

1. **Name:** John A. Hudak

Academic Rank: Faculty Associate

2. **Degrees:**

BSEE	Wilkes University	1973
------	-------------------	------

3. **UNC-Charlotte (number of years = 22)**

- Faculty Associate and Director of Microelectronics Clean Room and MBE Labs: 1998 - present
- Research Facilities Engineer and Manager of Microelectronics Clean Room: 1994 - 1998

4. **Other related experience:**

- Wafer Fabrication Manager, Solid State Devices, La Mirada, CA, 1992-1994
- Manufacturing and Wafer Fabrication Manager, SEMETEX, Torrance, CA, 1989-1992
- Production Manager and Wafer Fabrication Manager, M/A-COM PHO (Formerly Power Hybrids Inc.), Torrance, CA, 1975-1989
- Product Engineer – RF devices, RCA Solid State, Mountaintop, PA, 1973-1975

5. **Certifications or professional registrations:** none

6. **Current membership in professional organizations:** none

7. **Honors and awards:** none

8. **Institutional and professional service in the last five years:**

- UNC Charlotte - Microelectronics/Optoelectronics and Laboratory / Professional Practice FAIT teams, 2005 - present
- UNC Charlotte - Design/implementation team for PV lab in EPIC room G130, 2011-2013
- UNC Charlotte - EPIC building laboratory design team, 2007 - 2010
- UNC Charlotte - Research and Academic Space Upgrade/Maintenance Need Assessment Committee, 2008-2009

9. **Principal publications of last five years:**

- W. Sitaputra, J. Hudak, and R. Tsu “A Current Modulation in the Gd₂O₃/Si/Gd₂O₃ Quantum Well Structure As a Mean to Monitor Oxygen Vacancies,” AIP Conference Proceedings, Vol. 1598, pp. 146, 2011
- S. M. Bobbio, S. W. Smith, J. Zara, S. Goodwin-Johansson, J. Hudak, T. D. Dubois, H. Leamy, and J. Goodwin, “Microelectromechanical Actuator with Extended Range and

- Enhanced Force – Fabrication, Test, and Application as a Mechanical Scanner,”
Proceedings of SPIE Smart Structures and Materials Conference, Vol. 3673, 1999
- S. M. Bobbio, S.W. Smith, S. Goodwin-Johansson, R. B. Fair, T. D. Dubois, F. M. Tranjan, J. Hudak, R. Gupta, and H. Makki “Integrated Force Arrays: Interface to External Systems,” Proceedings of SPIE Smart Structures and Materials Conference, Vol. 3046, 1997

10. Professional development activities in the last five years:

- **Grant:** Co-PI with Dr. Ray Tsu on Northrop Grumman SiC Superlattice, Phases I through VI, 06/2004 - 12//2010. Total funding in excess of \$5,000,000. Funding enabled UNC-Charlotte purchase and develop an advanced MBE research lab
- **Patent:** US 8,846,506 B2 granted 9-30-2014, Tsu, Sitaputra, and Hudak, “Enhanced Electron Mobility at Interface between GD2O3 (100) and N-Si(100)”
- Participant – UNC-Charlotte Career Center, “Purpose in Life Test (PIL) study linking academic progression/success and career decidedness,” 2010-2012. Engr 1202 class is part of this multi-year study.
- Participant – NSF grant 08-569 (\$1,089,606), “Increasing STEM Enrollment and Retention in the College of Engineering Using a Multi-disciplinary Approach,” 07/2009 - 06/2012. Engr 1202 class is a major part of this grant.