

RAINER FASCHING

TECHNOLOGY AND SCIENTIFIC EXECUTIVE

**ENERGY STORAGE AND CONVERSION • BATTERIES AND FUEL CELLS • SENSOR SYSTEMS •
FABRICATION TECHNOLOGIES • STRATEGIC LEADERSHIP**

Dr. Rainer Fasching is a technology executive and a consulting associate professor at Stanford University, where he teaches advanced electrochemical energy storage and sensor technologies. He has over 20 years of experience in electrochemical devices, micro fabrication technologies, and industrial product development. His work has been centered on the physics, materials and fabrication technologies of electrochemical systems such as sensors, batteries and associated materials, and fuel cells. Currently he has been leading the development of advanced energy storage technologies from concept to product at top tier startup companies. He holds over 30 issued and/or published patents and has authored more than 60 publications.

EDUCATION AND TRAINING

Ph.D. degree, EE, summa cum laude, Vienna University of Technology

Masters degree, EE and Physics, summa cum laude, Vienna University of Technology

PROFESSIONAL EXPERIENCE:

Partner, RJF Consulting, CA (2011– present)

Consulting for a select group of corporations in the fields of energy storage and conversion, medical technologies, and autonomous systems

Consultant, Quantumscape Cooperation, CA (2017 – present)

VP, Device Development, Quantumscape Cooperation, CA (2011 – 2016)

Member of the founding team, development of solid state batteries

- Refocused the company by moving the development path to an electrochemical-based nanotechnology during the first year
- Utilized high-throughput thin-film technology for propriety cathode material development, which decreased the development duration more than tenfold
- Led the development of high energy cathode conversion and intercalation materials from concept to product performance level and associated electrolytes
- Successfully identified development paths for full solid state batteries and associated solid state electrolyte materials
- Built a distinguished team with a strong focus on risk mitigation development paths and accelerated learning

Head of Technology Development, Amprius Inc., CA (2009 - 2011)

Member of the founding team, development of silicon anode based batteries

- Invented and led the development of propriety Si-anode technologies
- Transformed early-stage technologies from concept to full product performance level
- Identified product applications and market specifications
- Secured government funding through NIST (\$3M)

Founder, InSitu Therapeutics Inc., CA (2006 - present)

Leading member of the founding team, development of products for ophthalmic applications

- Invented and developed propriety bio material-based micro technologies
- Identified core applications and led products for mark entrance
- Built a distinguished team with strong support of medical key players in company's operation field
- Developed wound closure product for eye procedures up to clinical trial level

Consulting Associate Professor, Mechanical Engineering, Stanford University, CA (2002 - present)

Invited to extend activities in emerging research topics that involved trend analyses, technology assessment, and restructuring of the research facility

- Established nano-technology laboratories for energy conversion/storage and bio engineering
- Introduced advanced electrochemistry courses with focus on fuel cells, batteries, and sensors
- Pioneered low temperature oxide fuel cells, solar cell nano-wire technology, and bio electricity conversion

Founder & CTO, Micro Technology Center, Austria, (1999 - 2001)

Established an interdisciplinary operating center focused on development of medical products and associated materials

- Established the center and built a distinguished team with strong interdisciplinary background
- Identified, developed, and negotiated product developments projects with partners in the EU (+€6M)

Head of the Sensor and Actuator Laboratory, Vienna University of Technology, (1998 - 2001)

Led a research team with 20 staff members and was responsible for a class-100 clean room fabrication facility

- Pioneered micro sensors for automotive, environmental, and medical applications such as miniaturized carbon dioxide -, oxygen -, ph-, glucose- and lactate sensors and integrated lab on chip systems
- Developed hybrid packaging technologies to combine sensors, ASICs, and thin film batteries into self-powered sensing systems

PUBLICATIONS & PATENTS

> 30 journal publications
> 60 conference contributions
6 invited lectures
3 book chapters
>30 issued or published U.S. patents

PROFESSIONAL MEMBERSHIPS

Society of Biomaterial
Institute of Electrical and Electronics
Engineers
Electrochemical Society
International Society of Optical Engineering
National Ski Instructor Association, Austria