

**Andrea P. Belz**  
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**Education**

2007	MBA, Finance	<i>Pepperdine University, Graziadio School of Business</i>
2000	PhD, Physics	<i>California Institute of Technology</i>
1993	BS, Physics	<i>University of Maryland at College Park</i>

**Academic Experience**

2012-present *Lloyd Greif Center for Entrepreneurial Studies, Marshall School of Business  
University of Southern California*  
Senior Lecturer of Clinical Entrepreneurship

2002 *Environmental Engineering Option, Division of Engineering and Applied Sciences  
California Institute of Technology*  
Lecturer, Environmental Engineering

**Honors and Awards**

2004 *Pepperdine University Graziadio School of Business, George Elkins Scholarship*  
1996 *NATO Summer School on Nuclear and Particle Physics, NATO Scholarship*  
1993 *University of Maryland at College Park*  
Outstanding Undergraduate in Computer, Math, and Physical Sciences  
High Honors (Physics) and University Honors (Political science/economics)  
Phi Beta Kappa

**Corporate Board**

2010-present *Ondax, Inc. (Caltech spinoff)*

**Professional Experience**

**2002- present      Belz Consulting, LLC**  
**Selected projects**

NASA Jet Propulsion Laboratory: Provide roadmaps for management of \$100 M technology portfolio; created and implemented \$3 M research program for novel software solution.

Occidental Petroleum: Launch internal skunkworks and technology infusion initiative.

UCLA and Tribogenics: Lead strategic partner development and assisted in raising \$3+ M for spinoff.

Hospital Association of Southern California: Provide strategic planning services.

CVI Melles Griot (division of IDEX): Provide extensive strategic planning and operational analysis for \$200 M optics division.

California Institute of Technology and Visualize Technologies: Wrote funded NSF grant to launch.

XAP Corporation: Led middle-market company during restructuring.

HRL Laboratories (formerly Hughes Research Laboratory): Provided strategic planning services.

The Athenaeum Fund: Evaluated business plans of \$1-25 M companies as opportunities; created portfolio projections and valuation estimates; prepared and presented reports to investors.

House Research Institute: Provided strategic planning services.

AquaNano Technologies: Provided strategic planning for Caltech spinoff.

Metric Products: Launched new consumer product lines.

La Sierra Fire Equipment/General Electric: Led feasibility/market analysis for F100 partnership.

Western Installation (division of Best Buy): Evaluated operations for freight/installation division.

ViaLogy: Provided operational guidance for publicly traded oil services company.

Signal Hill Petroleum: Advised on candidate technologies for oil and gas exploration.

EHD Technology Group: Led operations for \$2 M NIST grant.

Coming Home Studios: Provided operational leadership during restructuring.

SubSurface Exploration Company: As Division General Manager, launched a new technology division; restructured operations.

Fidelys Investment Bank: Managed due diligence for technology investments.

### **Early Career**

1999-2002 *Jet Propulsion Laboratory and California Institute of Technology*

Research Associate: Assessed novel technologies for flight readiness

### **Affiliations**

Session Co-founder and Chair, Technology Commercialization, IEEE Aerospace Conference (2010-present)

Los Angeles Chapter Chair, Licensing Executives Society (2010-present)

Certified Instructor, "IP Basics," Licensing Executives Society

### **Publications and Presentations**

#### **Book**

*The McGraw-Hill 36-Hour Course: Product Development* (McGraw-Hill, 2010).

#### **Blog and Interviews**

Blog published by *E-Commerce Times*; cited by: *Wall Street Journal* blog; *Bloomberg BusinessWeek*; others.

Interviews by: *NBC.com*; *CNN.com*; *Fund Strategy*; *SmartMoney.com*; *Los Angeles Business Journal*; others.

### **Product Development; Technology Commercialization; Start-ups and the Economy**

#### Invited talks and panels

"Innovation and the Economy: The Real Story Behind Innovation, Start-ups, Venture Funding, and Job Growth," Caltech Alumni Association, San Diego Chapter, May 10, 2012.

"Manufacturing and Logistics in the Inland Empire: Obstacles and Opportunities," APICS Inland Empire, Apr. 21, 2012.

"Funding or Marketing: Fish or Cut Bait?" Los Angeles Technology Week, Oct. 20, 2011.

"Technology Management and Effective Leadership," Jonathan Breakfast Club, Sept., 2011.

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“Titans of Media Tech,” Broads Circle, Feb., 2011.

“Doing Virtuous Business,” Pepperdine University Graziadio School of Business, Feb., 2011.

“The Prometheus Problem: Challenges in Technology Commercialization,” HRL (formerly Hughes Research Laboratory), June, 2010.

“Fast Track to Product Development,” Product Development Management Association, Los Angeles Chapter, May, 2010.

“Monetizing Your Idea,” Pepperdine University Graziadio School of Business, Dec., 2010.

“Product Development: Inside the Sausage Factory,” Young Inventors International, November, 2009.

#### Invited articles

“Getting Manufacturing Off the Ground,” *Los Angeles Business Journal*, Jan. 31, 2011.

“Innovation When Cash is Tight,” *MWorld (Journal of the American Management Association)*, Sept., 2010.

“Conservative and Transparent Risk Management in 2010,” *Corporate Compliance Insights*, March 7, 2010.

“Overstimulated and Underwhelmed,” *Industry Today*, Jan. 18, 2010.

#### Peer-reviewed conference proceedings

“Models for Technology Transfer in the Aerospace Industry,” 2011 IEEE Aerospace Conference, Mar., 2011

“Challenges in Technology Infusion: Adapting Best Practices from the Private Sector,” 2010 IEEE Aerospace Conference, Mar., 2010.

### **Instrumentation**

C. Camara, et al., “An Ultra-compact X-ray Source for Medical Applications,” TechConnect, poster presentation (peer-reviewed) (2012).

K. Finster, et al., “Applications of Electrostatic Spray Techniques to Surface Cleaning”, Proceedings of the Ninth International Symposium on Ultra-Clean Processing of Semiconductor Surfaces, (Scitec Publications Ltd, Zuerich-Uetikon, Switzerland, 2009), special edition of Solid State Phenomena Vols. 145-146 (peer-reviewed) (2008).

T. Balint, et al., “Extreme Environments Technologies for Probes to Venus and Jupiter,” NASA document 20090020302 (NASA document; approved for public release) (2007).

B. Gilbert, et al., “Multiple Scattering Calculations of Bonding and X-ray Absorption Spectroscopy of Manganese Oxides,” *J. Phys. Chem. A*, 2003, 107 (16), pp 2839–2847, DOI: 10.1021/jp021493s (2003).

A. Belz, C. Ahn, and K. Nealson, “Microanalysis of Biologically Transformed Manganese Oxides,” *Bulletin of the American Physical Society*, Vol. 46, Part C, abstract #AB.007 (2002).

A. P. Dvoredsky, for the HERMES collaboration, “He-3 Polarimetry in the HERMES Experiment,” 7th International Workshop on Polarized Gas Targets and Polarized Beams, Urbana, IL, 18-22 (August 1997).

M. L. Pitt, et al., "TOM: A Target Optical Monitor of Polarization and Luminosity for Polarized Internal gas targets," Proceedings of the International Workshop on Polarized Beams and Polarized Gas Targets (July 1995).

W. Korsch, et al., "Temperature Dependence of  $^3\text{He}$  Polarization in the HERMES internal target," Proceedings of the International Workshop on Polarized Beams and Polarized Gas Targets (July 1995).

S. F. Pate, et al., "Cryogenic Polarized Internal  $^3\text{He}$  gas target for HERMES," Proceedings of the International Workshop on Polarized Beams and Polarized Gas Targets (July 1995).

### **Planetary Exploration and Biogeochemistry**

A. Belz and J. Cutts, "Planning for Planetary Protection and Contamination Control: Challenges Beyond Mars," 2006 IEEE Aerospace Conference, DOI : 10.1109/AERO.2006.1655739 (peer-reviewed) (2006)

A. Belz et al., "Planetary Protection and Contamination Control Technologies for Future Space Science Missions," JPL D-31974 (NASA publication; approved for public release) (2005)

L. Hamlin, et al., "Design Tools for Cost-Effective Implementation of Planetary Protection Requirements," 2006 IEEE Aerospace Conference, DOI: 10.1109/AERO.2006.1655740 (peer-reviewed) (2006).

A. Belz, C. Ahn, and K. Nealson, "Environmental Controls of Biological Manganese Oxidation," American Geophysical Union, Fall Meeting 2001, abstract #B22A-0128 (2002).

K. Nealson, A. Belz, and B. McKee, "Breathing Metals as a Way of Life: Geobiology in Action," *Antonie van Leeuwenhoek*, 81 (1-4), 215-222(8), (2002).

K. Brinton, A. Belz, and G. McDonald, "Amino Acid Racemization on Mars," *Abs. Pap. ACS 211*, GEOC-17 (2001).

B. L. Cox, et al., "Organization and Elemental Analysis of P-, S-, and Fe-rich Inclusions in a Population of Freshwater Magnetococci," *Geomicrobiol. J.* **19**, 387-406. (2002)

### **Nuclear and Particle Physics**

Andrea Paulina Dvoredsky, "Investigations of Novel Effects in Semi-inclusive Deep Inelastic Scattering," UMI-99-56107, DESY-HERMES-99-42, 2000. 174pp. Ph.D. Thesis.

Publications by HERMES collaboration at: <http://www-hermes.desy.de/notes/pub/publications.html>

M. Khayat, et al., "Analyzing Power Reduction in Quasifree Pion-nucleon Knockout Reactions," *Phys. Rev. C* **64**, DOI:10.1103/PhysRevC.64.064606 (2001).

B.A. Raue, et al., "Analyzing Powers for Polarized H-1 ( $\pi^+$ ,  $\pi^-$ ) at  $T(\pi) = 165\text{-MeV}$  and  $240\text{-MeV}$ ," *Phys. Rev. C* **53**:1005-1008 (1996).

**Ad hoc reviewer**

Jet Propulsion Laboratory (proposals) (2004-present)  
Environmental Science and Engineering Magazine (2002)  
Thomas Jefferson National Accelerator Facility (proposals) (1997-9)

**Languages:** Spanish (native); English (native); German; French

**Birthplace:** Santiago de Chile

**Citizenship:** USA