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Acceptance of the Roebling Medal of the Mineralogical Society of America for 1979

W.H. TAYLOR

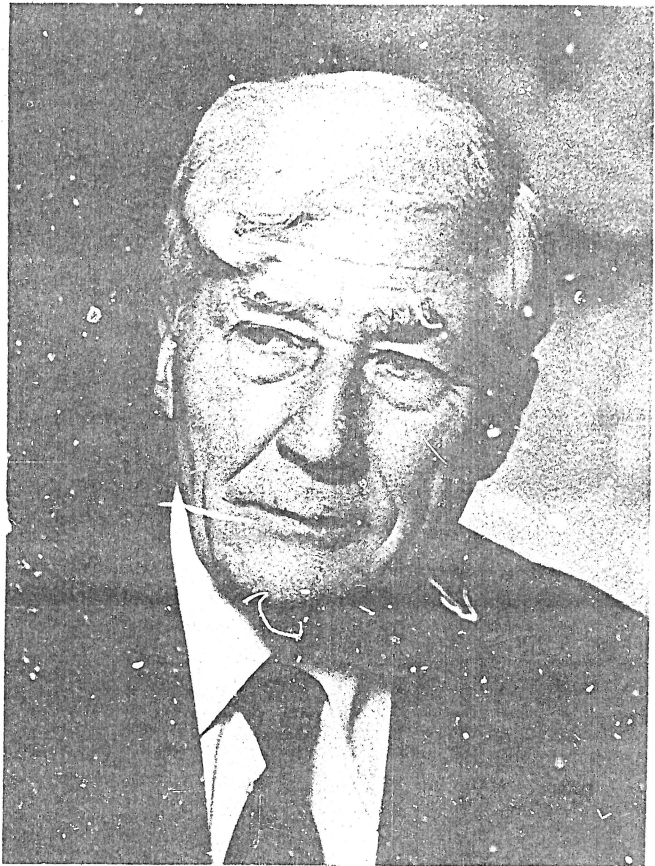
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Mr. President, members of the Mineralogical Society of America, ladies and gentlemen:

May I first express my sincere thanks to the Society for the award of the Roebling Medal, which I accept with great pleasure: I am aware that no higher honour for work in this field could be offered. My many friends here would probably agree that I am not often reduced to a state of stunned silence, but when Professor Gibbs telephoned me in Cambridge about a year ago to tell me that I had been named as the recipient of the 1979 Medal, I fear that I became quite incoherent with mingled surprise and delight.

Professor Smith has obviously worked hard on my behalf, and I am grateful that he so willingly agreed to act as my citationist. I liked his light-hearted phrase about 'knocking off' several structures in my early years—at the time it did not feel like that at all. In similar vein, his account of my Christmas afternoon festivities in 1932 might be taken to imply that a couple of hours with a slide rule gave me the feldspar structure—but, of course, mountains of calculations on the feldspars had previously got me nowhere, until a sudden flash (which seemed bound to be correct—and was!) led straight to the solution.

The biographical note printed on your luncheon



Scientific Career of W. H. Taylor

Born in Lancashire on 25 September 1904, W. H. Taylor graduated Bachelor of Science (Manchester) with First-class Honours in Physics in 1926 and joined the research team directed by Professor W. L. Bragg. In the following eight years, first (1926-28) as a research student, afterwards (1928-34) as Assistant Lecturer in the Physics Department, he published some twenty papers for which the Doctorate of Science was awarded in 1934. These studies established the principles governing the structures of the aluminosilicates, the zeolites, the feldspars, and other silicate minerals.

The award of a Leverhulme Research Fellowship (1934-36) enabled Dr. Taylor to work first in Bernal's Crystallographic Laboratory in Cambridge and afterwards in the Davy-Faraday Laboratory of the Royal Institution under Sir William Bragg.

Returning to Manchester in 1936 as Head of the Physics Department in the College of Technology, he immediately established a small crystallographic research laboratory, resumed his own work on silicates, and initiated projects on organic structures and metals. The new 'lines' were to prove important when at the outbreak of World War II in 1939 Dr. Taylor's team was instructed to contribute, as a unit, to the war effort in the industrial northwest.

In 1945 Dr. Taylor accepted the invitation of Professor Sir Lawrence Bragg to return to Cambridge as University Reader in Crystallography with responsibility for crystallographic research in the Cavendish Laboratory. In the immediate post-war atmosphere so favorable to

expansion, in a laboratory with facilities and potential unmatched elsewhere, and with the backing of the Cavendish Professor, Dr. Taylor recognised a unique opportunity for much-needed diversification of the research interests of the crystallographic group. In carrying out this deliberate policy he was fortunate in being able to attract to the Cavendish Dr. W. Cochran from Edinburgh and Dr. Helen D. Megaw from Bernal's group in London. To these experienced researchers there was added at about this time P. B. Hirsch, with a brilliant undergraduate record in the Natural Sciences Tripos and showing great promise, soon to be fulfilled. Dr. Max Perutz, already installed in the Laboratory during the war period and, of course, completely autonomous, remained until his new laboratory was ready for occupation. The group grew rapidly to a total of perhaps 60 or 70, its members drawn from laboratories all over the world and often returning there to take up senior appointments, so satisfying another aim of Dr. Taylor's planned policy for his laboratory: that it should produce leaders of research as well as valuable original work. In time, the hiving-off process began to operate: Dr. Cochran returned to Edinburgh as Professor of Physics, Dr. Hirsch accepted the Chair of Metallurgy in Oxford, and of the original leaders only Dr. Megaw remained.

International recognition of Dr. Taylor's work led to the award in 1970 of the Becke Medal by the Österreichische Mineralogische Gesellschaft, to his election as Membre d'Honneur of the Société Française de Minéralogie et de Cristallographie on the occasion of the Société's centenary in 1978, and now to the award of the 1979 Roebling Medal of the Mineralogical Society of America.

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