

## **RE-EXAMINATION OF MÁTRAITE FROM THE TYPE LOCALITY, GYÖNGYÖSOROSZI, MÁTRA MTS., HUNGARY**

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ZnS crystals with peculiar conical-pyramidal morphology were described from Gyöngyösoroszi, Hungary by KOCH (1958) and reported as representatives of a new polymorph of ZnS. Based on similarities of X-ray diffraction patterns (taken in a 114.6 mm oscillation camera) SASVÁRI (1958) suggested that these crystals are the natural counterparts of the 3R rhombohedral modification of ZnS reported by BUCK & STROCK (1955). The 3R structure was supposed to be the result of a slight distortion of the cubic close-packed, 3C sphalerite structure. The new natural ZnS polymorph was given the mineral name mátraite.

WEISZBURG & LOVAS (1982) studied the type material of mátraite by applying a broader range of single crystal X-ray diffraction techniques. They concluded that mátraite could not be a 3R modification, predicted strong real structure effects and suggested further TEM studies.

Recently we found again ZnS crystals of mátraite type morphology on samples from Gyöngyösoroszi. Our combined X-ray diffraction, optical, scanning and transmission electron microscopy study revealed that the “mátraite” crystals have a densely twinned 3C sphalerite structure, similar to the “pyramidal type” ZnS that was also reported from Gyöngyösoroszi (PÓSFAL *et al.*, 1988).

These results indicate that mátraite should be regarded as a morphological variety of sphalerite having a characteristically disordered (twinned) structure. Nomenclatural consequences of the present results are under preparation for IMA CNMMN.

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### References

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