

Donald E. Ackley PhD
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PROFESSIONAL EXPERIENCE

2012-present *Consultant*

Provide technology development, intellectual property, and management expertise to technology, investment, and law firms for projects in optoelectronics, sensors, and equipment.

- Work with investors to assess technology and intellectual property of companies prior to funding or acquisition
- Evaluate client IP and generate new patents to optimize patent portfolios
- Act as an expert witness to law firms and their corporate clients
- Act as interim CEO or COO for early stage companies
- Assist clients in obtaining grant funding and manage technology projects

Some recent projects include:

- Provided IP and technology support for projects in superluminescent LEDs as amplifiers for LIDAR and remote sensing. Generated new IP for single frequency optical devices to specifically find white space in the existing art to avoid royalty payments.
- Managed a team developing organic TFT and photodetector arrays as biosensors.
- Acted as an expert witness in a broad ranging suit before the FTC covering white LEDs.

2004-2011 *Nanotrope Inc., San Diego, CA – Founder and CEO*

Founder and CEO of a nanomaterials company utilizing nanodroplet technology and molecular self-assembly to produce nanoparticles for applications in materials science, health care, and consumer goods.

Newton Sensors Inc., San Mateo, CA - Founder and CTO

Founder and CTO of a seed stage company focused on applying digital wireless sensor networks to consumer markets. Managed prototyping and the intellectual property portfolio, and helped position the product for applications in emerging Asian economies.

Jaco Electronics, Hauppauge, LI – Member of the Board of Directors

Board member for a \$600M distributor of electronics components. Company sold off its distribution business and transformed itself into a value-added supplier of display sub-systems with substantially improved gross profit margins.

2001-2004 *VSK Photonics Inc., Lake Forest, CA - President and CEO*

CEO of an early stage company producing 10 and 40 Gb/s optical components. Company raised \$36M from top tier VCs, corporate venture funds, and lenders. Built management team, constructed semiconductor fabrication facility, and grew staff to 60 people in 18 months. Implemented complete InP OEIC manufacturing capability. Developed business strategies, introduced six products and generated sample revenues in down markets. Led the transition into LED based TOSA modules.

1999-2001 *Redeon, Inc., San Diego, CA - VP Engineering*

Technical and operations responsibility for a start-up developing MEMS microneedle technology for transdermal drug delivery and continuous glucose monitoring. Built team to apply printed circuit board via technology to create microneedle arrays. Successfully procured SBIR funding. Managed IP portfolio and university relationships, guided business development and interfaced with investors.

- 1996-1999 Nanogen, Inc., San Diego, CA - Executive Director, Microelectronics**
Hired to solidify Nanogen's DNA chip and microfluidics technology. Set up external supply chain and internal fabrication capability and transferred the semiconductor and flip-chip packaging technology into production. Developed novel flip-chip fluidic modules. Solicited and managed over \$8MM in government programs. Directed a diverse team of 35 engineers, biologists, and chemists. Supported relationships with potential corporate and technology partners, interfaced with investors and board, and contributed to the investor pitchbook for the IPO.
- 1990-1996 Motorola Photonics Technology Center, Tempe, AZ - Chief Scientist**
Led effort defining and initiating new research programs, and for initiating new relationships with Motorola partners. Developed the vision, IP portfolios, and business relationships for new programs in optical sensors and thin film electronics. Evaluated and managed external programs in organic transistors and OLEDs, and visible lasers.
- Manager, Optoelectronic Device Research Group**
Led multi-million dollar development efforts for vertical cavity surface emitting lasers (VCSELs), microLED virtual displays, and optoelectronic integrated circuits. Developed the first VCSELs and LED display chips at Motorola, which later moved to pilot production. Developed ROSA packaging.
- Prior Experience**
Positions of increasing responsibility at a number of large and development stage companies. The common thread among all the positions was compound semiconductor materials and devices. My teams developed LEDS, LED displays, novel diode lasers, and photodetectors.
- **Epitaxx Incorporated, Princeton NJ** – Procured external funding and managed programs to develop visible LEDs and avalanche photodiodes. Company was successfully sold to Nippon Sheet Glass.
 - **Siemens Corporate Research, Princeton NJ** - Managed team applying MBE to research on the materials science and physics of heterostructures for high speed electronics and photonics. Developed novel tunable LED devices.
 - **Lytel Incorporated, Somerville NJ** - Built engineering team and facilities to develop new optoelectronic materials and components, including lasers, LEDs and photodetectors
 - **RCA Laboratories, Princeton NJ** - Developed new types of phase-locked diode laser arrays, and high-power diode lasers for pumping Nd:YAG solid state lasers.
 - **Hewlett-Packard Laboratories, Palo Alto CA** - Led projects to develop high power AlGaAs injection lasers using MOCVD materials growth.

ACADEMIC APPOINTMENTS:

Adjunct Professor, University of Illinois Department of Electrical Engineering – High-power InGaAs diode lasers
Visiting Scientist, Rutgers University Department of Materials Science and Engineering – Sol gel waveguide chemical sensors

PATENTS: More than 90 issued and pending US patents
PUBLICATIONS: More than 50 journal publications, two book chapters.

EDUCATION:

Ph.D. In Electrical Sciences, Brown University
Dissertation: A study of picosecond relaxations in amorphous semiconductors
M.Sc. in Electrical Sciences, Brown University
Thesis: Optical absorption below the gap in amorphous silicon at high temperatures
Sc. B. in Electrical Engineering, Brown University (Magna cum Laude)