

Petrology

- The study of the properties of rocks and the processes behind their formation
- Recognition and description of rocks
- Interpretation of their origin and history

Granites and Basalts

- The most common igneous rocks
- Represent end members of igneous processes
- Key to understanding petrology

Granites

- Minerals
- Textures
- Processes
- Phase relations

Minerals

- Quartz
- Plagioclase (An_{10-30})
- K-spar (orthoclase or microcline)
- Biotite
- Hornblende
- Opaque phase (magnetite or ilmenite)

Textures

- Hypidiomorphic granular
- Sugary
- Reaction textures?
- Xenoliths

Processes

- Fractional crystallization
- Assimilation
- Deuteric alteration

Phase Relations

- Bowen's reaction series?
- Ab-An-Or system
- Fe-Ti oxide system

Basalts

- Minerals
- Textures
- Processes
- Phase relations

Minerals

- Olivine (Fo_{90-70})
- Clinopyroxene (augite, pigeonite)
- Orthopyroxene (enstatite)
- Plagioclase (An_{90-70})
- Opaque phase (magnetite, ilmenite)

Textures

- Hypidiomorphic granular
- Ophitic
- Interganular
- Porphyritic
- Glomeroporphyritic

Processes

- Crystal settling
- Crystal fractionation
- Reaction textures
- Deuteric alteration

Phase Relations

- Ab-An
- Fo-Fa
- Di-An