

**JAMES DALE WEBSTER**  
CURATOR AND PROFESSOR  
DEPARTMENT OF EARTH AND PLANETARY SCIENCES  
DIVISION OF PHYSICAL SCIENCES

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**HIGHEST DEGREE EARNED**

Ph.D.

**AREAS OF SPECIALIZATION**

Volcanoes, hydrothermal fluids, and mineral deposits

**EDUCATIONAL EXPERIENCE**

Ph.D., Arizona State University, 1987

M.S., Colorado School of Mines, 1981

B.S., North Carolina State University, 1978

**PREVIOUS EXPERIENCE IN DOCTORAL EDUCATION**

GRADUATE ADVISEES

Ms. Claudia Cannatelli, University of Naples/Virginia Polytechnic University, 2005-2007

Dr. Luca Fedele, University of Naples/Virginia Polytechnic University, 2003-2005

Dr. Guido Paparoni, Ph.D. Columbia University, 2000

Mr. Andries Krijgsman, M.S. Columbia University, 1995

**GRADUATE COMMITTEES**

None, currently

**RESEARCH GRANT SUPPORT**

FEDERAL SOURCES

National Science Foundation, "Collaborative Research: Experimental Study of H, S, Cl, and F Partitioning Between Apatite, Fluid(s), and Melts: Applications to Magma Evolution and Volatile Component Exsolution", \$142,211, December 1, 2008-November 30, 2011.

National Science Foundation, Experimental Investigation of H<sub>2</sub>O, Cl, CO<sub>2</sub> and SO<sub>2</sub> Solubilities in Rhyolite and Andesite Melts at Shallow Crustal Conditions, \$134,273, June 1, 2003-May 31, 2009.

National Science Foundation, "REU Site: Collaborative Research: Earth and Planetary Science and Astrophysics REU at the American Museum of Natural History in Collaboration with the City University of New York", \$250,436 (with co-PI Charles Liu), April 1, 2006-March 31, 2009.

**RECENT ARTICLES IN REFEREED JOURNALS (2003-2009)**

- Webster, J.D., Sintoni, M.F., De Vivo, B. 2009. The partitioning behavior of Cl and S in aqueous fluid- and saline-liquid saturated phonolitic and trachytic melts at 200 MPa. *Chemical Geology*, in press.
- Aiuppa, A., Baker, D.R., Webster, J.D. 2009. Halogens in volcanic systems. *Chemical Geology*, in press.
- Webster, J.D., Mandeville, C.W., Goldoff, B., Coombs, M.L., Tappen, C. 2009. Augustine volcano, Alaska: The influence of volatile components in magmas erupted AD 2006 to 2100 years before present. *In* J. Power, M.L. Coombs, J. Freymueller (Editors), *The 2006 Eruption of Augustine Volcano, Alaska, U.S. Geological Survey Professional Paper*, in press.
- Webster, J.D., Tappen, C., Mandeville, C.W. 2008. Partitioning behavior of chlorine and fluorine in the system apatite-melt-fluid: II. Felsic silicate systems at 200 MPa. *Geochimica et Cosmochimica Acta*, in press.
- Webster, J.D. and C.W. Mandeville. 2007. Fluid immiscibility in volcanic systems. *In* Leibscher, A., and C. Heinrich (editors), *Fluid-fluid equilibria in the crust. Reviews in Mineralogy and Geochemistry* 65: 313-362.
- Cannatelli, C., A. Lima, B. De Vivo, M. Piochi, R.J. Bodnar, J.D. Webster, and L. Fedele. 2006. Geochemistry of melt inclusions from the Fondo Riccio and Minopoli eruptions at Campi Flegrei (Italy). *Chemical Geology* 237: 418-432.
- Thomas, R., J.D. Webster, H.-J. Förster, D. Rhede, W. Seifert, K. Rickers, and W. Heinrich. 2006. The transition from peraluminous to peralkaline granitic melts in nature: evidence from melt inclusions and accessory minerals. *Lithos* 91: 137-149.
- Thomas, R. and J.D. Webster. 2006. Pegmatite-forming processes: what melt and fluid inclusions tell us. *In* J.D. Webster, (editor), *Melt inclusions in plutonic rocks. MAC Short Course vol. 36: 189-210. Mineralogical Association of Canada.*
- Webster, J.D. and R. Thomas. 2006. Silicate melt inclusions in felsic plutons: a synthesis and review. *In* J.D. Webster (editor), *Melt inclusions in plutonic rocks. MAC Short Course vol. 36: 165-188. Mineralogical Association of Canada.*
- Mathez, E.A. and J.D. Webster. 2005. Partitioning behavior of chlorine and fluorine in the system apatite-silicate melt-fluid. *Geochimica et Cosmochimica Acta*, 69, 1275-1286.
- Thomas, R., H.-J. Förster, K. Rickers, and J.D. Webster. 2005. Formation of extremely F-rich hydrous melt fractions and hydrothermal fluids during differentiation of highly evolved tin-granite magmas: a complex melt/fluid-inclusion study. *Mineralium Deposita* 148, 582-601.
- Webster, J.D., M.F. Sintoni, B. De Vivo. 2005. The role of sulfur in promoting magmatic degassing and volcanic eruption at Mt. Somma-Vesuvius. *In* B. De Vivo (editor), *Volcanism in the Campania Plain: Vesuvius, Campi Flegrei and ignimbrites. Developments in volcanology vol. 8: 221-236. New York: Elsevier.*
- Zajacz, Z., W.E. Halter, W.J. Malfait, O. Bachman, R.J. Bodnar, M.M. Hirschman, C.W. Mandeville, Y. Morizet, O. Muentener, P. Ulmer, and J.D. Webster. 2005. A composition independent quantitative determination of water content in silicate glasses and silicate melt inclusions by confocal Raman-spectroscopy. *Contributions to Mineralogy and Petrology* 150: 631-642.
- Godon, A., J.D. Webster, G.D. Layne, and F. Pineau. 2004. Secondary ion mass spectrometry for the determination of  $\delta^{37}\text{Cl}$ . Part II. Intercalibration of SIMS and IRMS for aluminosilicate glasses. *Chemical Geology* 207, 291-303.
- Halter, W., and J.D. Webster. 2004. The magmatic to hydrothermal transition and its bearing on ore-forming systems. *Chemical Geology* 210, 1-6.

- Layne, G.D., A. Godon, J.D. Webster, and W. Bach. 2004. Secondary ion mass spectrometry for the determination of  $\delta^{37}\text{Cl}$ . Part I. Ion microprobe analysis of glasses and fluids. *Chemical Geology* 207, 277-289.
- Pettke, T., W.E. Halter, J.D. Webster, M. Aigner-Torres, and C.A. Heinrich. 2004. Accurate quantification of melt inclusion chemistry by LA-ICPMS: A comparison with EMP and SIMS and advantages and possible limitations of either method. *Lithos* 78, 333-361.
- Webster, J.D. 2004. The exsolution of magmatic hydrosaline melts. *Chemical Geology* 210 33-48.
- Sandland, T.O., L.-S Du, J.F. Stebbins, and J.D. Webster. 2004. Structure of Cl-containing silicate and aluminosilicate glasses: A  $^{35}\text{Cl}$  MAS-NMR study. *Geochimica et Cosmochimica Acta* 68, 5059-5069.
- Webster, J.D., R. Thomas, H.-J. Förster, R. Seltmann, and C. Tappen. 2004. Geochemical evolution of halogen-enriched, granite magmas and mineralizing fluids of the Zinnwald tin-tungsten mining district, Erzgebirge, Germany. *Mineralium Deposita* 39, 452-472.
- Webster, J.D., F. Raia, C. Tappen, and B. DeVivo. 2003. Pre-eruptive geochemistry of the ignimbrite-forming magmas of the Campanian Volcanic Zone, Southern Italy, determined from silicate melt inclusion. *Mineralogy and Petrology* 79, 99-125.

#### **SPECIAL RECOGNITION/AWARDS**

- Co-recipient of the American Geophysical Union 2002 Excellence in Geophysical Education Award, 2002
- NATO Postdoctoral Fellowship, 1988
- National Research Council Postdoctoral Associate Award, 1987