

**RESUME**  
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**Education**

1974	Ph.D. (Chemistry) Thesis:  Advisors:	Stanford University, Stanford, CA Photodetachment and Photodissociation of Negative Molecular Ions in the Gas Phase." Prof. J. I. Brauman, L. M. Stephenson, and J. D. Baldeschwieler.
1970	B.S. (Chemistry) Thesis: Advisors:	California Institute of Technology, Pasadena, CA. "Photoionization of Ethylene Oxide." (Prof. D. Holtz, J. L. Beauchamp and R. Bergman)

**Professional Experience**Lawrence Livermore National Laboratory (1974-present)

2008-	PAD Staff, Weapons and Complex Integration. Support for STRATCOM Strategic Advisory Group, Science and Technology Panel. Staff support for national conferences (i.e., Strategic Weapons in the 21 <sup>st</sup> Century (Washington DC), STRATCOM CTBT Confidence Conference (Omaha, NE)) and treaties / nuclear posture review.
2006-2008	IPA Technical advisor, AF/A3S, Directory of Strategic Security (Pentagon) (later Directorate of Nuclear Operations, Plans and Requirements). Provided technical input on RRW-2 (air delivered nuclear weapon), WAFAS (WR1 Air Force Adaptability Study), Next Generation Fuze for Minuteman III / D5 weapon systems, Stockpile Surveillance Programs, and various life extension programs. Developed Air Force – UK collaborative efforts in fuze and RVs under the Enhanced Cooperation Program. Drafted language for the subsequent Statutory Determination that permitted sharing of weapons data with the UK. Assisted with OSD Policy (SOLIC – Strike Policy and Integration) on force structure and establishment of Strategic Analysis Group. Member of Nuclear Detection Working Group (Center for the Study of the Presidency), participated in analysis and support of DHS/DTRA efforts in radiation detection and systems analysis to prevent nuclear terrorism.
2004-2006	P Division Leader, Proliferation and Terrorism Prevention Program. Primary responsibility for PTP Program (> 100M\$, >150 FTE): Radiological /

April 2009

Nuclear programs (DHS Rad/Nuc detection, Port Authority NY & NJ, enabling technology R&D, international radiation detection cooperation), Nuclear Materials and Treaties (MPC&A, international safeguards, CWC, NPT/AP), and International Cooperation (nuclear explosion monitoring, regional security, Global Initiatives for Proliferation Prevention, Nuclear Cities Initiative, ISTC/STCU, Brookings – Islamic World collaboration).

- 1997-2004 Principal Deputy Program Leader, Proliferation Prevention and Arms Control Program. Primary responsibility for oversight of MPC&A Program and radiation detection technology efforts. Led Laboratory's nuclear smuggling program (97-99). Developed regional (primarily Middle East and Central Asia) collaborative security projects involving cooperative responses to environmental stresses (97-02). Helped develop DOE Second Line of Defense Program (98-01). Led effort to establish Laboratory-wide Radiation Detection Center (98-03). Technical auditor for ISTC / STCU (00-06). DOE/NA-22 4-month assignment, responsible for developing Port Authority New York & New Jersey test bed for counter-terrorism and homeland security (02-03). Led CWC program, achieving OPCW designated lab status (00-06).
- 1994-1996 Program Leader, Energy, Manufacturing and Transportation Technologies Program. (6M\$) Led successful proposal efforts in industrial sponsored numerical simulation of materials behavior and DOE/EE sponsored fuel cell R&D. Project leader for conversion of municipal solid waste to hydrogen, joint with Texaco via a CRADA.
- 1993-1997 Program Development Office, Chemistry and Materials Science Directorate. Led successful proposal efforts: 1) 2 TRP awards (Technology Reinvestment Program for DoD/ARPA); 2) DOE/OBES/DMS & DCS; 3) JAST (DoD Joint Advanced Strike Technology); 4) FAA. Program development of water desalinization and applications of multilayer technology to materials issues.
- 1988-1993 Division Leader, Chemical Sciences. Technical oversight, Department strategic planning, and personnel administration (180 FTE) for the five technical sections: Energetic Materials, Tritium, Chemical Engineering, Polymers, and Physical Chemistry. 3 LDRD Director's Initiatives. Multiple interactions with government agencies (e.g., Tiger Teams, DOE/DP planning efforts in tritium, materials and high explosives)
- 1983-1988 Group Leader of Advanced Materials for nuclear driven x-ray laser program. Coordination within DOE complex, with selected industrial partners, and interfaced with physics and engineering materials requirements. DOE Weapons Award of Excellence (1987).
- 1982-1983 Team Leader of weapons (B83, W84, W87) projects (organic coatings, silicone cushions)
- 1974-1983 Laboratory scientist (stress chemiluminescence, oil shale chemistry, solar cell kinetics, lasers applications in analytical chemistry, laser glass analysis)

**Publications:**

Over 100 publications 1973-2009 (complete list available on request).

Selected recent publications:

- 1) J. Richardson, "Nuclear Deterrence in the Age of Nonproliferation," LLNL-JRNL-410192 (January 30, 2009)
- 2) J. Richardson, "A New Partner in Enhanced Collaboration: the U.S. Air Force," in *U.S.-UK Nuclear Cooperation After 50 Years*, Center for Strategic and International Studies / Chatham House (July 2008), p.141-148.
- 3) O.O. Gritzay, M. Gnidak, V. Koloty, O. Korol, V. Razbudey, V. Venedyktov, J. Richardson, and K. Sale, "The Neutron Scattering Cross Sections for Natural Carbon in the Energy Range 2-133 keV, UCRL-CONF-222156, 47<sup>th</sup> Annual Meeting of the Institute of Nuclear Materials Management, Nashville, Tennessee (July, 2006)
- 4) J. Richardson, "Improved Technology to Prevent Illicit Trafficking in Nuclear Materials," UCRL-CONF-213961, 5<sup>th</sup> International Conference on Nuclear and Radiation Physics, Almaty, Kazakhstan (September 2005).
- 5) R. Knapp, A. Loshak, B. Yuidashev, V. Petrenko, and J. Richardson, "Uzbekistan Radiation Portal Monitoring System," UCRL-CONF-213002, Institute of Nuclear Materials Management Conference, Phoenix, AZ (July 2005)
- 6) S.Djalilov, R.B. Knapp, A. Loshak, V.D.Petrenko, J. Richardson, and B.S.Yuldashev, "The Pilot Portal Radiation-Monitor System in Uzbekistan," International Workshop on Radiological Sciences and Applications, Vienna, Austria (16-18 March 2005).
- 7) J. Richardson, "Future Technology Challenges in Nonproliferation," UCRL-CONF-206643 (September 2004), Third Eurasian Conference, Nuclear Science and Its Application, Tashkent, Uzbekistan (October 5-8, 2004).
- 8) A. Tompson, R. Maxwell, J. Richardson, W. Abu El Sha'r, J. Rihani, H. El-Naser, K. Al-Hadidi, M. Al-Awamleh, A. Subah, M. Al-Foqaha, O. Abu-Eid, R. Abu Hayyaneh, "Experiential Education in Groundwater Hydrology: Bridging the Technical-Policy-Populace Gap, UCRL-154423 (July 2003).
- 9) J. Richardson, "Technologies for Fissile Material Detection and Prevention of Fissile Material Introduction into International Shipping," UCRL-154692 (July 2003), presented at Atoms for Peace After 50 Years: New Challenges and Opportunities, Saclay, France (July 21-25, 2003)
- 10) A.F.B. Tompson, J. Richardson, R.C. Ragaini, R.B.Knapp, N. Rosenberg, D.K. Smith, and D.Y. Ball, "Science and Technology to Advance Regional Security in the Middle East and Central Asia," UCRL-JC-150576 (October 2002), presented at The International Seminar on Nuclear War and Planetary Emergencies, Erice, Italy, August 18-26, 2002
- 11) D.K.Smith, R.B. Knapp, R.C. Ragaini, J. Richardson, N.D.Rosenberg, and A.F.B. Tompson, "Post Cold-War Solutions to Problems of the Fate and Transport of Contaminants Affecting Water Resources," UCRL-149599 (2002).
- 12) S. Labov, J. Richardson, R. Waldron, and R. Goetzman, "Alternative Signatures for Detecting Fissile Materials," UCRL-ID-139279 (June 2000)
- 13) J. Richardson, "Nuclear Smuggling: The Role of Nuclear Forensics", Proceedings of the Institute of National Security Studies 4th Special Materials Workshop, University of Pittsburg, Pittsburg, PA (July 9, 1997).