

# A practical introduction to igneous petrology for students and practitioners

The newly revised Second Edition of *Igneous Rocks and Processes: A Practical Guide*, delivers an authoritative introduction to igneous petrology and helps students to develop key skills and confidence in identifying igneous materials and in naming and interpreting unknown igneous rocks presented to them. It serves as both a conventional course text and a practical laboratory manual.

The authors review igneous nomenclature and subsequently describe specific compositional categories of magmatic rocks. Each chapter covers definitions, mineralogy, eruption and emplacement processes, textures and crystallization processes, geotectonic distribution, geochemistry, and aspects of magma genesis. Additional chapters address phase equilibrium experiments and physical volcanology.

This latest edition offers readers extensively updated chapters, as well as access to a companion website with supplementary material. It also provides:

- Thorough introductions to magmas, magmatic rocks, and magma differentiation
- Exercises for each chapter, with answers provided at the end
- A detailed summary of techniques and optical data for mineral identification using a polarizing microscope
- An introduction to petrographic calculations and an extensive glossary

Perfect for geoscience students taking courses in igneous petrology, *Igneous Rocks and Processes: A Practical Guide*, second edition will also earn a place in the libraries of postgraduate students and researchers in the field.

**Robin Gill** lectured in igneous petrology, geochemistry, and volcanology at Royal Holloway, University of London, UK.

**Godfrey Fitton** is Professor of Igneous Petrology at the University of Edinburgh, UK.

Front cover image: Volcanic eruption on the flanks of Cumbre Vieja, La Palma, Canary Islands, December 2021.

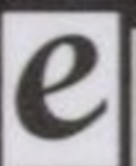
Back cover images (from top): (1) Thin section of haüyne nephelinite from Etinde volcano, Cameroon; (2) Layered series of arfvedsonite-eudialyte-nepheline syenite cumulates in the Ilímaussaq Intrusion, South Greenland; (3) Slump structure in layered cumulates of the Rum intrusion, Inner Hebrides, Scotland; (4) Welded layers (showing columnar jointing) in the Lower Bandelier ignimbrite, San Diego Canyon, Jemez Mountains, New Mexico, USA; (5) Polished section of welded lapilli-tuff (ignimbrite), English Lake District; (6) Close-up of the contact of a dolerite dyke (right) chilled against host rock (left), East Greenland.

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