

perimental work using Mo  $K\alpha$  radiation to reduce the large absorption corrections involved in our work with Cu  $K\alpha$  radiation.

One of us (F.W.H.) wishes to acknowledge the receipt of a maintenance grant from the Department of Scientific and Industrial Research, during the tenure of which this work has been carried out.

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**Diffuse scattering of sericite.** By MITSUOKI NAKAHIRA, *Scientific Research Institute, Kamifuji-Mae, Bunkyo-ku, Tokyo, Japan* and SHINICHI IWAI, *Tokyo Institute of Technology, Japan*

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Sericite is a mineral of the mica group, the structure of which is said to be of the muscovite type. As it always occurs in a powder state in nature, only the X-ray powder method has been used for the study of its crystal structure. Recently, however, we have obtained X-ray fibre diagrams of various Japanese sericites by passing the X-rays parallel to thin films formed by drying water suspensions of these minerals. These diagrams correspond to rotation photographs obtained by rotating a single crystal about the normal to the  $ab$  plane.

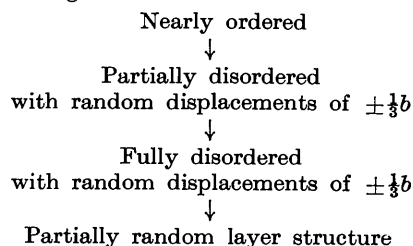
With many sericites it was observed that considerable diffuse scattering took place along the innermost row lines (with indices  $(11l)$ ,  $(02l)$ ) and other similar row lines with  $k \neq 3n$  (where  $n$  is integer), while those with  $k = 3n$  were relatively sharp. These effects indicate that in sericite, as in many other clay minerals, there is

## References

- BRAGG, W. L. (1937). *Atomic Structure of Minerals*. London: Oxford University Press.  
 DAVIES, M. (1946). *Rep. Progr. Chem.* **43**, 5.  
 HIETANEN, A. (1951). *Amer. Min.* **36**, 859.  
 MACHATSKI, F. & MUSSGNUG, F. (1942). *Naturwissenschaften*, **30**, 106.  
 MILNE, I. H. (1949). *Amer. Min.* **34**, 442.

considerable random displacement of layers by multiples of  $\frac{1}{3}b$  parallel to the  $b$  axis.

Using many Japanese sericites, we have found a wide range of variation in the degree of disorder, as shown in the following scheme:



Details will be reported in the near future.

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