GEORGE F. VANDEGRIFT

630 252 4513 • vandegrift@anl.gov

EDUCATION AND TRAINING

Lowell Technological Institute	Chemistry	B.S. 1967
Iowa State University	Inorganic Chemistry	Ph.D. 1972

PROFESSIONAL EXPERIENCE

Distinguished Fellow Nuclear Engineering Division/ANL	2015-present
Distinguished Fellow Chemical Sciences and Engineering Division/ANL	2007-2014
Senior Technical Advisor Chemical Engineering Division/ ANL	2005–2007
Associate Division Director for Nuclear Programs, Chemical Engineering Division/ANL	2003–2005
Head Process Chemistry and Engineering Department Chemical Technology Division/ANL	2002–2003
Senior Scientist	1994–2007
Head Separation Science and Technology Section Chemical Technology Division/ANL	1989–2002
Argonne Principal Investigator Conversion of Mo-99 Production from LEU to HEU under the Reduced Enrichment for Research and Test Reactors (RERTR, later, the Global Threat Reduction Initiative (GTRI), and later still the Materials Management and Minimization (M ³) Programs	1986-present
Leader Separation Science and Technology Group Chemical Technology Division/ANL	1985–1989
Chemist, Chemical Technology Division/ANL	1980–1985
Assistant Chemist Chemistry Division/ANL	1975–1980
Post-Doctoral Fellow Chemistry Division/ANL	1974-1975

Research Associate, University of Illinois, Chicago

PUBLICATIONS

Vandegrift, G. F., Production of fission-product ⁹⁹Mo using high-and low-enriched uranium targets, Proceedings of the International HANARO Symposium 2010, Daejeon, Korea, Nov. 1-2, 2010.

Chemerisov, S. D. Gelis, A. V. Tkac, P. Bowers, D. L. Makarashvili, V. Bakel, A. J. Harvey, J. T. Dale, G. E. and Vandegrift, G. F., Argonne activities for the production of Mo-99 using LINAC Irradiation of Mo-100, Proceedings of the 32nd International Meeting on Reduced Enrichment for Research and Test Reactors (RERTR 2010), Lisbon, Portugal, Oct. 10-14, 2010.

Jerden, J. L. Chemerisov, S. Hebden, A. Vandegrift, G. F. Wiedmeyer, S., Development of a productionscale dissolver for nitric-acid dissolution of LEU foils, Proceedings of the 32nd International Meeting on Reduced Enrichment for Research and Test Reactors (RERTR 2010), Lisbon, Portugal, Oct. 10-14, 2010.

Ziegler, A. J. Krahn, E. O. Stepinski, D. S. Tkac, P. Hebden, A. S. Jerden, J. L. Chemerisov, S. Makarashvili, V. Gelis, A. Bakel, A. Vandegrift, G. F., Development activities for Mo-99 production using an aqueous homogeneous reactor, Proceedings of the 32nd International Meeting on Reduced Enrichment for Research and Test Reactors (RERTR 2010), Lisbon, Portugal, Oct. 10-14, 2010.

Stepinski, D. C. Ziegler, A. J. Jerden, J. L Fortner, J. A. Quigley, K. J. Mertz, C. J. Gelis, A. V. Chemerisov, S. D. Bakel, A. J. Vandegrift, G. F., Sorbent selection for ⁹⁹Mo recovery from irradiated aqueous homogeneous reactor fuel solutions, Proceedings of the 31st International Meeting on Reduced Enrichment for Research and Test Reactors (RERTR 2009), Beijing, China, Nov. 1-5, 2009.

Vandegrift, G. F. Stepinski, D. Ziegler, A. Krahn, E. Fortner, J. Quigley, K. Mertz, C. Gelis, A. Chemerisov, S. Jerden, J. L. Hebden, A. S. Bakel, A. J., Overview of Argonne Progress in developing LEU-based processes for the production of ⁹⁹Mo, Proceedings of the 31st International Meeting on Reduced Enrichment for Research and Test Reactors (RERTR 2009), Beijing, China, Nov. 1-5, 2009.

Gelis, A. V. Bakel, A. Jerden, J. Precek, M. Quigley, K. Wiedmeyer, S. Vandegrift, G., Alternative methods for digesting irradiated LEU foil targets to produce ⁹⁹Mo in alkaline media, Proceedings of the 31st International Meeting on Reduced Enrichment for Research and Test Reactors (RERTR 2009), Beijing, China, Nov. 1-5, 2009.

Bakel, A. Guelis, A Hafenrichter, L. Hebden, A. Jerden, J. Leyva, A. Quigley, K. Stepinski, D. Vandegrift, G. F., Status report on technical progress for LEU-based ⁹⁹Mo production at Argonne National Laboratory, Proceedings of the RERTR-2007 International Meeting on Reduced Enrichment for Research and Test Reactors, Prague, Czech Republic, Sep. 23-27, 2007.

Vandegrift, G. F. Bakel, A. Chemerisov, S. Fortner, J. Gelis, A. Hebden, A. Jerden, J. Levya, A. Stepinski, D. Wiencek, T. Ziegler, A., Status of Mo-99 production using low-enriched uranium, Proceedings of the 50th Institute of Nuclear Materials Management (INMM) Annual Meeting, Tucson, AZ, July 12-16, 2009.

Vandegrift, G. F. and Fei, E. T., Mo-99 Production Using LEU, Proceedings of the Institute of Nuclear Materials Management 48th Annual Meeting, Tucson, AZ, July 8-12, 2007.

SYNERGISTIC ACTIVITIES

More than 400 journal articles, book chapters, reports, and patents in basic chemistry and applied topics in separation science and technology with emphasis on chemical processing, solvent extraction; aqueous- phase kinetics and mechanisms; interfacial chemistry; computer modeling; hazardous- and radioactive-waste treatment, disposal, and migration; nuclear-fuel reprocessing; and production of Mo-99 from low-enriched uranium.