

**Stephen M. Lane, PhD**  
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## **A. PROFESSIONAL PREPARATION**

<u>College/University</u>	<u>Major</u>	<u>Degree &amp;Year</u>
San Jose State Univ., San Jose, CA	Physics	BS, 1971
Univ. of California Davis	Applied Science	MS, 1973
Univ. of California Davis	Applied Science	PhD, 1978

## **B. ACADEMIC/PROFESSIONAL APPOINTMENTS**

### Positions and Appointments

2012–present	Adjunct Professor Emeritus, Dept. of Neurological Surgery, UC Davis
2007-2012	Adjunct Professor, Dept. of Neurological Surgery, UC Davis
2002-2012	Chief Scientific Officer & Associate Director, NSF Center for Biophotonics Science and Technology, UC Davis
2005-2007	Adjunct Professor, Dept. of Radiology, UC Davis
2004-2007	Deputy Division Leader, Medical Physics & Biophysics Division, Lawrence Livermore National Laboratory, Univ. of California (LLNL)
1992-2007	Group Leader, Program Leader, Deputy Division Leader, Medical Physics and Biophysics Division, LLNL
2001-2006	Deputy Director for Research, Biosecurity and Nanoscience Laboratory, LLNL
1978-1996	Experimental Physicist, Group Leader, Senior Scientist, Inertial Laser Fusion Program, LLNL
1990-1991	Visiting Scientist and Lecturer, Dept. of Nuclear Engineering, UC Berkeley

### Other Experience and Memberships

2014-present	Member, NSF ERC Site Review Teams, North Carolina A&T State Univ. and Texas A&M Univ.
2012-present	Independent Technical Consultant
2009-present	Scientific Consultant, Tahoe Institute for Rural Health Research
2005-present	ad hoc Reviewer, Australian Research Council
2005-present	ad hoc Reviewer, Biophotonics Advanced Imaging and Sensing for Human Health (BISH) Proposal Review Panel, NSF
2015	ad hoc Reviewer, NSF Science & Technology Center Full Proposal Panel
2004-2013	Member, Scientific Advisory Board, Australian Research Council Centre of Excellence for Coherent X-Ray Science, Univ. of Melbourne
2012	Member, National Research Council Report Review Committee, Optics and Photonics: Essential Technologies for Our Nation, National Research Council
2003-2012	Member, Advisory Committee, McClelland Nuclear Radiation Center, UC Davis
2007-2010	ad hoc Reviewer, Biomedical Imaging Technology Study Section (BMIT), NIH
2009	Member, DOE Report Committee, New Frontiers in Characterizing Biological Systems
2009	ad hoc Reviewer, NCI-NIH Physical Science Oncology Centers
2004-2009	Member, Biotechnology Program Executive Committee, UC Davis Cancer Center
2008	Member, Special Director's Optical Imaging Program Progress Review Committee, NIH/NIBIB
1990-1996	Co-Founder and CEO; Sunol Technologies, Inc., Pleasanton, CA

### Honors

2001	Federal Laboratory Consortium Award, Dept. of Energy
2001	Bright Light White House Award, Dept. of Energy
1994	R&D 100 Award, R&D Magazine
1988	R&D 100 Award, R&D Magazine

### C. PRODUCTS

1. T. Gao, Z.J. Smith, T.Y. Lin, D.C. Holt, **S.M. Lane**, D.L. Matthews, D.M. Dwyre, J.Hood,, S. Wachsmann-Hogui, Smart and fast blood counting of trace volumes of body fluids from various mammalian species using a compact, custom-built microscope cytometer. *Anal. Chem.* 2015, 87, 23, 11854-11862
2. K. Chu, Z.J. Smith, S. Wachsmann-Hogiu, **S.M. Lane**. Super-resolved spatial light interference microscopy. *JOSA A*, 2012, 29, 3, 344-351
3. Z.J. Smith, K. Chu, A.R. Espenson, M. Rahimzadeh, A. Gryshuk, M. Molinaro, D.M. Dwyre, **S.M. Lane**, D. Matthews, S. Wachsmann-Hogiu. Cell phone platform for biomedical device development and education applications. *PLoS One*, 2011.
4. K. Chu, J. Evans, N. Rohringer, S. Hau-Riege, M. Frank, Z.J. Smith, **S.M. Lane**. In-plane rotation classification for coherent X-ray imaging of single biomolecules. *Optics Express*, 2011, 19, 12, 11691-11704
5. J.W. Chan, D.S. Taylor, T. Zwerdling, **S.M. Lane**, K. Ihara, T. Huser, Micro-Raman spectroscopy detects individual neoplastic and normal hematopoietic cells. *Biophysical J.*, 2006, 90, 2, 648-656
6. D.R. Cary, N.P. Zaitseva, K.Gray, K.E. O'Day, C.B. Darrow, **S.M. Lane**, T.A. Peyser, J.H. Satcher, W.P. Van Antwerp, A.J. Nelson, J.G. Reynolds, Rhenium bipyridine complexes for the recognition of glucose. *Inorg. Chem.*, 2002, 41, 6, 1662-1669
7. D. Ress, R.A. Lerche, R.J. Ellis, **S.M. Lane**, K.A. Nugent. Neutron imaging of laser fusion targets. *Science*, 1988, 241, 956-958
8. Larsen J.T., Lane S.M., HYADES-a plasma hydrodynamics code for dense plasma studies. *J. of Quantitative Spectroscopy and Radiative Transfer*, 1994, 51,1-2, 179-186.

### D. SYNERGISTIC ACTIVITIES

1. Initiated and led a collaboration between Lawrence Livermore National Laboratory and MiniMed, Inc. to develop a minimally-invasive fluorescence-based glucose sensor for the treatment of diabetes. This project led to a NIST Advanced Technology Program grant, an NIH/NIDDK grant, 6 issued patents, a federal laboratory award for technology transfer and a DOE Bright Light Award for innovation. Medtronic, Inc., who purchased MiniMed, and LLNL hold the licensing rights.
2. With 3 colleagues, founded and was CEO of a small company, Sunol Technologies, Inc., that successfully developed for DuPont, SmartsShield, a system to minimize the dose to radiopharmacists, consisting of radiation shields containing built-in radiation detectors. Received an R&D 100 award from R&D Magazine for one of the 100 most important inventions of 1994.
3. In 2000 with Dr. Dennis Matthews, organized 30 projects and 60 researchers from 10 institutions to win a 10-year grant to establish the NSF Center for Biophotonics Science and Technology (CBST). For the next 10-years led the science and technology program at CBST consisting ~100 projects, 150 PhD and MD researchers, 67 post-docs, and 125 graduate students.
4. Senior investigator on projects funded by DoE, DoD, DARPA, NIST, NIH, NSF, LLNL, and UC. Also served as co-investigator or institutional partner on SBIR/STTR grants.

### E. COLLABORATORS AND OTHER AFFILIATIONS

Thesis advisor for 11 graduate students.

Supervised 6 postdoctoral researchers.