



# Czech Geological Society: Mineralogical Section



[www.geologickaspolecnost.cz](http://www.geologickaspolecnost.cz)

The Mineralogical Section is a significant and very active part of the Czech Geological Society ([www.geologickaspolecnost.cz](http://www.geologickaspolecnost.cz)). The section's re-organization into an independent mineralogical society has been repeatedly discussed but has never materialized, partly because of its rather small membership (less than 50), and also to maintain its close ties with other geological disciplines.

## HISTORY

The old mining traditions in what is today the Czech Republic date back to placer gold and tin mining by the Celts ~900 BC and can be traced through the Middle Ages, when the now-classic ore deposits of Kutná Hora (Kuttenberg) and Jáchymov (Joachimsthal) were Europe's main suppliers of silver. These mining activities stimulated the earliest scientific study of various ores and their constituent minerals. Georgius Agricola (1494–1555, “the Father of Mineralogy”) was active in Jáchymov during the main period of mining, summarizing his findings in the twelve volumes of his most famous work, *De re metallica*. Prague's court of Emperor Rudolf II (1552–1612) was a flourishing center of alchemy and science in the early 1600s. Several important mineral collections were founded by Austrian, Czech, and German noblemen over the next 200 years (e.g. I.A. Born 1742–1792, J.N. Mitrowski 1757–1799, K.M. Sternberg 1761–1838), which laid the foundation for the historic collections of the National Museum in Prague and the Moravian Museum in Brno.



National Museum in Prague

Scientific academic societies that included mineralogy in their activities, such as *Královská česká společnost nauk* (1784), were founded during the 1700s and 1800s along with others in the Austrian Empire. After the empire's breakup, the Czechoslovak Society for Mineralogy and Geology was founded in 1923. The life of this society and its members was strongly influenced by such pivotal historical events as the Munich Treaty and occupation by Nazi Germany, the whole of World War II, the communist coup d'état of 1948, the Soviet invasion of 1968, the “Velvet Revolution” of 1989, and the breakup of Czechoslovakia in 1993.

Modern mineralogical research in Czechoslovakia effectively started in the 1700s with the discovery of three important new minerals: uraninite and bornite at Jáchymov (Brückmann 1727; Wallerius 1747) and the lithium mica lepidolite at Rožná (Klaproth 1792). Throughout the 1800s and until World War I, mineralogical science was practiced at several Czech and German universities and museums (e.g. by J.S. Presl 1791–1849; F.X.M. Zippe, 1791–1863; V. Zepharovich, 1830–1890; F. Pošepný, 1836–1895; E. Bořický, 1840–1881). After the foundation of Czechoslovakia in 1918, this research continued to flourish (K. Vrba, 1845–1922; J.E. Hibschi, 1852–1940; F. Becke, 1855–1931; F. Slavík, 1876–1957; B. Ježek, 1877–1950). During WW II, Czech universities were closed and mineralogical research was restricted to supporting the war effort. Also during this time, some of the greatest Czech mineralogists (V. Rosický, 1880–1942; F. Ulrich, 1899–1941; R. Nováček, 1905–1942; L. Kaplanová-Slavíková 1890–1943) perished in Nazi concentration camps.

In the 1950s, renewed industrial growth was accompanied by an exploration and mining boom in Czechoslovakia, which enabled the development of new mineralogical laboratories. A new crop of excellent scientists were firmly establishing themselves in mineralogical research across the country. For example, at the Charles University in Prague there was J. Novák (1902–1971), R. Rost (1912–1999), K. Paděra

(1923–2010), L. Žák (1925–2008), F. Čech (1929–1996), V. Bouška (1933–2001), and M. Rieder; at the Czech Technical University there was A. Ondřej (1887–1956), J. Kašpar (1908–1984), and J. Bauer (1920–1995); at Masaryk University in Brno there was J. Sekanina (1901–1986), plus J. Staněk and B. Fojt; at the Geological Survey there was J.H. Bernard, S. Vrána, M. Drábek, and P. Ondruš; and at the Academy of Sciences there was P. Povondra (1924–2013), Z. Johan (1935–2016), P. Černý, and J. Ulrych. This period ended with the Soviet invasion in August of 1968, which not only stopped the 23<sup>rd</sup> International Geological Congress in Prague in its tracks but also disrupted international cooperation (except with the communist countries) and forced many young talented scientists (e.g. Z. Johan, P. Černý, E. Makovický, E. Slánský) to emigrate. The enthusiastically received “Velvet Revolution” of 1989 and democratization opened the door again for international cooperation and ushered in a new period of rapid growth in mineralogical research.

## RESEARCH STRENGTHS

Today, mineralogical research in the Czech Republic covers a wide spectrum of topics, with internationally recognized strengths in systematic mineralogy, crystal chemistry of various mineral groups, experimental studies of mineral stability, and the development of computational crystallographic methods. Notable for their long tradition and strong recent progress are the fields of secondary uranium minerals (R. Nováček, J. Čejka, J. Sejkora, J. Plášil), the crystal chemistry of phyllosilicates (M. Rieder, Z. Weiss, M. Valášková), tourmalines (P. Povondra, M. Novák), experimental studies on the chalcogenides (M. Drábek, A. Vymazalová, F. Laufek), granitic pegmatites (K. Vrba, J. Sekanina, J. Staněk, F. Čech, P. Černý, D. Němec, M. Novák, J. Cempírek), the rare-earth minerals (R. Škoda, J. Kynický), meteorites and tectites (V. Bouška, R. Skála), and on improving X-ray diffraction techniques (B. Ježek, M. Rieder, L. Palatinus). Over one hundred new minerals have been described from the territory of the Czech Republic: the aforementioned (Bi, Co, Ni, U, Ag)-hydrothermal deposit of Jáchymov is one of the richest localities worldwide (> 430 minerals, including 48 new species).



Linekrite  $K_2Ca_3[(UO_2)(CO_3)_3]_2 \cdot 8H_2O$ , a new mineral from Jáchymov

## PUBLICATIONS AND MEETINGS

The Czech Geological Society publishes a high-quality open-access journal (the current volume is no. 61), which in 1993 started to be published exclusively in English as the *Journal of the Czech Geological Society* and since 2007 became the *Journal of Geosciences* (ISSN 1802-6222; [www.jgeosci.org](http://www.jgeosci.org)). This journal is indexed by Thomson Reuters (IF = 1.40) and welcomes manuscripts in all areas of mineral sciences, geology, petrology, and the geochemistry of crystalline rocks. The society meets bi-annually at joint conferences with the Slovak Geological Society. The society has also been actively involved in the organization of many large international conferences (IMA 2010, Goldschmidt 2011 and 2015, CEMC 2014) and specialized symposia (e.g. Natural Glasses 1988, Lepidolite200 in 1992, Tourmaline 1997, LERM 2003, Granulites & Granulites 2009, Eurogranites 2015). The next large project of international caliber is the symposium “New Minerals and Mineralogy in the 21<sup>st</sup> Century”, which will be held 3–5 September 2016 in Jáchymov, the cradle of mineralogical research in the Czech Republic.

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