

Ryan A. Munden

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PERSONAL DATA:

Born 02 Dec 1978, U.S. citizen

EDUCATION:

Stetson University, Physics, B. S. Honors, Magna Cum Laude 5/01

Yale University, Applied Physics, M. S., 12/03 , M.Phil. 5/05

UNDERGRADUATE ADVISOR: Kevin Riggs (Stetson University)

GRADUATE ADVISOR: Mark A. Reed (Yale University)

EMPLOYMENT and INTERNSHIPS:

Research Assistant (Graduate Student), Yale University, 6/02 – present
Semiconductor Nanowires

DOE ERULF Intern, Oak Ridge National Lab, Fusion Energy Div., summer '01
VASMIR Plasma Thruster

DOE ERULF Intern, Argonne National Lab, Materials Science Div., summer '00
Thin Film High-Tc Superconductors

NSF REU Intern, CREOL at Univ. Central Florida, summer '97
Broadband Dispersion of Photonics Components

SURE grant Intern, Stetson Univ., summer '97
Auger Spectroscopy

HONORS:

1. Two time DOE Energy Research Undergraduate Laboratory Fellowship recipient
2. Marsh W. White Award 1997 –SESAPS/SPS Award Best Undergrad Presentation
3. Sigma Pi Sigma – Undergrad physics honor society
4. Phi Kappa Beta – Undergrad honor society
5. Professional Membership: American Physical Society (APS)

PUBLICATIONS:

1. E. Stern, G. Cheng, E. Cimpoiasu, R. Klie, S. Guthrie, J. Klemic, I. Kretzschmar, E. Steinlauf, D. Turner-Evans, E. Broomfield, J. Hyland, R. Koudelka, T. Boone, M. Young, A. Sanders, R. Munden, T. Lee, D. Routenberg, and M. A. Reed, "Electrical Characterization of Single GaN Nanowires", *Nanotechnology* 16 2941-2953 (December 2005)
2. G. Cheng, A. Kolmakov, Y. Zhang, M. Moskovits, R. Munden, M. A. Reed, G. Wang, D. Moses, and J. Zhang, "Current rectification in a single GaN nanowire with a well-defined p-n junction", *Appl. Phys. Lett.* **83**, 1578 (2003).

3. Guosheng Cheng, Elena Cimpoiasu , Eric Stern , Ryan Munden, Nilay Pradhan, Aric Sanders, and Mark A Reed. “Catalyst-free routine for synthesis of indium nitride nanowires” Conference Proceeding IEEE-NANO 2005.
4. Elena Cimpoiasu, Eric Stern, Guosheng Cheng, Ryan Munden, Aric Sanders, and Mark A. Reed, “Electron mobility study of hot-wall CVD GaN and InN nanowires” Latin American Congress of Surface Science, Brazilian Journal of Physics (BJP) (in press).
5. Guosheng Cheng, Ryan Munden, Ilona Kretzschmar, Aric Sanders, Eric Stern and Mark A Reed. “Microstructure and Nanoelectronics of Single GaN Nanowire with Well-Defined p-n Junction” Conference Proceeding IEEE-NANO 2004.
6. M.R. de Jong, I. Kretzschmar, R.A. Munden, et al. “High-yield process for making metal-molecule-metal junctions on microfabricated chips.” Abstracts of Papers of The American Chemical Society 226: U423-U424 455-POLY Part 2 (Sep 2003).

TEACHING RELATED ACTIVITIES:

1. Teaching Assistant for “Science Fiction and Science Fact”, “Solid Mechanics and Materials Science Lab”, “Intro. to Nanoscience”, “Semiconductor Devices”, “Microelectronic Circuits”
2. Developed webpage “Nanopicture of the Day”, www.nanopicoftheday.org

LANGUAGE RELATED ACTIVITIES:

1. Served Two-year, full-time mission in Mexico City, Mexico (Spanish Speaking) for the LDS Church.
2. 6+ years Spanish interpretation in legal/professional/ecclesiastical situations.
3. Currently serving in leadership of bilingual church congregation.