**Kenneth J. Polasko**

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Passionate professional with a proven track record of success in translating research into commercial results. Developed and implemented one of the **first corporate entrepreneurial program, Eureka,** at Motorola resulting in numerous successes including a new $500M business, integrated microwave passives, and a more cost-efficient semiconductor shrink wrap machine. Served as the CTO of a Stanford University startup, which targeted improving athletic performance. Developed a broad range of technical innovation and commercialization expertise including: semiconductor memory, artificial intelligence methods, novel materials, cryptosecurity technologies, medical devices, drug delivery systems and agricultural seed germination and growth technologies. Implemented a competitive grant program to solicit new ideas from the three Arizona public universities to develop innovative solutions to Arizona specific needs and improve work force development efforts.

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**Education**

**Stanford Graduate School of Business**, Stanford, CA

**MBA**

* + - Institutional Venture Partners Fellowship
    - Boise Cascade Corporation Fellowship

**Stanford University**,Stanford, CA

**Ph.D. Electrical Engineering**

**M.S. Materials Science**

* + - Twice selected as the recipient of an IBM Predoctoral Fellowship
    - Initiated the project and developed substrate materials that resulted in the second

**Feynman Prize** in nanotechnology being awarded.

* + - Director of R&D for a Stanford related start-up Psycon Performance Systems.

**University of California**,Santa Barbara, CA

**M.S. Electrical Engineering**

* Professor Herbert Kroemer (2000 Nobel Laureate in Physics), Advisor
* Assembled one of the first molecular beam epitaxy systems.

**University of Pittsburgh**,Pittsburgh, PA

**B.S. Electrical Engineering** with a minor in Physics and Mathematics

* Summa Cum Laude
* University Scholar (top 2%)

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**Professional Experience**

2021 – present **Chief of Research and Technology Commercialization,**

**Arizona Board of Regents,** Phoenix, AZ

• Designed and implemented a competitive research grant program for Arizona State’s three public universities focused on solving specific state issues. Project funded over $34M of Arizona State and community focused research.

• Zimin Institute Executive Board Member.

2020 – present **Stanford Graduate School of Business,**

**Consultant (pro bono),** Palo Alto, CA

• Served as a strategic advisor to bring Silicon Valley like innovation, growth and entrepreneurship to African based companies.

• Projects included: business plan generation, market opportunity analysis and system design to solicit employee generated innovation.

2020 – present **Founder and CEO,**

**IGF Consulting,** Scottsdale, AZ

• Developed business plan for three startup companies developing: UV-C sanitation technology (in the process of being sold to a Fortune 500 company), enhanced growth and seed germination technology for agricultural markets and a novel drug delivery device to treat sinusitis.

• Conceived, designed, implemented and published an innovative, licensing revenue modeling tool to estimate high-risk/reward portfolio income and expand scenario planning capabilities for early-stage investors and academic technology transfer offices.

2012 – 2020 **Executive Director and Vice President of Business Development,**

**Arizona Technology Enterprises,** Scottsdale, AZ

• Licensed digital-drop PCR technology to startup company, Dropworks,

acquired 4-years later by Bio-Rad Laboratory for $120M.

• Licensed a large patent portfolio of nonvolatile semiconductor memory

technologies to BRIDG, one of the most recent US based foundries.

• Increased faculty engagement: 56% of engineering faculty submitted an invention disclosure and 42% submitted multiple invention disclosures.

• Conceived and designed a novel, patent prosecution expense modeling tool to predict future portfolio expenses and expand scenario planning capabilities.

• Arizona State University ranked No. 10 worldwide for U.S patents awarded.

• Key witness for a $40M license dispute. Worked closely with outside counsel for two years. Resulting in zero liability.

• Advisory Board Member for SciHub, a unique, technology development, generator lab focused on developing commercial products, led by

Professor Frank Wilczek (2004 Nobel Laureate in Physics).

• Provided strategy consulting services for: the University of Connecticut,

Virginia Tech’s Innovation Campus, University of Hawaii, University of

Tulsa and Northern Arizona University.

• Reviewed and made recommendations for commercialization plans for the 2015 Joint Warfighter Medical Research Program.

• Fulton Engineering Entrepreneurial Professor Selection and Judging Committee Member.

• ERC Innovation Ecosystem Advisory Council Member for Nanotechnology-Enabled Water Treatment.

• Fulton Engineering Industrial Engagement Catalyst Member.

2009 – 2020 **Graduate** **Faculty,**

**Physics Department, Arizona State University,** Tempe, AZ

• Investigator for an $800,000 ARPA-E Award to develop diamond electronic devices.

* Advisory Board Chair for ASU’s Professional Science Master’s in Nanoscience.

• Faculty advisor for more than 20-graduate students.

• Taught a graduate level course in Intellectual Property Management.

2009 – 2012 **Senior** **Vice President of Business Development,**

**Arizona Technology Enterprises,** Scottsdale, AZ

• Doubled deal flow.

• Facilitated over $8M in sponsored research funding.

• Built and utilized a financial model to predict and manage patenting expenses.

2008 – 2009 **Vice President of Business Development, Physical Sciences,**

**Arizona Technology Enterprises,** Scottsdale, AZ

• Developed and implemented a proactive marketing strategy to bridge the

gap between industry/investors and academia.

2005 – 2008 **Director of Business Development and Industry Sponsored Research,**

**UCLA,** Los Angeles, CA

• Led the planning, intellectual property licensing, and negotiating process

for three nano start-ups originating from UCLA's California NanoSystems Institute: NanoH2O (acquired by LG Chem for $200M), AutoESL Technologies (acquired by Xilinx for $20M), and Silvus Technologies (recently won a $950M military contract).

• Led the team responsible for managing and negotiating over 300 contracts

worth ~$37 million/yr of industry sponsored research.

• Conducted patent portfolio valuation of a major Fortune 500 for a potential third-party purchase.

• Managed Sir Fraser Stoddart’s (2016 Nobel Prize in Chemistry) patent portfolio.

• Lecturer in Electrical Engineering Department.

2006 – 2007 **Consultant,**

**New Mexico Technology and Research Collaboration**, Santa Fe, NM

• Evaluated and prioritized 15 start-up proposals for funding.

2003 – 2005 **Business Development Officer,**

**Office of Intellectual Property Administration, UCLA,** Los Angeles, CA

• Completed one of the largest license deals in UCLA history. Licensed over 50 patents and patent applications, which generated over $1,000,000 in cash flow.

• Facilitated a 70% increase in invention disclosures and an 80% increase in license revenue.

• Led the technology commercialization process including: facilitating faculty invention disclosures, patent evaluation, marketing strategy, negotiation, deal closure and license compliance for physical sciences.

• Recruited and facilitated a major Japanese Corporation, ALPS, joining the Electrical Engineering Department Affiliates' Program.

1999 – 2003 **Chief of Staff,**

**Motorola, DigitalDNATM R&D Laboratories,** Tempe, AZ

• Led the corporate development of a radio frequency switch spin-out strategy.

* Pitched the business plan to venture capital which resulted in funding being offered.
* Developed a process to discover, evaluate and facilitate technology licensing possibilities within the DigitalDNA™ R&D Labs. The effort resulted in evaluating over 90 projects and discovering 5-new licensing opportunities.

1991 - 1999 **Director of Technology and Quality**,

**Motorola, Distribution Business Unit,** Phoenix, AZ

• Conducted process definition and implementation of an internal and

external R&D benchmarking methodology. Successfully led teams that benchmarked best-in-class R&D methodologies in the electronics industry: Lucent, Infineon, DuPont, STMicroelectronics, Honeywell and Sony. The benchmarking results were used to drive R&D strategy, metrics, program management and portfolio selection.

• Led the Customer Loyalty process definition, implementation, analysis and improvement proposal.

• Led a team responsible for leveraging the QS9000 international quality standard for the Semiconductor Products Sector's Distribution Business Unit. The quality system was designed to drive business performance through compliance with the QS9000 standard. Results from the first external audit by Lloyd’s Register Quality Assurance resulted in a perfect score.

**Manufacturing** **Manager, Advanced Custom Technologies Semiconductor**

**Pilot Line Motorola, Semiconductor Products Sector,** Mesa, AZ

• Led a team of 120 R&D professionals (5 shifts and 18,000 sq. ft. of lab space) which included: device designers, process designers, operators, equipment maintenance, facilities, training, and document control. The team achieved record cycle time metrics.

• The team manufactured advanced silicon integrated circuits.

**Director, Research and Development, Nippon Motorola Ltd.,**

**Semiconductor Products Division,** Tokyo, Japan

• Led a team of 32 R&D professionals based in Sendai and Aizu, Japan. Reorganized the R&D team and developed a 5-year plan to leverage the regional strength for the Japanese market.

* **Smart Pressure Sensor**

Delivered the first monolithic Smart Pressure Sensor, which included a microcontroller, analog circuitry, pressure sensor and package to Nippon Motorola.

* **Advanced Manufacturing**

Initiated programs to monitor and leverage key manufacturing developments in Japan.

* **External Research and Development**

Initiated programs to enhance and leverage Motorola’s interaction with government agencies and local universities.

**Manager, Technology Transfer and Protection**

**Motorola, Semiconductor Products Sector,** Phoenix, AZ

• Led a diverse team of 56 professionals based in Phoenix, Arizona and Austin, Texas with an annual budget of $7.8M. Responsibilities included:

**The Eureka Fund** (An innovative "microventuring/intrapreneurial" program available to all 40,000 Semiconductor Sector employees.)

* Designed and implemented **The Eureka Fund** program resulting in the commercialization of three new technologies: silicon integrated circuit Cu inductors for RF, integrated microwave passives (now a $500M business), and a shrink wrap machine for final manufacturing that resulted in $500,000 worth of materials savings, a 10X reduction in scrap and a 56% reduction in required floor space per machine.
* Extended and adapted **The Eureka Fund** program for Japan and Europe.
* **The Eureka Fund** has been adapted and sponsored by Motorola Corporate to teach over 200 students in Schaumburg, IL; Phoenix, AZ; and Austin, TX, the basics of team-oriented innovation.

**Direct Wafer Bonding**

* Successfully led a manufacturing and development team in a turn-around business opportunity.
* Implemented a strategy that within 9 months reduced wafer cost by 10X, increased throughput by 2.5X and transferred the technology to manufacturing.

**Patent Engineering and Administration**

* Led a group of 12-patent engineers that prosecuted ~40% of the Semiconductor Products Sectors' U.S. patent filings.
* Responsible for implementing joint programs with Corporate Intellectual Property to reduce patent backlogs and prosecution cycle time.
* Responsible for all patent review committees and patent awards.

**University Research and Development**

* + - * + Responsible for funding decisions and maximizing the value from Motorola funded university research, affiliate programs, and the Semiconductor Research Consortium.
        + Responsible for the marketing and sales of all Semiconductor Products Sector's final products to educational institutions in the United States and Canada.
        + Served as Motorola's representative on Stanford University's Executive Advisory Board for the Center for Integrated Systems.
        + Served as Motorola's representative on the Executive Technical Advisory Board for the Semiconductor Research Corporation's Quality Subcommittee.
* Member of Motorola's MIT Media Lab Steering Committee.
* Member of Motorola's Berkeley’s Sensor Steering Committee.
* Member of ASU’s Engineering Advisory Board.

1990 – 1991 **Consultant,**

**Nikon Precision Incorporated,** Belmont, CA

• Assessed the viability of a competitors’ alignment systems for 0.25 micrometer semiconductor production.

* + - Reviewed artificial intelligence options for implementation in future semiconductor lithography systems.

1989 - 1990 **Consultant,**

**GE Corporate Research & Development Center,** Schenectady, NY

• Formulated models and simulated evaporation of metal foam.

1984 - 1989 **Research Staff Member,**

**GE Corporate Research & Development Center,** Schenectady, NY

**Digital X-Ray Imaging**

• One of a four-member team that developed and demonstrated the technical feasibility of fabricating large area (16 by 16 sq. in.), amorphous silicon detectors to replace medical imaging x-ray film.

• GE Healthcare has commercialized this digital x-ray imaging technology for applications, such as full-field digital mammography, digital radiography and all-digital cardiology. Some industry observers have hailed it as the most significant breakthrough in x-ray imaging in the last 35 years.

• Developed, implemented, and patented a manufacturable, low-leakage current, photodiode.

**Very Large-Scale Silicon Integrated Circuit Process Development**

• Committee member responsible for the evaluation and integration of RCA's Research Laboratory with GE's Research Laboratory.

• Initiated, planned, and implemented an excimer laser research program with a major European semiconductor manufacturing company, Leitz-IMS.

**Submicrometer Integrated Circuit Program**

• Developed theory and simulation tools used to increase sales of GE’s Contrast Enhancing Materials for photolithography applications.

**Recent Presentations, Publications and Courses**

• K. Polasko, P. Ponce, and A. Molina,“An Income Model Using Historical Data,

Power-Law Distributions and Monte Carlo Method for University Technology

Transfer Offices”, Future Internet 2021, 13(5).

• K. Polasko, “Modeling Technology Transfer Income Reveals Significance of IP

Portfolio Selection”, Technology Transfer Tactics, Volume 14, Number 12,

December 2020, p. 187.

• K. Polasko, “Academic Technology Transfer Expense, Income and Efficiency”,

Russian Science Technology and Education Conference, Phoenix, AZ, October

12-16, 2020.

• K. Polasko, “Fundamentals and Challenges for Technology Commercialization”,

NSF Research Traineeship (NRT) program Tempe, AZ, November 18, 2019.

• K. Polasko, “Working with Tech Transfer Offices on Battery IP”, National

Alliance for Advanced Transportation Batteries IP Workshop, Phoenix, AZ,

March 12, 2019.

• K. Polasko, “ASU Startups: Business Structure and Relationships”, SciApp –

Science, the Arts & Possibilities in Perception, Tempe, AZ, March 6, 2019.

• P. Ponce, K. Polasko and A. Molina,“Open Innovation Laboratory in Electrical

Energy Education Based on the Knowledge Economy”, International Journal of

Electrical Engineering Education, 2019.

• P. Ponce, A. Molina and K. Polasko,“Product Design Based on Smart, Sensing

and Sustainable Features”, 9th IFAC Conference on Manufacturing Modelling,

Management and Control Submission, Number 61, 2018.

• P. Ponce, K. Polasko and A. Molina,“Neuro-Model for Improving University-

Industry Collaboration and Intellectual Property”, Handbook of Research on

Strategic Innovation Management for Improved Competitive Advantage, IGI

Global, Chapter 10, 2018.

# • K. Polasko, “R&D Administration within Large Organizations”, School for the

# Future of Innovation in Society, Spring, 2018; Tempe, Arizona.

# • K. Polasko, “R&D Administration within Large Organizations”, School for the

# Future of Innovation in Society, Spring, 2017; Tempe, Arizona.

• P. Ponce, K. Polasko and A. Molina,“End User Perceptions Toward Smart Grid

Technology: Acceptance Adoption, Risk, and Trust”, Renewable and Sustainable

Energy Reviews, Volume 60, 2016.

• P. Ponce, K. Polasko and A. Molina,“Open Innovation Laboratory in Electrical

Energy Education Based on the Knowledge Economy”, Journal of Science

Education and Technology, Volume 60, 2016.

# • K. Polasko, “Where Are The ‘Net’ Jobs” Annual Meeting of the APS Four

# Corners Section, Volume 60, Number 11, October 16-17, 2015; Tempe, Arizona.

• P. Ponce, A. Molina and K. Polasko,“Technology Transfer Motivation Analysis

Based on Fuzzy Type 2 Signal Detection Theory”, AI & Society, April 18, 2015.

• P. Ponce, A. Molina, K. Polasko and M. Ramirez, (2016)“Intellectual Property

Basic Manual for Engineering Researchers in Universities”: Benthan Science

Publisher, Ltd.

• P. Ponce, A. Molina and K. Polasko,“Efficient Operation in University

Technology Transfer”, International Journal of Advanced Research in

Computer Science and Software Engineering, Volume 3, Issue 10,

October 25, 2013.

• K. Polasko, “Innovation and IP Management”, ASU’s Professional Science Masters in

Nanoscience (NAN 506), Phoenix, AZ, Summer Quarter 2013.

• K. Polasko, “Innovation and IP Management”, ASU’s Professional Science Masters in Nanoscience (NAN 506), Phoenix, AZ, Summer Quarter 2012.

• K. Polasko, “Commercializing Academic Innovations”, Science Policy for Scientists

and Engineers (CHM 501), Phoenix, AZ, January 25, 2012.

• K. Polasko, “Innovation and IP Management”, ASU’s Professional Science Masters in

Nanoscience (NAN 506), Phoenix, AZ, Summer Quarter 2011.

• K. Polasko, “Contracting with Industry: Bridging the Gap”, National Council of

University Research Administrators, Denver, CO, April 3-6, 2011.

• K. Polasko, “Entrepreneurship and Intellectual Property”, Industrial Engineering

(IEE594), Phoenix, AZ, Fall Semester 2010.

• K. Polasko, “Innovation and IP Management”, ASU’s Professional Science Masters in

Nanoscience (NAN 506), Phoenix, AZ, Summer Quarter 2010.

• K. Polasko, “Exploring the Technology Transfer Profile in Brazil and the United

States – Case Study: Energy Efficiency and Renewables”, 2009 US-Brazil Innovation

Learning Laboratory 3, Sao Paulo, Brazil, July 13-15, 2009.

• K. Polasko, “Innovation and IP Management”, ASU’s Professional Science Masters in

Nanoscience (NAN 506), Phoenix, AZ, Summer Quarter 2009.

• K. Polasko, “A Novel Light Emitting Diode (LED) Substrate”, ASU Technology

Forum, Phoenix, AZ, February 13, 2009.

• K. Polasko, “ASU’s Physical Science and Energy IP Portfolio and Academic

Technology Commercialization”, Arizona’s Institute for Renewable Energy, Tempe, AZ, November 19, 2008.

• K. Polasko, “ASU’s Solar Intellectual Property Portfolio”, Solar Energy Industries Association Summit, Phoenix, AZ, October 29, 2008.

• K. Polasko, “From Concept to Product”, UCLA’s NSF Interdisciplinary Graduate

Education and Research Training Program (Chem 283), Los Angeles, CA, Winter and Spring

Quarter 2008.

• K. Polasko, “Academic Technology Transfer”, 1st Tohoku University Future Innovation Forum, Stanford, CA, April 27, 2007.

• K. Polasko, “Technology Commercialization”, UCLA Mechanical Product Design Course (MEA162), Los Angeles, CA, Winter Quarter 2007.

• K. Polasko, “Postdoc Entrepreneurship”, UCLA University-based Start-up Development Workshop, Los Angeles, CA, Spring Quarter 2006.

• K. Polasko, “Nurturing Nanotech”, Arizona's First Annual Nanotechnology Symposium, Phoenix, AZ, March 16, 2006.

• K. Polasko, "It Takes Two to Tango: Building Successful Alliances with Universities",

Larta Institute's Third Annual Project T2 Conference, Los Angeles, CA, 2005.

• K. Polasko, "Commercialization Issues for Sol-Gel Materials and Processes", 13th International Workshop on Sol-Gel Science and Technology, Los Angeles, CA,

August 21-26, 2005.

• K. Polasko, "Investigation of High-Value UCLA Patents", Innovation Matters,

Austin, TX, February 21, 2005, Vol. 3, Issue 4.

• K. Polasko, "Investigation of High-Value UCLA Patents", ATUM Annual Meeting

Review, Scottsdale, AZ, February 2005.

• K. Polasko, "How to Develop a Successful UCLA/Industry Partnerships", UCLA's

Electrical Engineering Annual Review, Los Angeles, CA, October 25, 2004.

• K. Polasko, "Nano, University, and Technology Transfer ", Los Angeles CEO Council, Woodland Hills, CA, September 28, 2004.

• K. Polasko, "How to get a UCLA Start-Up Going", Institute for Cell Mimetic Space Exploration, Los Angeles, CA, August 12, 2004.

• K. Polasko, "UCLA Research and Technology Commercialization", UCLA College VC Fund, Menlo Park, CA June 9, 2004.

• K. Polasko, "How to get a UCLA Start-Up Going", UCLA's Electrical Engineering

Department Seminar, Los Angeles, CA, May 6, 2004.

• K. Polasko, "UCLA Technology Transfer", Larta's Technology Transfer Conference,

Los Angeles, CA, November 13, 2003.