

Rebecca J. Chacon

Address upon request
Davis, California 95616
jrchacon@ucdavis.edu
<http://www.ece.ucdavis.edu/sse>

Home: (530) xxx-xxxx
Office: (530)xxx-xxxx
Cell (530) xxx-xxxx

Position Desired:

Education:

Ph.D. Materials Science Expected 2007
University of California, Davis
One Shields Avenue
Davis, California 95616

M.S. Materials Science 9/03-3/05
University of California, Davis
“Characterization of Electrochemically Deposited PbTe Thermoelectric Nanowires”

B.S. Physics 1/95-6/97
University of California, Davis

Work Experience:

1. Graduate Student Researcher
University of California, Davis
Davis, Ca. 95616

Research interests are in the characterization of structural and electrical properties of Reticulated Vitreous Carbon as germane to its field emissive properties.

2. Member Engineering Staff 1/99 – 2003
Jet Propulsion Laboratory
Pasadena, California

Device research, fabrication and packaging of III-V semiconductor lasers in the mid to near infrared for use in gas detection and LIDAR. Process development for MEMS based thermopiles for use in MCS space flight mission. Training of new personnel in microdevice fabrication techniques within class 100,000 to class 10 cleanroom area.

3. Associate Engineer 8/97 - 12/98
Research and Development Laboratory
Culver City, California

Development and implementation of a Golay Cell (a MEMS-based thermal IR-detector) for insertion into a non-intrusive insulin monitor. This project was part of a small business technology transfer agreement between RDL and JPL. Responsibilities included procurement of materials, fabrication, testing and characterization of devices.

Work related Skills:

Experience with (but not limited to) the following:

- Photolithographic contact aligners (Karl Suss MJB3 and MA6)
- Photolithographic projection aligner
- Metal evaporation systems (thermal and e-beam)
- PECVD oxide, nitride and oxi-nitride growth.
- Conventional chemical wet bench operations
- Reactive Ion Etch systems.
- Ball Bonding and Wedge Bonding equipment (K&S, Westbond)
- Laser Die Mounting equipment (TOSOK)
- Process Characterization such as ellipsometry and profilometry
- Software design tools such as Autocad and L-edit.
- Transmission Electron Microscope (TEM)

Publications:

1. Y. Qiu, D. Uhl, R. Chacon, R.Q. Yang, "Lasing Characteristics of InAs Quantum-dot lasers on (001) InP substrate" *Applied Physical Letters*, v. 83 n.9, September 1, 2003. pp. 1704-1706
2. D.M. Tratt, K. Mansour, R.T. Menzies, R.J.Chacon, P.D. Maker, R.E. Muller, M.J.Manfra, G.W. Turner. "Progress in Semiconductor Reference Oscillator Development for Coherent Detection Optical Remote Sensing." *Proceedings, Second Annual Earth Science Technology Conference, Pasadena, California. June, 2002 (4pp: no pagination)*
3. M.C. Foote, M. Kenyon, T.R. Krueger, T.A. McCann, R. Chacon, E.W. Jones, M.R. Dickie, J.T.Schofield, D.J. McCleese. "Thermopile Detector Arrays for Space Science Applications" Invited talk at NASA Goddard Thermal Detector Workshop, presented by Dr. Marc Foote
4. Yueming Qiu, Rebecca Chacon, David Uhl, and Rui Yang, "Adding GaAs Monolayers to InAs Quantum-Dot Lasers on (001) InP" *NASA Tech Briefs*, May 2005
5. M.M. Cao, R. J. Chacon, and C. E. Hunt, "A Field Emission Light Source using a Reticulated Vitreous Carbon (RVC) Cathode and Cathodoluminescent Phosphors" *IEEE Transactions on Industrial Applications*. 2006 (submitted).

Other Skills:

Demonstrated fluency, verbal and written, in Spanish.

Scholarships and Awards:

Dr. George Grotefund Scholarship, 1991

JPL- NOVA Award – Section 384, 2002

NASA Graduate Student Research Program (GSRP) fellowship – 2004

References:

Available upon request.