

X-ray study of this gobbinsite shows that the mineral is orthorhombic but strongly pseudo-tetragonal,  $a$  9.80,  $b$  10.15,  $c$  10.10 Å, both  $c$  and  $X$  parallel to elongation, space group  $Pnmm$  (59) or  $Pnm2_1$  or  $Pn2_1m$  (31). It is clear that the twinning intergrowths in gobbinsite are better described as occurring on (110) in order to explain the previous single crystal photographs. An electron microprobe analysis of the untwinned gobbinsite was by mistake published (Nawaz, 1982) under the name of Giant's Causeway phillipsite (anal. 8, Table I).

The above data shed new light on the garronite problem. Garronite was previously thought to be tetragonal (Nawaz and Malone, 1982) with twinning intergrowths similar to those of gobbinsite. A fresh X-ray diffraction study of the garronite fibres reveals that the  $c$  axis and  $X$  are parallel to

elongation, an oscillation photograph gives  $c$  9.93 Å, and zero and first-level Weissenberg photographs show spot doubling and tetragonal symmetry due to twinning intergrowths but closer examination proves  $a$  and  $b$  to be dissimilar,  $a$  9.89 and  $b$  10.30 Å. The single crystal data are too complicated for space group determination but the unit cell clearly is body-centred.

## REFERENCES

- Nawaz, R. (1982) *Irish Naturalists J.* **20**, 480-3.  
 — and Malone, J. F. (1982) *Mineral Mag.*, **46**, 365-9.

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Department of Geology, Ulster Museum, Belfast, N. Ireland

RAB NAWAZ

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## An appeal for reflectance data on opaque minerals for the QDF

THE Commission on Ore Microscopy (COM) of the International Mineralogical Association (IMA) is very keen to complete the collection of modern reflectance data for opaque minerals in the IMA/COM Quantitative Data File (QDF) 2nd Edition. It is expected that the QDF will become as useful a reference for ore microscopy as is the JCPDS Powder Diffraction File for X-ray powder diffraction data.

It is important that the QDF be updated regularly, and all ore microscopists are urged to submit their reflectance data for new opaque

minerals, and new data obtained on known species or microanalysed varieties of more common species. These data may be submitted to the QDF Editor, A. J. Criddle. In this connection, A. J. Criddle has the appropriate forms required and is at your disposal for any further information or questions that may arise in order to facilitate transmittal of these data for publication in the 2nd Edition of the QDF File, with due acknowledgement of the work.

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Secretary IMA/COM, Laboratoire de Minéralogie Cristallographie, T. 16, 4 Place Jussieu, 75230 Paris Cedex 05, France

B. CERVELLE

Department of Mineralogy, British Museum (NH), Cromwell Road, London SW7 5BD, England

A. J. CRIDDLE