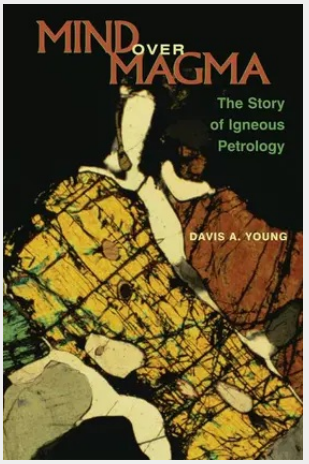
Young

Mind over Magma

The Story of Igneous Petrology



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Mind over Magma chronicles the scientific effort to unravel the mysteries of rocks that solidified on or beneath Earth's surface from the intensely hot, molten material called magma. The first-ever comprehensive history of the study of such igneous rocks, it traces the development of igneous petrology from ancient descriptions of volcanic eruptions to recent work incorporating insights from physical chemistry, isotope studies, and fluid dynamics.Intellectual developments in the field--from the application of scientific methods to the study of rocks to the discovery of critical data and the development of the field's major theories--are considered within their broader geographical, social, and technological contexts. Mind over Magma examines the spread of igneous petrology from western Europe to North America, South Africa, Japan, Australia, and much of the rest of the world. It considers the professionalization and Anglicization of the field, detailing changes in publication outlets, the role of women, and the influence of government funding. The book also highlights the significant role that technological developments--including the polarizing microscope, high-temperature quenching furnaces, and instrumental analysis--have played in the discovery of new data and development of revolutionary insights into the nature of igneous rocks.Both an engagingly told story and a major reference, Mind over Magma is the only available history of this important field. As such, it will be appreciated by petrologists, geochemists, and other geologists as well as by those interested in the history of science.

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