

Name: Dr. Andrea M. Koziol

Affiliation: Dept. of Geology, University of Dayton, Dayton OH

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a. Professional Preparation

B.A., Planetary and Space Sciences, Boston University, 1983

Ph.D. Geophysical Sciences, University of Chicago, 1988

National Research Council Post-doctoral Fellow, U.S. Geological Survey, Menlo Park, CA, 9/89 – 8/90

b. Appointments

8/2000 - present Associate Professor, Dept. of Geology, The University of Dayton, Dayton OH

8/93 - 8/2000 Assistant Professor, Dept. of Geology, The University of Dayton, Dayton OH

8/92 - 8/93 Research Associate, Dept. of Geophysical Sciences, University of Chicago, Chicago IL. Coordinator: Dr. R.C. Newton

8/91 - 8/92 Visiting Assistant Professor, Dept. of Geology, The College of Wooster, Wooster OH

8/90 - 7/91 Visiting Assistant Professor, Dept. of Geology, Indiana University, Bloomington, IN

c. Publications

1) 5 most recent publications/products

Koziol, A.M. (2012) Contact Relationships between Goshen Dome rocks and surrounding schists, West-Central Massachusetts, USA. Geological Society of America Abstracts with Programs, Vol. 44, No. 5, p. 59.

Koziol, A. M., McGrew, A. J. (2011) A framework for learning-centered curricular innovation in the Department of Geology at The University of Dayton. Geological Society of America Abstracts with Programs Vol. 43, p. 300.

Snoeyenbos, D. R., Koziol, A. M., Russell, A., Ebel, D. S., Valley, J. W. (2011). Prograde Growth History of Possible Relic UHP Garnets from the Taconian of Western Massachusetts. American Geophysical Union Fall 2011 Meeting, San Francisco CA.

Koziol, A. M., Snoeyenbos, D. R. (2009). Minor Element Solid Solution in Garnet at Ultra-high Pressure Metamorphic Conditions. Denver, CO: Geological Society of America Abstracts with Programs, Vol. 41, pp. 636.

Snoeyenbos, D. and Koziol, A.M. (2008) Exsolution Phenomena of UHP Type in Garnets From Western New England, USA. EOS transactions AGU 89 n. 53. American Geophysical Union Fall 2008 Meeting, San Francisco CA.

2) 5 other significant publications/products

Koziol, A.M. (2004) Experimental determination of siderite stability and application to Martian meteorite ALH84001. *American Mineralogist*, 89, p. 294-300.

Koziol, A. M. and Newton, R.C. (1998) Experimental determination of the reaction: magnesite + enstatite = forsterite + CO₂ in the range 6-25 kbar and 700 - 1100 °C and the enthalpy of formation of forsterite. *American Mineralogist.*, 83, p. 213-219.

Koziol, A.M. and Newton, R.C. (1995) Experimental determination of the reactions: magnesite + quartz = enstatite + CO₂ and magnesite = periclase + CO₂ and enthalpies of formation of enstatite and magnesite. *American Mineralogist*, 80, 1254-1262.

Koziol, A.M. and Bohlen, S.R. (1992) Solution properties of almandine-pyrope garnet as determined by phase equilibrium experiments. *American Mineralogist*, 77, 765-773.

Koziol, A.M. and Newton, R.C. (1988) Redetermination of the anorthite breakdown reaction and improvement of the plagioclase-garnet-Al₂SiO₅-quartz barometer. *American Mineralogist*, 73, 216-223.

d. Research Grants

National Science Foundation

Principal Investigator "Experimental Studies of Fe-Mg Carbonates and Their Role in Petrogenesis." October 1998 - September 2000.

NASA

Principal Investigator "Fe-Mg Carbonates as a Monitor Phase of Carbon Dioxide and Oxygen Fugacity on Mars." 2000-2003.

Principal Investigator "Experimental Studies of Fe-Mg Carbonates as Indicators of Martian Near-Surface Conditions." February 1999 - February 2000.

e. Synergistic Activities

1. Mentoring and teaching activities at the University of Dayton. I have mentored nine undergraduates at UD through my research activities. I have participated in a number of teaching workshops, and recently presented my own interactive exercise on global warming. I chaired (2003 – 2004) the department Committee on Academic Excellence, which led to a list of competencies for the department and to the development of a new senior seminar course.

2. Service to the Mineralogical Society of America. I am the elected secretary of MSA and will serve until Fall 2015. I am the MSA society Editor for *Elements*, a combined newsletter

for a number of professional societies. I also maintain the list of professional meetings for *Elements*. I was *Lattice* Editor (former newsletter for MSA) from 2001 to 2004.

3. Service to the Cosmochemistry program of NASA. After obtaining funding from the Cosmochemistry program in 1999, I was appointed to Cosmochemistry Review Panel for 2000 and 2001.