

## DMITRY BUDKER



### Professional Experience

01/96-present Faculty Scientist, Nuclear Science Division, LBNL  
7/95-6/01 Assistant Professor of Physics, University of California at Berkeley  
7/01-6/05 Associate Professor of Physics, University of California at Berkeley  
7/05-present Professor, Department of Physics, University of California at Berkeley  
6/93-6/95 Postdoctoral Researcher,  
University of California at Berkeley  
4/89-5/93 Graduate Student Research Assistant,  
University of California at Berkeley  
1985-1988 Junior Researcher, Institute of Nuclear Physics,  
Novosibirsk, USSR

### Education

5/1993 Ph.D. in Physics, University of California at Berkeley.  
Thesis advisor - Professor Eugene D. Commins  
6/1985 MS (Diploma with Honors). Novosibirsk State  
University, Novosibirsk, USSR  
1980-1985 Student, Department of Physics, Novosibirsk  
State University, USSR  
1983-1985 Undergraduate Student Researcher in the group  
of Professors L.M. Barkov and M.S. Zolotarev

### Business activities

Co-founder (2010) and Scientist, Rochester Scientific, LLC

Awards • The 1994 American Physical Society Award for Outstanding Doctoral Thesis Research in Atomic, Molecular, or Optical Physics

- 1998-2003 National Science Foundation CAREER Award
- Spring 2002, Distinguished Visiting Lecturer, Old Dominion University
- 2002-2003; 2012-2013 Miller Research Professorship, UC Berkeley
- 2003-2006 NIST Precision Measurement Grant
- 2005 Elected Fellow, American Physical Society
- 2007 R&D 100 Award for Laser Detected Magnetic-Resonance Imaging
- 2009 American Physical Society Outstanding Referee
- 2011-2012 Distinguished Visiting Researcher, Swinburne University, Melbourne, Australia

### Selected

• Book: D. Budker, D. F. Kimball, and D. P. DeMille: **Atomic Physics: Exploration**

### Publications

**Through Problems and Solutions;** [Oxford University Press](#), 2003; 2<sup>nd</sup> Edition, 2008; Russian Edition, 2009

- Book: M. Auzinsh, D. Budker, and S. M. Rochester: **Optically Polarized Atoms: Understanding Light-Atom Interactions;** [Oxford University Press](#), 2010
- D. Budker and M. V. Romalis, Optical Magnetometry, [Nature Physics](#) **3**, 227 - 234 (2007)
- D. Budker, Electrons in a Shell, *Am. J. Phys.* **66**(7), 572 (1998); D. Budker, D. J. Orlando, and V. Yashchuk, Nonlinear Laser Spectroscopy and Magneto-Optics, *Am. J. Phys.* **67**(4), 1 (1999); S. M. Rochester and D. Budker, Atomic polarization visualized, *Am. J. Phys.* **69**(3), (2001); D. Budker, A new spin on magnetometry, *Nature* **422**, 574 (2003)
- D. Budker and J. E. Stalnaker, Magnetoelectric Jones dichroism in atoms [Phys. Rev. Lett.](#), **91**(26), 263901 (2003)
- D. Budker, V. Yashchuk and M. Zolotarev, Ultra-Narrow Features in Magneto-Optical Rotation, [Phys. Rev. Lett.](#) **81**(26), 5788 (1998)
- D. Budker, D. F. Kimball, S. M. Rochester, V. V. Yashchuk, and M. Zolotarev, Sensitive Magnetometry based on Nonlinear Magneto-Optical Rotation, [Phys. Rev. A.](#) **62**(4) (2000)
- D. Budker, D. F. Kimball, S. M. Rochester, and V. V. Yashchuk, Nonlinear Magneto-optical Rotation via Alignment-to-Orientation Conversion, [Phys. Rev. Lett.](#) **85**(10), 2088 (2000)
- D. DeMille, D. Budker, N. Derr, and E. Deveney, Search for Exchange-Antisymmetric Two-Photon States, [Phys. Rev. Lett.](#) **83**(20), 3978 (1999)
- A. Cingoz, A. Lapiere, A.-T. Nguyen, N. Leefer, D. Budker, S. K. Lamoreaux, and J. R. Torgerson, Limit on the Temporal Variation of the Fine-Structure Constant Using Atomic Dysprosium, [Phys. Rev. Lett.](#) **98**, 040801 (2007)
- D. Budker, W. Gawlik, D.F. Kimball, S.M. Rochester, V.V. Yashchuk, A. Weis, Resonant nonlinear magneto-optical effects in atoms, [Rev. Mod. Phys.](#) **74**, 1153 (2002)
- K. Tsigtukin, D. Dounas-Frazer, A. Family, J. E. Stalnaker, V. V. Yashchuk, D. Budker, Observation of a Large Atomic Parity Violation Effect in Ytterbium, [Phys. Rev. Lett.](#) **103**, 071601 (2009)