Acta Geologica Sichuan* (四川地质学报),V 35, no. 3, p. 391-395 (in Chinese).

ZHENG, Ruifan. 1987. The discovery of aquamarine in [Pingjiang county, Yueyang prefecture,] northeast Hunan. *Acta Mineralogica Sinica*. V 7, p. 92-94 (in Chinese with English abstract). Nanjiang-pingjiang pegmatite field, Northeast Hunan province, no maps. With a black and white picture of a faceted crystal.

ZHONG, Huabang (钟华邦). 1995. Beautiful Amazonite. *China Gems & Jades*, No. 3, p. 32 (Chinese only with English-Chinese title). No maps or pictures.

ZHONG, Liangjun and TIAN, Zhao. 1990. Selection of a Quarry Mining Program for the Maerkang Spodumene Deposit, Maerkang County, Aba Prefecture, Sichuan. *Xinjiang Non-Ferrous Metals*, No. 2, p. 43- 48 (in Chinese). Contains sketch maps of the underground tunnels used to extract the spodumene. Also contains description of the pegmatite dimensions, the mine area and its local environment without actually stating where it is. Evidence that this mine has been around for at least 20 years.

ZHONG, Liuhua. 2009. Zhong stones – Zhong Liuha's zang shi ? ?.174 p. (in Chinese) hardcover, ISBN 978-988-18022-8-6.

ZHOU, Jiàntíng (周建廷), WANG (王小颖), Xiǎoyǐng, LI (李自敏), Zìmǐn. 2012. Geological characteristics and metallogenic mechanism of the Toubei granitic pegmatite spodumene quarry in Guangchang County, Jiangxi province. *Journal of the East China University of Technology, Natural Science*, no. 4, p. 378-387 (in Chinese).

ZHOU, Jiayun; ZHENG, Rongcai; SHEN, Bing; ZHU Xhimin, CHEN Jiabiao; LIU, Feiyan and WEN Huaguo. 2007. Geochemical characteristics of the Host intrusion of Muluo REE deposit in Mainning, Sichuan Province and their tectonic significance. *Journal of Mineralogy and Petrology*, V 27, no. 1, p. 83– 89 (in Chinese with English abtract).

ZHOU, Kaican; QI, Lijian; and XIANG, Changjin. 2005. Study on gemology of beryl gem from Pingwu Sichuan and Mechanism of irradiation inducing coloration. *China Mining Magazine*. V 14, no. 5, p. 30-32 (in Chinese with three sentence English abstract). No maps.

ZHOU, Kāicàn, QI, Lìjiàn; XIANG, Changjīn, FENG, Qǐmíng, WU, Jíeshàn; and HAO, Qíng. 2002. Geologic characteristics of gem beryl formation from Pingwu, Sichuan. [J], *Journal of Mineralogy and. Petrology*, V 22, no. 4, p. 1-7 (in Chinese with English abstract). one geologic map of area.

ZHOU, Kaichan; LI, Qiang; XIANG, Changjin; FENG, Qiming; WAN, Jishan; and HAO, Qin. 2002. Scheelite, Cassiterite and Beryl from Pingwu, Sichuan Province [J]; *Journal of Gems & Gemology,* No. 1 (in Chinese).

ZHOU, Peiling. 1991. Gemological Characteristics of Topaz from a Certain Mining Area, Guangxi. *Journal of Guilin College of Geology*, V 11, Supplement S-1, p. 43- 49 (in Chinese with a three sentence English abstract). Some sketches of the veins but no maps.

ZHOU, Qifeng; Kezhang QIN, Dongmei TANG, Ye TIAN, Mingjian CAO, and Chunlong WANG. 2015. Formation Age and Evolution Time Span of the Koktokay No. 3 Pegmatite, Altai, NW China: Evidence from U–Pb Zircon and 40Ar–39Ar Muscovite Ages. *Resource Geology*, V. 65, no. 3, p. 210–231.

ZHOU, Qifeng; Kezhang QIN, Dongmei TANG, Chunlong WANG , Ye TIAN, and Patrick Asamoah SAKYI. 2015. Mineralogy of the Koktokay No. 3 pegmatite, Altai, NW China: Implications for evolution and melt–fluid processes of rare-metal pegmatites. *European Journal of Mineralogy*, v. 27, no. 3, p. 433-457 (English).

ZHOU, Taofa; ZHANG, Xinglong; JIA, Fuyi; WANG, Rucheng; CAO, H.; and WU, Boqing. 1986. The genesis of the No. 3 pegmatite at Keketuohai. *Mineral Deposits*, V 5, No. 4, P. 34-48 (in Chinese).

ZHOU, Taofa; YUAN, Feng; FAN, Yu; ZHANG, Dayu; Cooke, David; and ZHAO, Guochun. 2008. Granites in the Sawuer region of the west Junggar, Xinjiang Province, China: Geochronological and geochemical characteristics and their geodynamic significance. *Lithos*, V 106, p. 191-206 (In English).

ZHOU, Wuqun. 1994. The Basic features of Beryl deposits in Jiangxi and Prospecting techniques for beryl-type gems. *Geology of Jiangxi*, V 8, no. 1, p. 26-36 (in Chinese with English abstract). Index map of pegmatites distributed across the province with towns, roads and scale bar. .

ZHU, Bingyu. 1997. Rare Metal and Gem Mineral-bearing Pegmatites in Koktokay of Altay, Xinjiang. [J] (新疆地質) *Xinjiang Geology*, V 15, No. 2, p. 97-115 (in Chinese).

ZHU, Bingyu and ZHU, Jinchu. 1996. Rare Metal and Gem Mineral-bearing Pegmatites in Koktokay of Altay, Xinjiang [, China]. *30th International Geological Congress, Field Trip Guide T-111,* 21 p., Beijing, China (in English). With generalized road maps and geologic cross sections and maps simplified. Contains a brief description of the mining history of the deposit starting by the Russians in 1935.

ZHU, Jinchu; LI, Renke; LI, Fuchun; XIONG, Xiaolin; ZHOU, Fengying. and HUANG, Xiaolong. 2001. Topaz-albite granites and rare-metal mineralization in the Limu District, Guangxi Province, southeast China. *Mineralium Deposita*, V 36, No. 5, p. 393-405 (in English).

ZHU, Jinchu; LI, Renke; ZHOU, Fengying; WANG, Rucheng; XIONG, Xiaolin; XU, Hongzhong. 1996. Genesis of Asymmetrically Layered Pegmatite Aplite Dykes of Shuiximiao Mine, Limu District, Guangxi. *Geochimica*, V 25, No. 1, p. 1-9 (in Chinese with English abstract). No maps but one cross section. This is a tin-niobium district with high temperature veins, topaz and some pegmatitic features.

ZHU, Jinchu; WU, Changnian; CHEN, Peirong, YANG, Shenzu; and ZHU, Bingyu. 1996. Magmatic-hydrothermal evolution and genesis of Koktokay no. 3 rare metal pegmatite dyke, Altai, China. *Proceedings of the 30th IGC* (abstract in English).

ZHU, Jinchu; WU, Changnian; LIU, Changshi; LI, Fuchun; HUANG, Xiaolong; and ZHOU, D.S. 2002. Magmatic-hydrothermal evolution and genesis of Koktokay no. 3 rare metal pegmatite dyke, Altai, China. *Geologic Journal of China Universities*. V 6, No. 1, p. 40-52 (in Chinese with English abstract)..

ZHU, Jinchu; RAO, Bing; XIONG, Xiaolin; LI. Fuchun; and ZHANG, Peihua. 2002. Comparison and genetic interpretation of Li-F rich, rare-metal bearing granitic rocks [J]; *Geochimica*; V 31, No. 2, p. 141-152.

ZHU, Yongfeng; Yishan ZENG, and Libing GU. 2006. Geochemistry of the rare metal-bearing pegmatite No. 3 vein and related granites in the Keketuohai region, Altay Mountains, northwest China. *Journal of Asian Earth Sciences,* Volume 27, Issue 1, June 2006, Pages 61-77 (in English).

ZOU, Tianren. 1996a. Pegmatite Gem Minerals. *Mineral Deposits*, V 15, S2 (Supplement), p. 9-16 (in Chinese). Lots of pegmatite cross sections and maps.

ZOU, Tianren. 1996b. Aquamarine gem beryl from the Asikaerte beryl pegmatite, Altai prefecture, Xinjiang province. (新疆阿斯喀尔特似伟晶岩型海蓝宝石 - 绿柱石矿床) *Mineral Deposits*, V 15, S2 (Supplement), p. 38-40 (in Chinese, no abstract). One map and two pegmatite cross sections.

ZOU, Tianren. 1996c. Colouration mechanism and main controlling factors of aquamarines from China. *Mineral Deposits*, V 15, S2 (Supplement.), p. 55-61 (in Chinese with English abstract).

ZOU, Tianren. 1996d. Chrysoberyl in China. *Mineral Deposits*, V 15, S2 (Supplement.), (in Chinese).

ZOU, Tianren (邹天人); CAO, Huizhi (曹惠志); WU, Baiqing (吴柏青). 1988. Discrimination between orogenic granites and non-orogenic granites in Altay, Xinjiang. *Acta Geologica Sinica,* v. 3, p. 229-243 (in Chinese).

ZOU, Tianren and LI, Qingchang. 2006. *Rare and Rare-Earth element Deposits in Xinjiang [Province], China.* Geological Publishing House, Beijing. ISBN 9-787116-048, 284 p. (in Chinese with extended English Abstract). Numerous maps of many of the offical 38 rare-metal

pegmatite districts in the Altai region, extensive color and black & white photographs of minerals – colored tourmalines, tantalites, spodumene, beryls, apatite, feldspar and others. Extensive bibliography of Chinese references. Far superior to all the other publications but supplements previous reports.

ZOU, Tianren (邹天人) and XU, Jianguo (徐建国). 1975. On the genesis and classification of granitic pegmatite. *Geochemistry* (地球化学), V 3, p. 161-173 (in Chinese with English abstract). Several diagrammatic cross section drawing of how pegmatite fields form and pegmatite classification sketches. Material shows influence of Russian scientists.

ZOU, Tianren (邹天人); and XU, Jue (徐珏). 1996. Alkaline pegmatite-type diopside-gem deposits in China. *Mineral Deposits* (矿床地质), No. 15, S2 (Supplement), p. 42-43 (in Chinese).

ZOU, Tianren (邹天人); and YANG, Yueqing. 1996. The Color and Composition of Tourmaline. [J] *Mineral Deposits* (矿床地质), No. 15, S2 (Supplement), p. 65-68 (in Chinese). No maps or illustrations.

ZOU, Tianren; YANG, Yueqing (杨岳清); CAO, Huizhi; (曹惠志); YU, Wenzhao (余文昭); YAO, Yutang (姚玉堂); LI, Yifu (李义甫); and SUN, Zhongliang (孙忠良). 1986. The composition and mineralization characteristics of the No. 112 pegmatite, Xinjiang Province as a result of studies done in 1980. *The anthology collection from the Institute of Geology, Chinese Academy of Geological Sciences*. No. 2, p. 79-80.

ZOU, Tianren; YANG, Yueqing; GUO, Yongquan and NI, Yunxiang. 1985a. China's Crust- and Mantle-sourced pegmatites and their discriminating Criteria. *Geochemica*, Beijing, No. 4, p. 1-17 (in Chinese). An English version exists also.

ZOU, Tianren; YANG, Yueqing; GUO, Yongquan and NI, Yunxiang. 1985b. China's Crust- and Mantle-sourced pegmatites and their discriminating Criteria. *Geochemistry*, Beijing, No. 4, p. 1-17 (in English).

ZOU, Tiānrén (邹天人); and YU, Xiǎojìng (於晓晋). 1996. Natural gemstones and their deposit types and their origin in China. 中国天然宝石及矿床类型和主要产地. *Mineral Deposits* (矿床地质), Supplement 1, p. 1-8 (In Chinese).

ZOU, Tianren; ZHANG, Xiangchen; JIA, Fuyi; WANG, Ruchong; CAO, Huizhi; and WU, Poqing. 1986. The Origin of the No.3 pegmatite in Altay[, Xinjiang Province]. *Mineral Deposits*, V 5, no. 4, p. 34-48 (in Chinese with English abstract). The title has also been reported as "A discussion about contributing factor of the Altai No. 3 pegmatite. Excellent horizontal and vertical geologic cross sections of the No. 3 pegmatite. No scale bars for either cross section.

ZUO, Wenqian; ZHANG, Zhanshi, SHA, Yazhou and RAO, Chaojun. 2011. Differences of ore-bearing and non-ore bearing pegmatite in the guangshigou area and its research significance. *Journal of East China Institute of Technology, Natural Science*, v. 43, no. 3 (September), p. 215-223. (in Chinese). ISSN 1674-3504

ZUEN, Dong; ZHANG, Pengxiang; and ZHANG, Yan.1999. Raman measurements of inclusion in Yunnan emerald. [J]; *Journal of Light Scattering*; No.3.