

# Curriculum Vitae

**Mark A. Wistey**

## Contact Information

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## Summary

Dr. Wistey joined University of Notre Dame in July, 2009, as an Assistant Professor of Electrical Engineering. Prior to that, he was a postdoctoral scholar at the University of California Santa Barbara where he twice won the ScienceLine award for outstanding K-12 outreach. He also served as a postdoctoral scholar at Arizona State University in 2006. He received his B.S. in Electrical Engineering from Montana State University-Bozeman in 1994, and his M.S. and Ph.D. in Electrical Engineering from Stanford University in 2000 and 2005, respectively.

Dr. Wistey's research generalizes Moore's law by developing new materials for diverse devices, including lasers, solar cells, detectors, biosensors, and THz transistors, all potentially on the same chip. Wistey received the Ross Tucker award for semiconductor materials in 2004 and the outstanding student paper award at the 2003 North American Molecular Beam Epitaxy conference.

Wistey is author or co-author of over 68 peer-reviewed journal articles, 97 conference papers and invited talks, and 2 book chapters. He currently advises three graduate students.

## Education

- 1999-2004 **Stanford University**, Stanford, CA.  
Ph.D. in Electrical Engineering  
Thesis: "Growth of 1.5  $\mu\text{m}$  GaInNAsSb Vertical Cavity Surface Emitting Lasers (VCSELs) by Molecular Beam Epitaxy (MBE)."
- 1997-1999 **Stanford University**, Stanford, CA.  
M. S. in Electrical Engineering
- 1988-1994 **Montana State University**, Bozeman, MT.  
B. S. in Electrical Engineering (major) and Physics (minor), *summa cum laude*,  
University Honors Degree of Highest Distinction.
- 1991-1992 **University of Massachusetts at Amherst**.  
National Student Exchange.

## Honors and Distinctions

UCSB Materials Research Lab ScienceLine Award for K-12 outreach: 2008, 2009.  
Ross N. Tucker Award (IEEE/TMS) for Advancement in Semiconductor Materials, 2004.  
Outstanding Student Paper, North American Molecular Beam Epitaxy Conference, 2003.  
Top 10% on Stanford EE Ph.D. qualifying exam, 1998.  
National Science Foundation Graduate Fellowship, 1997-2000.  
Score of 960 (top 0.2%) on Engineering GRE, 1997.  
Barry Goldwater Scholar, 1990-1993.  
MSU Presidential Scholar, 1989-1993.

## Professional Experience

### *Academic and Professional Appointments*

- 2009- Assistant Professor at the University of Notre Dame, Notre Dame, Indiana.
- 2007–2009 Postdoctoral Research Scholar at University of California, Santa Barbara.
- 2006 Postdoctoral Research Associate at Arizona State University, Tempe, Arizona.

### *Research and Development Activities*

- 2005 Visiting Scholar at Stanford University, Stanford, California.
- 2000-2001 Visiting Researcher at Lawrence Livermore National Laboratory, Livermore, California.
- 1995-1997 Development Engineer at CinnabarMac, Livingston, Montana.
- 1993 Science and Engineering Research Semester student, Lawrence Livermore National Lab, Livermore, California.

## Professional Activities

*Reviewer:*

Applied Physics Letters  
Journal of Applied Physics,  
Journal of Crystal Growth  
Journal of Special Topics in Quantum Electronics  
Journal of Vacuum Science and Technology  
Scripta Materialia

*Panelist:*

National Science Foundation (NSF): 2009, 2011

*Professional Memberships:*

Institute of Electrical and Electronics Engineers (IEEE)  
Electrochemical Society: 2009

**Current Research Assistants**

*Graduate Students (3)*

Mr. William O'Brien (Ph.D., expected May 2014)

Mr. Chad Stephensen (Ph.D., expected May 2015)

Mr. Meng Qi (M.S., expected May 2012)

*Undergraduate Students (2)*

Mr. Kuijun Liang

Mr. Steven Cress

**Courses Taught**

EE 47010/67034 — Alternative Energy Devices and Materials  
New course, Fall 2009. Also: Fall 2010.

EE 60566 — Solid State Devices  
Spring 2010, with lecture notes from Prof. Debdeep Jena

**Courses Developed**

EE 47010/67034 — Alternative Energy Devices and Materials

**Prior Teaching Experience**

2007      University of California-Santa Barbara  
Co-developed and taught "Alternative Energy Materials and Devices."  
Co-taught "Molecular Beam Epitaxy and Heterostructure Devices."

- 1999-2001 Stanford University, Stanford, California.  
Teaching Assistant for four courses.
- 1996-1997 Course Development at CinnabarMac, Livingston, Montana.  
Codeveloped a professional course on Macintosh forensics for law enforcement.
- 1993 Texts and Critics Junior Fellow at Montana State University, Bozeman.  
Co-led the Honors Program's flagship Oxford tutorial.

## Research Funding

### *Submitted Proposals Under Consideration*

1. Co-investigator, Office of Naval Research, \$6,930,981, for "High K and Low K Dielectrics by Atomic Layer Deposition for III-V Devices"

## University Service

### *Department of Electrical Engineering*

- Graduate Committee, 2009-present
- Graduate Admissions Committee, 2009-10.
- Organizer: Solid State Seminar Series

## External Service

### *Community*

- Executive team and re-founding member, Kiwanis Club, Livingston, MT, 1996-7.

## Workshops Attended

### *Kaneb Center for Teaching and Learning, University of Notre Dame*

- New Faculty Teaching Workshop
- Teaching Well By Design

## Invited Lectures

1. "What Moore Missed: Hybrid Integrated Devices -- Is there life after transistors?"
  - Department of Materials Science and Engineering, University of Texas - Dallas, Dallas, TX, March 4, 2009
  - Department of Electrical and Computer Engineering, University of Utah, Salt Lake City, UT, March 13, 2009
  - Department of Electrical Engineering, University of Notre Dame, March 18, 2009

## Patents

Two patents pending.

## **Publications**

Hirsch *h*-index: 18

All publications available at: <http://www.nd.edu/~mwistey/pubs/wistey-pubs.pdf>