

Li Song

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<http://www.mse.berkeley.edu/groups/Evans/Li/default.html>

Objective: Industrial position in the field of semiconductor material processing, characterization or modeling.

Education:

- Ph.D University of California at Berkeley, December 1998
Major: Materials Science and Mineral Engineering, GPA: major 4.0/4.0
Minors: Electrical Engineering and Chemical Engineering, GPA: overall 3.9/4.0
- M.S Georgia State University, August 1993
Solid State Physics, GPA: 4.0/4.0
- B.S University of Science and Technology of China, August 1991
Materials Science and Engineering,

Experience:

- 7/98-Present: Engineering Project Manager, Apple Computer Inc. Cupertino, CA
- Responsible for sustaining engineering of Macintosh desktop products.
 - Worked in conjunction with Hardware and Software design engineers, and customer support engineers, to develop, support, and implement strategies that ensure proper functionality, and optimum quality of components, ASIC's, boards, and systems.
 - Performed failure analysis and initiated corrective action. Performed timing analysis, signal characterization of complex microprocessor based systems. Performed Macintosh computers troubleshooting using logic analyzers, fast scopes, emulators.
- 1/96-7/98: Engineering Manager, First International Computer, Inc. Fremont, CA
- Supervised, trained and hired technical support and application engineers in the engineering department
 - Provided technical support to customers, sales and product marketing people for company's products including PC motherboards, peripherals and systems
 - Coordinated between R&D engineers, vendors, and customers for PC component design, performance and compatibility issues
- 1/94-1/96: Application Engineer, First International Computer, Inc., Fremont, CA
- Provided technical support to major OEM customers
 - Tested and debugged customer reported issues
 - Worked with R&D engineers to design PC board

8/95-Present: Research Assistant, University of California at Berkeley and Lawrence Berkeley National Lab, Berkeley, CA

- Made and assembled lithium polymer batteries and studied their electrochemical behaviors
- Performed experimental measurement of the thermal conductivity of lithium polymer battery cell components using Guarded Heat Flowmeter
- Performed experimental measurement of the heat generation rate of lithium ion batteries and lithium polymer batteries using HCC Microcalorimeter
- Established coupled electrochemical and thermal mathematical model for thermal management, electrochemical and heat transport studies of lithium polymer battery for electrical vehicle applications

9/91-8/93: Teaching and Research Assistant, Georgia State University, Atlanta, GA

- Performed positron annihilation lifetime measurements using Fast-Fast Coincidence System.
- Collected and analyzed data using Multi-Channel Analyzer. Wrote programs for data process and analysis
- Taught undergraduate physics lab

Courses:

Advanced IC Processing and Layout,
Solid State Device,
Thermodynamics,
Kinetics and Phase Transformation,
Material Characterization,
Transport and Rate Phenomena,
Defects in Solid,
Semiconductor Materials,
Thin Film Materials,
Solid State Physics,
Electromagnetic Theory,
Statistical Mechanics,
Quantum Mechanics,
Electrochemistry

Skills and Knowledge:

Fortran, Visual C and Visual basic Programming,
Process simulation using SPICE, BSIM, SAMPLE, SIMPL and SUPREM,
Statistic Process Control and Design of Experiments,
Novell and NT networking, PC architecture, PCB design and layout,
testing, debugging, and trouble shooting using oscilloscope
and timing analysis using digital logic analyzer

Publications:

- L. Song and J. W. Evans, "The Thermal Stability of Lithium Polymer Batteries", J. Electrochem. Soc. 145, 2327 (1998)
- L. Song and J. W. Evans, "Measurements of the Thermal Conductivity of Lithium Polymer Battery Electrolyte and Composite Cathode", 3rd Chicago Midwest Battery Workshop, Chicago, IL, June, 1998
- L. Song and J. W. Evans, "Thermal Stability and Mathematical Modeling of Lithium Polymer Battery for Electrical Vehicle Applications", 3rd Chicago Midwest Battery Workshop, Chicago, IL, June, 1998
- L. Song, Y. Chen and J. W. Evans, "Measurement of the Thermal Conductivity of Poly(ethylene oxide)-Lithium Salt Electrolytes", J. Electrochem. Soc. 144, 3797 (1997)
- Y. Chen, L. Song, T. M. Devine and J. W. Evans, "Lithium Batteries: 1. Corrosion of Current Collectors 2. Thermal Modeling in Support of Thermal Management", Advanced Non-Aqueous Battery Technology Research and Development Workshop, Hunt Valley, MD, October, 1997
- Y. Chen, L. Song, T. M. Devine and J. W. Evans, "Corrosion and Thermal Management in Advanced Batteries", Automotive Technology Development Customer's Coordination Meeting, Dearborn, MI, October, 1997
- Y. Chen, L. Song and J. W. Evans, "Modeling Studies on Battery Thermal Behavior, Thermal Runaway, Thermal Management, and Energy Efficiency", 31st intersociety Energy Conversion Engineering Conference Proceedings, Washington, D.C. August, 1996
- "Positron Annihilation Studies of Cyclodextrin Complex Formation" 93 Meeting of the Southeastern Section of American Physical Society, Columbia, SC Nov.4-6, 1993
- "Studies of Cyclodextrin Complexes by Positron Annihilation" Journal De Physique IV, Vol. 3, 297-303, Sept. 1993
- "Computer Model Simulation for the Structures of Metallic Nanocrystalline Materials" Chinese Phys. Lett. Vol. 8, No. 12, 637-640, 1991

Honors and Activities: University Fellowship, U.C. Berkeley, 1996, 1997

Affiliation: The Electrochemical Society,
Material Research Society,
TMS and ASM International Society

Status: Permanent Resident

Reference: Available upon request