

PROFESSIONAL

- 2007-present **INDEPENDENT CONSULTANT** Boulder, CO
Materials Engineer, Seminar Instructor
Provide consulting services in metallurgy, polymers and chemistry to clients ranging from early-stage startups to established companies. Created new seminar on polymers for medical device engineers titled “*Failure Analysis of Polymers for Medical Devices.*” Seminar offered in five cities in 2007 through the American Society of Materials (ASM). Member, 2008 Education Committee, ASM, Materials and Processes for Medical Devices. Contributor and committee member, ASM Medical Device Database. Co-founder and Scientific Advisory Board member for early-stage startup skin care company, Meridian Skin Care (<http://www.skinbymeridian.com>).
- 2002-2007 **EXPONENT FAILURE ANALYSIS ASSOCIATES** Menlo Park, CA
Senior Engineer, Mechanics and Materials Practice (<http://www.exponent.com>)
Provided consulting services in metallurgy, polymers and chemistry to clients in the medical device, electronics, energy, and consumer products industries. Conducted over eighty engineering investigations of products ranging from small, implantable medical devices to large pressure vessels. Prepared detailed evaluations on a wide range of engineering materials including ERW pipe, cast iron, ductile iron, thermoplastics, and thermosets. Provided expert witness testimony for two product liability cases. Created new seminar for ASM, “*Polymers for Medical Device Design*” in 2006.
- 1998-2002 **EXPONENT ENVIRONMENTAL** Boulder, CO
Senior Scientist
Performed chemical analyses related to health risk assessments at manufacturing sites for large companies.

EDUCATION

- June 2003 **COLORADO SCHOOL OF MINES** Golden, CO
MS, Metallurgical and Materials Engineering
Thesis title: “Fracture Behavior of Nb-V-T: Microalloyed Plates Processed With and Without Intermediate Cooling”
Adviser: Professor David K. Matlock
- June 1994 **YALE UNIVERSITY** New Haven, CT
PhD, Inorganic Chemistry
Thesis title: “Structural Characterization of Metal Hydride Complexes by NMR: Deuterium Isotope Effects in cis Dihydride Compounds of Iron, Cobalt, and Rhodium”
Adviser: Professor Robert H. Crabtree
- May 1988 **UNIVERSITY OF CALIFORNIA, BERKELEY** Berkeley, CA
BS, Chemistry
Thesis title: “Synthesis and Properties of Two Bimetallic Mixed Valence Di- μ -Oxo Manganese Complexes with Different Tetraaza Macrocyclic Ligands”
Adviser: Professor Melvin Calvin

Angele Sjong, PhD

PUBLICATIONS

“Epoxy Attributes,” Materials for Medical Device Database, Implantable Cardiovascular Devices, ASM International, November 2007.

“Accelerated Aging Study of Gamma and E-Beam Irradiated Poly(Ether-Block-Amide) (PEBA),” ANTEC, pp. 1544–1548, 2006 (with F. Villagomez and A Kendale).

ESC Failure of Polycarbonate Components: Two Case Studies,” ANTEC, pp. 1409–1413, 2006 (with J.M. Hoffman).

“Fracture Behavior of Nb-V-T: Microalloyed Plates Processed With and Without Intermediate Cooling, Proceedings, ASM Materials Solutions Conference, International Symposium of Microalloyed Steels, Columbus, OH, 2002.

“Cationic Dihydrogen Complexes of Rhodium and Cobalt: A Reinvestigation,” J. Am. Chem. Soc., 116(18), pp. 8838–8839, 1994 (with D.M. Heinekey and M. van Roon).

“Structural Characterization of Metal Hydride Complexes by NMR: Deuterium Isotope Effects in cis dihydride Compounds of Iron, Cobalt and Rhodium,” A. Liegeois (Sjong), PhD Thesis, Yale University, 1994.

“Synthesis and Properties of Two Bimetallic Mixed Valence Di- μ -Oxo Manganese Complexes with Different Tetraaza Macrocyclic Ligands,” J. Chem. Soc. Chem. Communication, 17, pp. 1219–1220, 1988 (with K.J. Brewer, J. Otvos, M. Calvin, and L. Spreer).

PRESENTATIONS

“Failure Analysis of Polymers for Medical Devices, Materials Processes for Medical Devices, American Society of Materials, March 2007, Sunnyvale, CA; May 2007, Memphis TN; July 2007, Norwood, MA; August 2007, Plymouth, IN; September 2007, Palm Desert, CA.

“Introduction to Polymers for Medical Devices,” Materials Processes for Medical Devices, American Society of Materials, May 2006, Minneapolis, MN; December 2006, Miami, FL.

“Accelerated Aging Study of Gamma and E-Beam Irradiated Poly(Ether-Block-Amide) (PEBA),” ANTEC 2006, Charlotte, NC, May 8, 2006.

“ESC Failure of Polycarbonate Components: Two Case Studies,” ANTEC 2006, Charlotte, NC (with J.M. Hoffman).

“Fracture Behavior of Nb-V-T: Microalloyed Plates Processed With and Without Intermediate Cooling,” Proceedings, ASM Materials Solutions Conference, International Symposium of Microalloyed Steels, Columbus, OH, 2002.

“Environmental Forensics,” Continuing Legal Education, Marten Brown, Seattle, WA, November 2000.

PROFESSIONAL AFFILIATIONS

- American Society of Materials (ASM) Education Committee, 2007-08
- ASM, Materials and Processes for Medical Devices, Author and Reviewer
- American Chemical Society, ACS
- Colorado Yale Association, CYA

Angele Sjong, PhD

LITIGATION EXPERIENCE

Expert Engagement

Type of Matter: Corrosion of underground fire protection system resulted in flooding (1M damage) to warehouse
Law Firm: Bragg & Dziesinski, San Francisco, CA; Elizabeth Gowdy, Esq.
Case Name: *Federal Insurance v Superior Automatic Sprinkler*
Services Provided: Expert witness testimony; metallurgical analysis of cement-lined ductile iron pipe
Disposition: Settlement
Date: January 2005

Expert Engagement

Type of Matter: Freon 134a treatment of soda lime glass champagne bottles resulted in inventory loss
Law Firm: Morgenstein & Jubelirer (now Schiff Hardin), San Francisco, CA; Jim Balick, Esq.
Case Name: *Twee Jong Gezellen v Owens Brockway Glass Container, Inc., et al.*
Services Provided: Expert witness; submission of Rule 26 expert report; chemical analysis of soda lime glass treated with Freon 134a
Disposition: Dismissed
Date: March 2006

Expert Engagement

Type of Matter: Rupture of cast-iron ammonia valve, one fatality
Law Firm: Lord Bissell and Brook, Los Angeles, CA; Gerald Fisher, Esq.
Case Name: *Costa v Vilter*
Services Provided: Metallurgical consultant, project manager, prepared Rule 26 expert report; testifying expert Robert D. Caligiuri, PhD, PE
Disposition: Settlement
Date: June-August 2004

Expert Engagement

Type of Matter: Carbon monoxide leak in cast iron mixing valve on generator; two fatalities
Law Firm: Wilson Elser Moskowitz Edelman & Dicker, San Francisco, CA; Ralph Robinson, Esq.
Case Name: *Pearlman v Kohler*
Services Provided: Prepared Rule 26 Report; project manager; testifying expert R.D. Caligiuri
Disposition: Settlement
Date: June-December 2005