Curriculum Vita
Neil Evan Johnson

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Education

Ph.D. Geology -1986. Virginia Polytechnic Institute and State University, Blacksburg VA 24061
Ph.D. Dissertation: *The Crystal Chemistry of Tetrahedrite.*

M.S. Geology -1983. Virginia Polytechnic Institute and State University
M.S. Thesis: *A Study of the Vein Copper Mineralization of the Virgilina District, Virginia and North Carolina.*

B.S. Geology -1980. Ohio State University, Columbus, OH 43210
B.S. Thesis: *Hydrothermal Synthesis of $NaNb(BO_3)_2$ and $CaPb(BO_3)_2$, Analogues of Nordenskiöldine - $CaSn(BO_3)_2$.*

Experience

Lecturer, Appalachian State University: 1994 - present
Taught physical and honors physical geology classes and labs, applied geology classes and labs, crystal chemistry, optical mineralogy, earth materials, environmental geology and computer applications. Managed Macintosh laboratories and X-Ray diffractometer lab. Acted as departmental webmaster.

Oak Ridge Associated Universities Post-Doctoral Fellow, U.S. Department of Energy, National Energy Technology Laboratories, P.O. Box 10940, Pittsburgh, PA 15236-0940: 1992 - 1994
Determined nature of a synthetic interstratified marcasite/pyrite used as a catalyst precursor. Investigated structural aspects of hydrotalcite precursors and spinel catalysts used in Fischer-Tropsch catalysis. Installed and tested new X-ray diffractometer software. Developed and maintained periodic standardization routine for aging diffractometer. Wrote on-site user guide for diffractometer software.

Instructor, Department of Geology, Radford University, Radford, VA 24142: 1986-1991
Taught physical geology classes and introductory-level laboratories in physical, historical and environmental geology. Aided in development of environmental geology laboratory curriculum, including creating or collaborating on several laboratory exercises now in use. Assisted in purchasing decisions on X-ray diffractometer, along with development of laboratory.

Research associate, VPI & SU: 1987-1991
Assisted in hardware and software maintenance of X-ray diffractometry laboratory and provided training and consultation for research users. Assisted in project on porting mainframe FORTRAN software to Macintosh computers. Conducted original and collaborative research on mineralogic and ore deposits related topics (see publication list). Taught junior-level laboratories in powder diffraction and graduate-level laboratories in single crystal and powder diffraction.

Teaching assistant, VA Governor's School for the Gifted, VPI & SU: Summers 1983-1989
Designed, developed and taught a series of geoscience laboratories for gifted high school students in month long summer enrichment programs.

VA Mining and Minerals Resource Research Institute Fellow, VPI & SU: 1983-1986
Investigated the chemical and physical properties of minerals in the tetrahedrite series, including the ranges and types of solid-solution substitutions and the effects of composition on the unit-cell dimensions. Developed a model to predict the rotation of the crystal structure framework as a function of the composition. Produced and maintained a microcomputer database of published chemical and physical data on tetrahedrite.

Teaching assistant, VPI & SU: 1981-1983
Taught introductory-level laboratories in historical geology, senior-level laboratories in economic geology and supervised the teaching of introductory-level laboratories in resources geology.

Awards and Honors

Nominee, Outstanding Teacher, College of Arts and Sciences, Appalachian State University, 1996, 1998
Oak Ridge Associated Universities Research Excellence Award, 1994
Oak Ridge Associated Universities Post-Doctoral Fellowship, 1992, 1993, 1994.
Mining and Minerals Resource Research Institute Fellowship, 1983, 1984, 1985, 1986
R.M. Spieker Field Geology Scholarship, 1980.

Professional Affiliations

American Crystallographic Association
Mineralogical Association of Canada
Mineralogical Society of America
National Center for Science Education
Society of Economic Geologists

References

Dr. J. Donald Rimstidt (540) 231-6589
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Department of Geological Sciences
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Blacksburg, VA 24061

Dr. Steven W. Lenhart (540) 831-5257
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Department of Geology
Radford University
Radford, VA 24142

Dr. Loren A. Raymond (828) 262-2749
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Publications

(* undergraduate student co-author)

Books, book chapters, or edited compilations:

Johnson, N.E., Craig, J.R. and Rimstidt, J.D. *Vein Copper Mineralization of the Virgilina District,Virginia and North Carolina.* Contributions to Virginia Geology VI, (N.H.Evans, editor) Virginia Division of Mineral Resources Publication 88 (1989), 1-16.

Papers in refereed journals:

Callahan, J.E., Bream, B.R., **Johnson, N.E.** and Stepp, J.D. *Geochemistry Of Megacrystic Zircons With Distinctive Fluorescent Zircon Populations From The Freeman Mine, Zirconia, North Carolina.* Southeastern Geology 45 (2007) 1-13.

Gunter, M.E., **Johnson, N.E.**, Knowles, C.R. and Solie, D.N. *Optical, X-ray and Chemical Analysis of 4 Eudialytes from Alaska.* Mineralogical Magazine 57 (1993), 743-746.

Johnson, N.E. *X-ray Powder Data for Synthetic Varieties of Tetrahedrite.* Powder Diffraction 6 (1991), 43-47.

Johnson, N.E. *X-ray Diffraction Simulation Using Laser Pointers and Printers.* Journal of Geological Education 49 (2001), 346-350.

Johnson, N.E., Craig, J.R. and Rimstidt, J.D. *Compositional Trends in Tetrahedrite.* Canadian Mineralogist 24 (1986), 385-397.

Johnson, N.E., Craig, J.R. and Rimstidt, J.D. *Effects of Substitutions on the Cell Dimension of Tetrahedrite.* Canadian Mineralogist 25 (1987), 237-244.

Johnson, N.E., Craig, J.R. and Rimstidt, J.D. *Crystal Chemistry of Tetrahedrite.* American Mineralogist 73 (1988), 389-397.

Johnson, N.E., Eldredge, P.A., Pollack, S.S., Frommell, E.A. *Powder Diffraction Analysis of an Interstratified Marcasite/Pyrite Structure.* Powder Diffraction 10 (1995), 198-203.

Johnson, N.E., Gunter, M.E., Solie, D.N.and Knowles, C.R. *X-ray and Optical Data for a Rare Earth-Poor Eudialyte from the North–Central Alaska Range.* Powder Diffraction 5 (1990), 89-92.

Abstracts:

Callahan, J.E., Stepp, J.*, **Johnson, N.E.**, and Bream, B.R.. *Fluorescence and Lack Thereof in Zircons from the Freeman Zircon Mine, Zirconia District, North Carolina.* Geological Society of America Program Abstracts Vol. 34, No. 2 (2002), A22.

Cartee, S.L.*, Cowan, E.A., **Johnson, N.E.**, Powell, R.D. and Cavin, B.O. *Comparison of Mineralogy, Magnetic Susceptibility and Source Area of Glacimarine Sediment, Yakutat Bay, Southern Alaska.* Geological Society of America Program Abstracts Vol. 28, No. 7 (1996), A58.

Johnson, N.E., *Application of a Personal Computer Relational Database to a Mineral Specific Dataset: Tetrahedrite.* 28th International Geological Congress Abstracts 2 (1989), 134.

Johnson, N.E., *Optical Transforms Redux: Creating Diffraction Gratings on a Laser Printer for X-Ray Diffraction Simulation.* Geological Society of America Program Abstracts Vol. 31, No. 7 (1999), A227.

Johnson, N.E., Craig, J.R. and Rimstidt, J.D. *Systematics of Tetrahedrite-Series Compositional Relations.* Geological Society of America Program Abstracts Vol. 17, No. 7 (1985), 620.

Johnson, N.E., Craig, J.R. and Rimstidt, J.D. *Structural Systematics of Tetrahedrite-Series Minerals.* Fourteenth International Mineralogical Association Program Abstracts (1986), 135-136.

Johnson, N.E., Eldredge, P.A., Frommel, E.A., Huggins, F.E. and Pollack, S.S. *A Catalyst Precursor With a New FeS_2 Structure.* Seventh International Conference on Coal Science (1993), 341-344.

Johnson, N.E., Groen, J.C. and Craig, J.R. *Ore Mineral Textures and Intergrowths from the Virgilina District, Virginia and North Carolina.* Geological Society of America Program Abstracts Vol. 22, No. 7 (1990), A136.

Johnson, N.E. and Howard, B.H. *XRD Study of Cation Distribution Variations in Low Temperature Disordered Spinels.* Transactions, American Geophysical Union (EOS), Spring Meeting, (1995), S154-S155.

Johnson, N.E., and Howard, B.H. *Structural Aspects of Alkali-ion Substitution and Exchange in Synthetic Cobaltian Kambaldaite Analogues.* Geological Society of America Program Abstracts Vol. 27, No. 6 (1995), A441.

Johnson, N.E. and Rimstidt, J.D. *Supergene Development of Widmanstätten Textures in Bornite: an Example of Exsolution via Oxidative Leaching.* V. M. Goldschmidt Conference Program Abstracts 5 (1992), A55.

Johnson, N.E., Rittenberry, D.*, Wisdom, S.*, and Parker, F.* *Reconnaissance Monitoring Of Acid Mine Drainage From An Incompletely Remediated Site At Ore Knob, North Carolina.* Geological Society of America Program Abstracts Vol. 35, No. 6 (2003), 239.

Knight, C.L., **Johnson, N.E.** and Bodnar, R.J. *Natural Zeolites: Identification, Structural and Chemical Information Provided by the Laser Raman Microprobe.* Geological Society of America Program Abstracts Vol. 21, No. 6 (1989), A118.