

THE SCHAIRER VOLUME

**A special volume of the American Journal of Science
in appreciation
of
J. FRANK SCHAIRER
on his sixty-fifth birthday**

SCHAIRER VOLUME

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J. FRANK SCHAIRER

FOREWORD

This volume is dedicated to Dr. J. Frank Schairer on the occasion of his sixty-fifth birthday. His multitude of friends join these authors in their appreciation of his contributions to experimental petrology and good fellowship among geologists.

The principal aim of Dr. Schairer's research has been the accurate determination of the melting relations of the synthetic end members of the common rock-forming minerals at one atmosphere. His motto has been "Let's get the facts first". Theory always follows experiment closely, and he eagerly organizes field excursions to critical areas to apply the results. Many of the data collected are immediately applicable to the problems of ceramics and steelmaking; however, the impetus and orientation are toward the relations among the major igneous rocks. Forty years of prodigious effort have laid the foundation for a definitive magma scheme, a flow sheet relating the liquids of various compositions which crystallize into the mineral assemblages characteristic of the common major igneous rocks. As important are the plethora of phase-equilibria data applicable to the lavas, which also provide a base for further studies involving additional variables. A further byproduct is the carefully prepared starting materials for these studies.

Dr. J. Frank Schairer was born in Rochester, N. Y., on 13 April 1904. He received his B.S. (chemistry) in 1925, M.S. (geology) in 1926, and Ph.D. (chemistry) in 1928, all from Yale University. There he was greatly inspired to study the inorganic chemistry of natural materials by Harry W. Foote and John Johnston in chemistry and Adolf Knopf, Charles H. Warren, William E. Ford, and Chester Longwell in geology. Dr. Schairer joined the staff of the Geophysical Laboratory, Carnegie Institution of Washington, in 1927 and since then has had the pleasure "of being paid to do exactly what he likes to do", and in turn inspiring the many Fellows, visitors, and colleagues who have the opportunity to work with him.

Few men have given so generously of their kind help and good cheer to so many colleagues. His boundless energy and effervescent enthusiasm pervade all his activities. He generates a happy atmosphere whether it be in the laboratory, the field, or international meetings. Always a friendly counsel, Dr. Schairer provides that positive and constructive mediation which promotes good will. Inherent greatness of spirit is indeed the aura of this man.

In recognition of his contributions to geology he was elected to the National Academy of Sciences in 1953 and received the Arthur L. Day Medal of the Geological Society of America the same year. For his services as Special Assistant of the National Defense Research Commission in 1942 to 1945, he received the President's Certificate of Merit (1948) and the Medal of Honor (Great Britain, 1948). The Mineralogical Society of America and the Geochemical Society elected him their President in 1943 and 1960, respectively. He also served as a Vice or Section

President of the American Geophysical Union (1956-1959), International Association of Volcanology (1957-1960), and Geological Society of America (1944). The Washington Chemical Society bestowed on him the Hildebrand Award in 1942, and the Deutsche Mineralogische Gesellschaft made him an Honorary Member in 1968. His most cherished rewards, which he shares with his wife Ruth, are his twin children, John and Jeanne.