

Gregory C. Munie

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What I'm good at! (formerly Professional Goals)

Hands-on research with a focus on practical application

Teaching/training at a high technical level either in industry or academia

Organizational and problem solving applied to business, technology or planning

Key Words

Patent review, electronics' manufacturing, materials science, analytical/sono/carbon chemistry, technical writing and editing, course development, wine chemistry and biology

Highlights of Qualifications

41 years experience in materials development and testing, electronics assembly, reliability and design

- Broad technical experience in chemistry, materials, experimental design and testing with hands on work in analytical, clinical and polymer chemistry, high modulus fiber development and electronics processing
- Extensive experience in technology road mapping/technology forecasting for the electronics industry
- Proven organizational skills involving cross functional/business unit/company teams dealing with issues such as data collection and interpretation, failure mode analysis, reliability testing, new process introduction, product development, environmental issues and standards development
- Proven teaching and communications skills honed through multiple public and internal presentations with teaching and seminars at the university level. Experienced in development and presentation of training seminars on electronics design and assembly, the environment, technology roadmaps and materials

Career Experience

Benedictine University, Lisle, IL

Physics Adjunct Professor: Quantum Mechanics, Relativity, Electronics Manufacturing: September 2021 to Present

Benedictine University, Lisle, IL

Biology Adjunct Professor: Wine Chemistry and Biology; Environmental risk:
January 2011 to Present

Saint Procopius Abbey, Lisle, IL

Abbey Wine Vintner and Vineyard Caretaker, June 2007 to Present

IPC: Association Connecting Electronics Industries, Bannockburn, IL

Director of Design Programs: March 2013 to June 2014

- Developed the training material for the Designer Certification programs including new modules in DFX and high speed design
- Acted as committee liaison as needed

Technical Conference Director for: APEX, Printed Circuit's EXPO, Designer's Summit, IPC Midwest and IPC Electronic Materials Conferences: January 2002 to March 2013

- Develop the technical sessions for the IPC conferences noted. Create the promotional material the conference technical sessions
- Edit and format the proceedings for the conferences noted above
- Manage the day to day running of the conferences using "on the run" problem solving, and continual communication with groups ranging from speakers, technical session chairs and facility personnel to the media and CEOs of attending companies

Kester ITW (Formerly Kester Northrup Grumman), Itasca, IL

Principle Member Technology Staff: September 2001 to November 2007

- Trouble shot a major production process and solved the problems of product consistency and performance resulting in \$20 million per year sales for Kester products
- Developed a variety of formulations for solder preforms, solder pastes, fluxes, and solder preservative coatings (two patents pending)
- Used formal training and team mentoring of Kester research staff to implement structured, statistically based experimental design and thus changed the product development process from "tweaking" existing formulas to use of basic and cross discipline chemistry and statistical evaluation in development of innovative new products
- Kester representative on both the IPC's Solder Products Value Council Technical Committee and National Roadmap for Interconnections Team, giving public written and oral exposure of Kester products and technologies

Lucent Technologies Inc. (Formerly AT&T Bell Laboratories), Naperville, IL

Distinguished Member of the Technical Staff: March 1994 to July 2001

- Author and editor of Lucent's web-based Design for Manufacturability, Design for Test and Design for High Frequency Product databases
 - Oversaw and coordinated seventeen cross-business unit design and assembly centers in six countries in this database development
 - Used structured and hands-on experimental statistical methods to develop low defect, innovative design rules for high density electronic assemblies (Lucent Technologies Silver Award 1998)

- Authored Lucent's internally developed Design for the Environment database
 - Assessed the environmental impact of Lucent assembly processes (Arno Penzias Bell Labs Vice President's Award 1994)
 - Member of a five person team that developed and tested a statistical tool for assessing the environmental impact of Lucent products based on design, manufacturing and use criteria (2001 EH&S Champions Award)
- Coordinator of the Switching Solutions Business Unit Manufacturing Technology Roadmap with oversight responsibilities for deployment of an annual average of \$9 million in process development funding
- AT&T/Lucent's representative on the National Roadmap for Interconnections (IPC President's Award 2001)
- Co-developer of AT&T Network System's internal component solderability standard—now part of the national standard ANSI-J-STD-002 (IPC Distinguished Committee Service Award 1998)

Member of the Technical Staff: January 1987 to November 1994

- Developed Design for Test/Manufacturing Standards for AT&T Switching Systems including new surface mount packaging using statistically based DOE techniques (Arno Penzias Bell Labs Vice President's Award 1993)
- Developed novel and environmentally benign surface mount cleaning processes and solder assembly fluxes (AT&T Oklahoma City Works Engineer of the Year Award 1991, US Patents 5,009,724 and 5,069,730, 1995 AT&T Environmental Hero Award)
- Technical and environmental advisor for a cross functional team that developed a field deployable cleaning and coating process saving over \$50 million in potential customer returns (Arno Penzias Bell Labs Vice President's Award 1988)

Western Electric Engineering Research Center, Princeton, NJ

Senior Member of the Technical Staff (promoted from Member of the Technical Staff December 1985): November 1982 to January 1987

- Developed aqueous processing system for Hybrid Circuits that improved semiconductor bonding yields five-fold and eliminated a cyanide hazardous waste source
- Developed environmentally benign detergents for use in circuit pack assembly that reduced cleaning costs by 60% and eliminated the need for cleaning with hazardous solvents (AT&T Engineering Achievement Award 1986)
- Developed a new solder assembly process for high reliability assembly (US Patent 4,648,547)

Fiber Industries Inc., Charlotte, NC

Research and Development Engineer: April 1980 to August 1982

- Supervised three technicians and coordinated the activities of ten people in pilot plant, engineering, safety, and R & D in bulk sample production for customers
- Researched basic polymerization mechanism of a new product reducing energy consumption by six-fold, and raw materials usage by eighty-fold with a projected 13% product cost reduction
- Developed winding and spinning techniques that eliminated a process step with a projected 12% product cost reduction

Hines VA Hospital, Renal Research Laboratory, Hines, IL

Research Laboratory Technician (GS-5): November 1971 to May 1974

- Analytical chemistry of trace metals, studies of membrane permeability and the clotting properties of surfaces in support of the renal dialysis research unit

Education

1980 Ph.D., Physical Chemistry: University of Illinois, Urbana, IL

1980 M.S., Physical Chemistry: University of Illinois, Urbana, IL

1971 B.S., Chemistry: St. Procopius College (now Benedictine University), Lisle, IL

Ph.D. Graduate Thesis: Crosslinking and Entanglement Effects in Polybutadiene: A study of the relation between molecular structure and bulk elastomeric properties

References and publications furnished upon request