

INTRODUCTION

Research in the complex field of clay mineralogy and clay technology has evolved rapidly during the past decade. The most striking aspects, perhaps, of this accelerated evolution have been not only the array of elaborate new equipment but also the bringing together of investigators from several so-called independent disciplines. This association has enabled workers possessing widely divergent backgrounds of training and experience and equally divergent motivations to attack common problems. These facts have of course all contributed to the desirability and value of the annual National Clay Conferences, the second of which is reported in this volume.

In any research enterprise, and particularly in a realm where a wide range of backgrounds, philosophies, and objectives are involved, spontaneity and originality of research effort are essential. Inasmuch as the purpose of the 1952 conference had been to summarize knowledge of clays and clay technology, the Program Committee for the 1953 (Columbia) conference decided to solicit independent contributions rather than to build a program along predetermined lines by invited papers. To have followed another course would have implied that the committee already knew which areas of investigation had been most fruitful during the past year and who in the field of clay research had been most successful in attacking these particular frontiers of knowledge. The committee suggested, therefore, genesis and identification of clays as broad areas of special interest, and asked for voluntary contributions of papers in the entire field of clay studies.

Included among the contributors are physicists, chemists, crystallographers, mineralogists, petrographers and other geologists, ceramists, soil scientists, and petroleum and civil engineers. Attendance at the Conference was about equally divided between academic people (faculty and advanced students) and representatives from government and industry.

The papers in this volume are not arranged in the order of their presentation at the Conference, but are grouped roughly in the following order: Genesis and occurrence of clays; methods of identification; fundamental crystallographic, chemical and other studies; and finally miscellaneous topics. The road log of the pre-Conference field trip precedes the paper on the same topic.

The discussions which accompany some of the papers have been selected from those which were submitted in writing, and authors to whom they were addressed were given an opportunity to reply in writing.

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