

Texas A&M Materials Characterization Facility  
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**Andrew V. Mott Ph.D.**  
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## **EDUCATION**

(2014) **Ph.D.** Geological and Environmental Sciences, *Stanford University, Stanford, CA*

- Dissertation: Rare Earth Elements in metamorphic environments: the Karrat Rare Earth Element deposit, Greenland and the Ultra-High Pressure North Qaidam terrane, China
- Advisors: Drs. Dennis Bird and Marty Grove

(2007) **B.S.** Geology. *Lafayette College, Easton, PA*

- Senior Thesis: Fluorite petrogenesis from rare earth element geochemistry
- Advisors: Drs. Dru Germanoski and Guy Hovis

## **PROFESSIONAL EXPERIENCE**

03/15 – present **Assistant Research Scientist (Electron Microprobe)**, Texas A&M University  
Materials Characterization Facility, College Station, TX

09/07 – 09/14 **Teaching and Research Assistant**, Department of Geological and  
Environmental Sciences, Stanford University, Stanford, CA

06/10 – 08/10 **Geologist (Core Logging)**, Avanna Resources, Copenhagen, Denmark.

06/07 – 08/07 **Geologist**, Texas A&M University-Corpus Christi, Corpus Christi, TX.

05/04 – 05/07 **Excel Researcher**, Lafayette College, Easton PA.

## **RESEARCH INTERESTS**

- Developments in EPMA
- Rare earth element partitioning between minerals
- Rare earth element economic mineral deposits
- Monazite and allanite geochronology

## **SEMINARS**

- (04/17) Imaging and Quantitative Analysis using the Electron Microprobe (EPMA)
- (10/16) MCF Seminar Series: Electron Microprobe (EPMA)
- (10/15) An Overview of the SXFive Electron Microprobe and Associated Preparation Lab

## **CONFERENCES ATTENDED**

- (2017) Microscopy and Microanalysis 2017 Meeting, St. Louis, Mo
- (2016) MAS Topical Conference: Electron Probe Microanalysis 2016, Madison, WI
- (2015) CAMECA Electron Microprobe Users Meeting, Madison, WI
- (2012) American Geophysical Union, San Francisco, CA
- (2011) American Geophysical Union, San Francisco, CA
- (2005) Geological Society of America, Salt Lake City, UT

## **AFFILIATIONS**

Microbeam Analysis Society, Focused Interest Group on Microanalytical Standards (FIGMAS)

## **SELECTED RESEARCH PUBLICATIONS:**

**Mott, A.** (2014). Rare earth elements (REE) in metamorphic environments: The Karrat rare earth element deposit, Greenland and the ultra-high pressure North Qaidam terrane, China. Thesis Dissertation. 463p.

**Mott, A.,** Bird, D., Grove, M., Rose, N., Bernstein, S., MacKay, H., and Krebs, J. (2013). Karrat Isfjord: A newly discovered Paleoproterozoic carbonatite-sourced REE deposit, Central West Greenland. *Journal of Economic Geology* 108, 1471-1488.

**Mott, A.,** Bird, D., and Grove, M. (2012). U-Th-Pb ion microprobe analysis of monazite from the Paleoproterozoic Karrat rare earth element (REE) deposit, western Greenland. Abstract and presentation at the American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 3-7, 2012.

**Mott, A.,** Bird, D., Grove, M., Rose, N., Bernstein, S., and MacKay, H. (2011). Karrat REE mineralization on Niaqornakavsak and extension on Umiamako Nuna, West Greenland:

mineralogic, geochronologic, and carbon and oxygen isotope constraints on the origin. Abstract and presentation at the American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 5-9, 2011.

Hovis, G., **Mott, A.**, and Roux, J. (2009). Thermodynamic, phase equilibrium, and crystal chemical behavior in the nepheline - kalsilite system. *American Journal of Science* 309, 397-419.  
Hovis, G., Morabito, J., Spooner, A., **Mott, A.**, Person, E., Henderson, C., Roux, J., and Harlov, D. (2008). A simple predictive model for the thermal expansion of  $AlSi_3$  feldspars. *American Mineralogist* 93, 1568-1573.

Hovis, G., Roux, J. and **Mott, A.** (2008). The significant effect of alkali-site occupancy on phase equilibria and thermodynamic behavior of nepheline - kalsilite crystalline solutions. *Goldschmidt Conference Abstracts 2008*, p. A395.

**Mott, A.** (2007). Fluorite Petrogenesis from Rare Earth Element Geochemistry. Senior thesis and presentation. May 9, 2007.

Germanoski, D., **Mott, A.**, Trowbridge, W., Wilson, J., and Chambers, J. (2005). Satellite image and GIS-based identification and characterization of wet meadows in the central great basin. Abstract and presentation at the Geological Society of America Meeting, Salt Lake City, Utah. Oct. 16-19, 2005.