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## **Employment**

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M. S. Massachusetts Institute of Technology, Electrical Engineering, September 1999

Ph. D. Massachusetts Institute of Technology, Electrical Engineering, May 2003

Postdoc: Los Alamos National Laboratory, Materials Science and Technology, Aug. 2003-Feb. 2006

## **Appointments**

Feb. 2006-present: Technical Staff Member, Center for Integrated Nanotechnologies (CINT), LANL

Nov. 2008-present: Adjunct Assistant Professor, University of New Mexico

June 2009-present: Acting Partner Scientific Leader, Nanophotonics Thrust, CINT, LANL

## **Publications**

1. (invited review paper) R. P. Prasankumar, Prashanth C. Upadhyay, and A. J. Taylor, "Ultrafast carrier dynamics in semiconductor nanowires," *Physica Status Solidi (b)*, 246, 1973 (2009). (selected for the cover) (CINT internal)
2. R. P. Prasankumar, S. G. Choi, S. A. Trugman, S. T. Picraux, and A. J. Taylor, "Ultrafast electron and hole dynamics in germanium nanowires," *Nano Letters* 8, 1619 (2008). (CINT internal)
3. R. P. Prasankumar, R. S. Attaluri, R. D. Averitt, J. Urayama, N. Weisse-Bernstein, P. Rotella, A. Stintz, S. Krishna, and A. J. Taylor, "Ultrafast carrier dynamics in a InAs/InGaAs quantum-dots-in-a-well heterostructure," *Optics Express*, 16, 1165 (2008). (CINT user)
4. D. J. Hilton, R. P. Prasankumar, S. Fourmaux, A. Cavalleri, D. Brassard, M. A. El Khakani, J.-C. Kieffer, A. J. Taylor, and R. D. Averitt, "Enhanced photosusceptibility near  $T_c$  for the light-induced insulator-to-metal phase transition in vanadium dioxide," *Phys. Rev. Lett.* 99, 226401 (2007).
5. (invited review paper) D. J. Hilton\*, R. P. Prasankumar\*, S. A. Trugman, A. J. Taylor, and R. D. Averitt, "On photo-induced melting phenomena in complex materials: Probing quasiparticle dynamics using infrared and far-infrared pulses," *J. Phys. Soc. Jpn.* 75, 011006 (2006). (\*both authors contributed equally to this work)
6. R. P. Prasankumar, H. Okamura, H. Imai, Y. Shimakawa, Y. Kubo, A. J. Taylor, and R. D. Averitt, "Coupled charge-spin dynamics in the magnetoresistive pyrochlore  $Tl_2Mn_2O_7$  probed by ultrafast mid-infrared spectroscopy," *Phys. Rev. Lett.* 95, 267404 (2005).
7. R. P. Prasankumar, A. Scopatz, D. J. Hilton, A. J. Taylor, R. D. Averitt, J. Zide, and A. C. Gossard, "Carrier dynamics in self-assembled ErAs nanoislands embedded in GaAs measured by optical pump-THz probe spectroscopy," *Appl. Phys. Lett.* 86, 201105 (2005). (CINT user)
8. R. P. Prasankumar, Y. Hirakawa, A. M. Kowalewicz Jr., F. X. Kärtner, J. G. Fujimoto, and W. H. Knox, "An extended cavity femtosecond Cr:LiSAF laser pumped by low cost diode lasers," *Opt. Express* 11, 1265 (2003).

9. R. P. Prasankumar, C. Chudoba, J. G. Fujimoto, P. Mak, and M. F. Ruane, "Self-starting mode locking in a Cr:forsterite laser using non epitaxially grown semiconductor-doped silica films," Opt. Lett. 27, 1564 (2002).
10. I. P. Bilinsky, R. P. Prasankumar, and J. G. Fujimoto, "Self-starting mode locking and Kerr-lens mode locking of a Ti:Al<sub>2</sub>O<sub>3</sub> laser by use of semiconductor-doped glass structures," J. Opt. Soc. Am. B 16, 546 (1999).

**Collaborators (last 48 months):** A. J. Taylor, S. T. Picraux, S. Choi, J. F. O'Hara, P. C. Upadhyay, K. M. Dani, J. Lee, D. A. Yarotski, G. Montano, S. Iyer, J. Zhu, S. A. Trugman, J. Hollingsworth, H. Htoon, N. Smith, A. Azad, D. Talbayev, E. Schelter, J. Kiplinger, D. Morris, A. Shreve, D. Dattelbaum (LANL), G. T. Wang, Q. Li, A. J. Fischer, A. Gin, Y.-J. Lee, R. J. Davis, M. T. Lloyd, P. Provencio, A. Voigt, M. B. Sinclair, A. C. Mayer, D. C. Olson, J. W. P. Hsu, W. W. Chow, J. Urayama (Sandia National Laboratories), R. S. Attaluri, P. Rotella, G. von Winckel, A. Stintz, R. Shenoi, N. Weisse-Bernstein, S. Krishna, Z. Ku, A. Neumann, Y. Kuznetsova, S. R. J. Brueck (University of New Mexico), R. D. Averitt (Boston University), W. J. Padilla (Boston College), H. Okamura (Kobe University), S. Saini (City University of New York-Queens College), S. L. Cooper, X. Li (University of Illinois), J. Demsar, T. Dekorsy (University of Konstanz), D. J. Hilton (University of Alabama-Birmingham), C. Jagadish, G. Jolley (Australian National University), J. Davis (University of Swinburne), A. M. Kowalewicz (BAE Systems), S. T. Cundiff (University of Colorado), M. Achermann (University of Massachusetts-Amherst), P. von Loosdrecht (University of Groningen), R. Kaindl (Lawrence Berkeley National Laboratory), J. Gerton, B. Mangum (University of Utah), J. Wang (Iowa State University), J. Zide (University of Delaware), H. Lu, A. C. Gossard (UCSB), D. Basov (UCSD), S. W. Cheong (Rutgers), K. Srinivasan (NIST), S. Zvyagin (Hochfeld-Magnetlabor Dresden), K. V. Kamenev (University of Edinburgh), G. Balakrishnan, D. McK. Paul (University of Warwick), S. Fourmaux, D. Brassard, M. A. El Khakani, J. C. Kieffer (Universite du Quebec), A. Cavalleri (Max Planck Institute), A. Helmy (University of Toronto), N. Engheta (University of Pennsylvania), T. Her (University of North Carolina-Charlotte), W. S. Choi, T. W. Noh (Seoul National University), T. C. Sum (Singapore National University)

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**Thesis Advisor and Postgraduate – Scholar Sponsor:** Prashanth Upadhyay, Keshav Dani, Jinho Lee (LANL) (Total: 3)