Lecture 7, Appendix 1
Partition Coefficient Literature (this list is not complete!)

I. RECENT NATURAL SYSTEMS STUDIES

A. Phenocryst/Matrix

Norman et al., Trace element distribution coefficients for pyroxene, plagioclase and olivine in evolved tholeiite, etc., *Am. Min.*, 9, 888-899, 2005.

B. Inter-mineral partitioning in upper mantle rocks


II. EXPERIMENTAL STUDIES

A. Important Reviews:


**B. Contributions from the Wood-Blundy Group:**


C. **Contributions from the Salters/Longhi Group:**


2) Salters and Longhi, Trace element partitioning during the initial stages of melting beneath mid-ocean ridges, *EPSL*, 166, 15-30, 1999.

D. **The Henry’s Law Problem**


### E. Beta-Track Mapping Procedure


3) Mysen, B., Experimental determination of rare-earth element partitioning between hydrous silicate melt, amphibole and garnet peridotite minerals at

4) Wendlandt, R.F. and Harrison, W.J., Rare earth partitioning between immiscible carbonate and silicate liquids and CO2 vapor: results and implication for the formation of light rare-earth enriched rocks.


### III. SPECIFIC MINERALS

#### A. Clinopyroxene:


**B. Garnet:**


**C. Olivine and Orthopyroxene:**


**D. Plagioclase:**

1) Bedard, Trace element partitioning in plagioclase, GCA, 70, 3717-3742, 2006.


**E. Amphibole:**


**F. Micas: Phlogopite and Biotite:**


5) Foley, Jackson, Fryer, Greenough and Jenner, Trace element partition coefficients for clinopyroxene and phlogopite in an alkaline lamprophyre from Newfoundland by LAM-ICP-MS, *GCA*, 60, 629-638, 1996.


**G. Rutile:**


**H. Titanite:**


**I. Magnetite:**


**J. Apatite:**


**III. Effects of Liquid Composition and Temperature**

**A. Geothermometry**


**B. Role of H₂O:**


C. Role of Melt Composition in Controlling Partition Coefficients:


**D. Mineral-Aqueous Fluid Partitioning**


**IV. Controls on Core Formation**


V. Metamorphic Processes


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