

Addendum/Curriculum Vitæ for

John H. Belk

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CLEARANCE

Supplied upon request.

EXPERIENCE

4/19 – Present, Chief Scientist, GroundLinx Technologies LLC, Blue Ridge, Georgia, USA

Lightning protection and electrical grounding systems. U.S. and international patents. Marketing and sales support. Manufacturing design. System testing.

6/17 – Present, Officer, ZeroTechnology, LLC, St. Louis, Missouri and Blue Ridge, Georgia, USA

[ANSI Nanotechnology Standards Panel](#), 2005 – 2022

STEM Contracting, Consulting

Software Intellectual Property

- ViZZ/DSI-Digital LLC (2018)

Proposal Reviews

- KB Sciences (2018)
- The Implementation Group (2018)

Industry Consulting/Advising

- Extra-Ordinary Consultants (2020)
- GLG (2019-present)
- NG1 (2019-present)

8/16 – Present, Officer, AttoTechnology, LLC, St. Louis, Missouri and Blue Ridge, Georgia, USA

STEM Contracting, Consulting

Fashion Clothing Industry

- 1 US patent filed.
- 1 China patent filed.

Consulting

- Sanitization of food containers. (2020)
- Sanitization of offices, jails, schools. (2020)
- Anti-viral masks and textiles. (2020)
- Graphene applications. (2019)
- Consumer products. (2017-present)
- Textiles. (2016-2018.)
- Vaping fluid IP. (2017)
- Women's undergarment IP. (2017)
- Air purification IP. (2017)
- Water purification IP. (2016-2017)
- Women's hygiene product development. (2016)
- ZPZ (an IP holding company) and ZPZ Foundation (2016-2017)

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'04 – Present, *Manufacton/ViZZ Technologies/DSi Digital, USA*

Member, Advisory Board. [Manufacton](#)'s cloud-based software helps manage construction materials, off-site production, and on-site installation.

2/14 – 3/19, *The University of Missouri, Columbia, Missouri, USA*

Adjunct Professor for Physics

- User Proposal Review Panel for the Center for Integrated Nanotechnologies ([CINT](#)), a joint center of Los Alamos National Labs (LANL) and Sandia National Labs, 2008 –2021.

1/17 – 12/17, *Pier 70 Ventures, Seattle, Washington, USA*

Technology Scout

1/13 – 10/16, *The Boeing Company, St. Louis, Missouri, USA*

Boeing Technical Fellow, Advanced Materials, Composites: Carbon-based materials charge transfer. Accessed Boeing-relevant technology globally.

- Protected Boeing intellectual property.
 - Licensed patent portfolio to General Nano/Veelo, 2016. (\$1M/year royalties.)
 - Nominated for 2018 Boeing Special Invention Award (2nd place).
- Externally-oriented: Presented a single Boeing face externally. Built a network to enable access.
 - AFOSR Multi-University Research Initiative (MURI) advisory panel, 3D Nanotube Architectures, Rice University, 2012-2016.
 - AFOSR MURI advisory panel, 3D Nanotube Architectures, Case Western Reserve University, 2012-2016.
 - Industry advisor, University of Illinois at Urbana-Champaign (UIUC) Nano-CEMMS (micro and nano manufacturing), 2005 – 2016.
 - Contract research winning topics.
 - Conductive materials.
 - U.S. Army RIF subcontract. (Awarded to Boeing January 2017.)
 - Dielectric sensing of polymer cure
 - International technology analysis
 - Improvised Explosive Device (IED) factory detection sensing
 - Rapid prototyping of oscillating heat pipes
 - Smoke trail visibility
- Internally-oriented: Introduced and guided Boeing in adopting nanotechnology and emerging materials.
 - Boeing Technical Fellow focal for ANSI/ISO/NIST, 2008 - 2016
 - Boeing Technical Fellow focal for Northwestern University, 2008 – 2016
 - Boeing Technical Fellow focal for Howard University, 2009-2010
 - Strategic University Focal Area Leader for Howard University R&D Alliance (November 2008 - 2016).
 - Wear reduction additives for manufacturing processes
 - Wear reduction/heat reduction additives for manufacturing processes
 - Quantum calorimetry (thermoelectrics)
 - Open-sided Non-Destructive Evaluation (NDE) software
 - Assistant Strategic University Focal Area Leader – Indian Institute of Science (IISc). Initiate and manage R&D projects.
 - Composite materials development, 2012-2014.
 - Raman Spectroscopy of polymers, 2012-2014.

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- Non-Linear Optics for contamination detection, 2012-2014.
- Conductive composite materials modeling, 2015-2016.
- Core-shell nanoparticles, 2015-2016.
- Global Technology - India R&D project
 - Indian Institute of Technology - Hyderabad (IIT-H)
 - Double-Sided Incremental Sheet Forming, 2014-2016.
- Global Technology - Saudi Arabia Projects
 - King Abdullah University of Science & Technology (KAUST)
 - Thermoelectric energy harvesting module, 2014-2016.
- Guide SBIRs (NASA and others).

4/05 – 12/12, The Boeing Company, St. Louis, Missouri, USA

Boeing Technical Fellow, Emerging Technology: Accessed relevant technology globally.

- Externally-oriented: Presented a single Boeing face externally. Built a network to enable access.
 - Session Chairman, [DOE Nanomanufacturing for Energy Efficiency Workshop](#), June 2007.
 - Selected for Committee for “[The National Nanotechnology Initiative: Research and Development Leading to a Revolution in Technology and Industry](#)”, supplement to the President’s FY 2006 Budget.
 - Technical Advisory Group (TAG), President’s Council of Advisors for Science and Technology ([PCAST](#)), 2002-2007.
 - Nanotechnology Technology Advisory Group (nTAG), President’s Council of Advisors for Science and Technology ([PCAST](#)), 2007-2008.
 - Attended [AAAS Forum on Science and Technology Policy](#), 2008.
- Internally-oriented: Introduced and guided Boeing in adopting nanotechnology and emerging materials.
 - Lead, Composites for System Level Performance
 - Co-Chair, Boeing Disruptive Technology Forum, February 2006.
 - Member representative, CAPCE composites consortium, 2005-2007.
 - Industry Advisory Board, New Vista Capital (USA).
 - Industry Advisory Board, United Overseas Bank Venture Management (Singapore)
 - Industry Advisory Board, Millennium Materials Venture Fund (Israel)
 - Industry Advisory Board, NGEN Venture Partners (USA)
 - Industry Advisory Board, The Technology Partners (U.K.)
 - Industry Advisory Board, Jerusalem Venture Partners (Israel)
 - Industry Advisory Board, Allen & Buckeridge Pty Ltd. CP Ventures Ltd. (Australia)
 - China R&D seedling projects
 - Zhejiang University (platinum nanotube synthesis)
 - Chinese Academy of Sciences Institute of Chemistry (transparent electrospun hydrophobic coatings)
 - Tsinghua University (efficient air filtration)
 - Teamed with Ford and Northwestern University to create and manage the Ford-Boeing-Northwestern University R&D Alliance, 2005-2008.
 - Series of Nanotechnology WebEx/Telecons, often teamed with FoMoCo, to expose Boeing to global nanoscience R&D talent, 2005-2009.
 - Participated in national S&T education policy (publications)
 - Guided SBIRs (NASA and others)
 - Internal R&D

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'06 – '12, PerfectDry LLC

Materials-based high-performance textile coatings teamed with Clariant and Achroma. Teamed with International Management Group (IMG) and Creative Artist Agency (CAA) to market water repellent fluoropolymer textile coating materials for natural fiber materials.

'03 – '05, The Maple Fund

Member, Corporate Advisory Board, venture capital fund (USA).

4/01 – 4/05, The Boeing Company, St. Louis, Missouri, USA

Boeing Associate Technical Fellow, Nanotechnology: Insured Boeing accessed “best of breed” nanotechnologies at earliest opportunity by building relationships with universities, national labs, and companies globally.

- Invited by U.S. Department of Commerce, NSF, FAA, and NASA to serve on several nanotechnology workshop panels on issues such as productivity, industry needs, global competitiveness, and air safety as industry, aerospace industry, or aircraft manufacturer expert.
- Successfully incorporated edits to the [21st Century Nanotechnology Research and Development Act](#), (P.L. 108-153), which President George W. Bush signed into law creating the U.S. National Nanotechnology Initiative (NNI). NNI has directed over \$20B of US government research funding (through 2014). Without these edits, industry representation would not have been required on advisory panels.
- NSF SBIR/STTR review panel, August 2004.
- NASA-Industry Nanotechnology Roadmap Workshop, Arlington, VA, January 22-23, 2004. Panel member.
- Federal appointment as a Technical Advisory Group member and Nanotechnology Technical Advisory Group member, President’s Council of Advisors for Science and Technology ([PCAST](#)), 2002-2007.
- National Research Council (NRC) NASA Capability Roadmap Review, Nanotechnology Panel, 2005.
- NRC Implications of Emerging Micro- and Nanotechnologies committee, 2001-2003.
- Societal Implications of Nanoscience and Nanotechnology, December 2003.

Technology Transition Manager: Evaluated products from venture-backed startups and other small companies for function, value, and suitability for introduction into Boeing products or processes. Introduced and transitioned selected products throughout Boeing. Managed \$(proprietary)M in venture capital fund technology relationships globally including relationship building, teaching Boeing’s needs, and extending the relationship to include other fund limited partners. Partnered internally for evaluation of potential global university, offset, and R&D relationships.

8/92 – 4/01, The Boeing Company (McDonnell Douglas Corporation), St. Louis, Missouri, USA

Quality Technology Project Manager: Introduced new technologies into production.

- Consulted with production programs (including the F/A-18, T-45, C-17, MD-500, and AH-64E Apache programs) on technology-related process improvements.
 - Created a vision system for identification of foreign object debris (FOD).
 - Developed a laser alignment system for composite panel bushing press.
- In-process monitoring of the composites manufacturing process.
 - Defense Manufacturing Conference R&D Award, 2002.

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CRAD Program Manager: Conceived and led proposal efforts in smart structures and composites processing, building teams, and managed the resulting programs.

- Intelligent processing of composites. (ONR)
- Monitoring the curing process of composite products via optical fiber sensors. (US Army, USAF, USN)
- Measuring bond strength of optical fibers in composites. (NASA)
- Multiparameter sensing within composites using RFID technology. (ONR, NRL)
- Embedded optical fiber sensors for structural health monitoring. (DARPA)

1/79 – 8/92, McDonnell Douglas Corporation, St. Louis, Missouri

Principle Technical Specialist: Responsible for supervision of engineers, scientists, and technicians as well as developing and performing custom optical system tests in an emerging GaAs laser diode product line, taking it from development into production.

- Assembled a facility for characterization and burn-in of laser diode devices for communications systems, the Mars Orbiter Laser Altimeter (MOLA), and fusion energy.
 - Increased test and burn-in throughput rates.
- Tested and retrofit satellite optical systems including design and construction of precision optical calibration systems. Assisted contractors with identifying and repairing faulty manufacturing processes (troubleshooting).
- Characterized efficiency degradation of the thermal protection system tiles on NASA's Space Shuttle due to the environmental exposure during the mission.
 - Reported cost savings of \$1M/flight.
- Industry advisor, optical technology program, Jefferson College, Hillsboro, Missouri, 1985-90.

6/77 – 8/77 and 6/78 – 8/78, National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce, Suitland, Maryland

Summer Intern: Investigated optical characteristics of the atmosphere for weather prediction.

EDUCATION

- Graduate Studies, Physiological Optics, University of Missouri, St. Louis, Missouri.
- Master of Engineering Management, Washington University, St. Louis, Missouri.
- M.S. Mechanical and Aerospace Sciences, University of Rochester, Rochester, New York. Full Fellowship.
- B.S. Physics, Clemson University, Clemson, South Carolina. Sigma Pi Sigma physics honor society, Sigma Pi Sigma Outstanding Senior in Physics award, Phi Kappa Phi academic honor society.

PROFESSIONAL ACCOMPLISHMENTS

Issued US Patents

- Internally Heated Concentrated Solar Power (CSP) Thermal Absorber, U.S. patent 11,563,160.
- Electrical Grounding Systems, U.S. patent 11,349,227.
- Systems and Methods for Electrical Earthing Systems, U.S. patent 11,329,406.

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- Internally heated concentrated solar power (CSP) thermal absorber, U.S. patent 11,063,199.
- Nano-Energetic Applications for Aircraft, U.S. patent 10,793,294.
- Carbon Nanomaterial Composite Sheet and Method for Making the Same, U.S. patent 10,758,936.
- Conductive Pre-Impregnated Composite Sheet and Method for Making the Same, U.S. patent 10,639,826.
- Method for Producing an Ultra-High Conductivity Electrical Conductor, U.S. patent 10,631,404.
- Contaminant Resistant Coating Fabrication Structure and Method, U.S. patent 10,537,915.
- Nano-Energetic Applications for Aircraft, U.S. patent 10,399,707.
- Carbon Nanotube Shielding for Transmission Cables, U.S. patent 10,373,739.
- Active Real-time Characterization System, U.S. patent 10,200,635.
- Method and System for Incremental Sheet Forming of Tailored Blanks, U.S. patent 10,189,072.
- Conductive Pre-Impregnated Composite Sheet and Method for Making the Same, U.S. patent 10,093,041.
- Fabrication of Ceramic Matrix Composites with Carbon Nanotubes and Graphene, U.S. patent 10,091,916.
- Carbon Nanotube Shielding for Transmission Cables, U.S. patent 9,972,420.
- High Resolution Thermo-Electric Nanowire and Graphene Coupled Detector System, U.S. patent 9,945,719.
- Elongated, Ultra-High Conductivity Electrical Conductors for Electronic Components and Vehicles, and Methods for Producing the Same, U.S. patent 9,872,384.
- Active Real-time Characterization System, U.S. patent 9,787,916.
- Non-linear Optical Ellipsometry for Surface Monitoring and Characterization, U.S. patent 9,632,020.
- Real-time non-linear optical strain gauge system, U.S. patent 9,631,923.
- Methods and Compositions for Reducing Wear of Surfaces in Contact with One Another, U.S. patent 9,605,228.
- Terahertz Imaging via Simultaneous Surface and Sub-surface Evaluation via Non-linear Optical Response, U.S. patent 9,557,267.
- Terahertz Material Evaluation and Characterization via Material Difference Frequency Generation, U.S. patent 9,557,263.
- Second and Third Order Simultaneously Nonlinear Optical Processes and Measurements for Surface Analysis, U.S. patent 9,404,854.
- Internally Heated Concentrated Solar Power (CSP) Thermal Absorber, U.S. patent 9,356,218.
- Composite Structure Having an Embedded Sensing System, U.S. patent 9,170,172.
- Frequency Selective Sensor System, U.S. patent 8,809,761.
- Nanowire antenna, U.S. patent 8,774,636.
- Scanning Optical Nanowire Antenna, U.S. patent 8,744,272.
- Optical Nanowire Antenna with Directional Transmission, U.S. patent 8,687,978.
- Nonlinear Optical Surface Sensing with a Single Thermo-electric Detector, U.S. patent 8,664,583.
- High Density Structural Health Monitoring System and Method, U.S. patent 8,447,530.
- Multi Operational System Apparatus and Method, U.S. patent 7,583,506.

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- Apparatus for Measuring Characteristics of a Hole and Associated Method, U.S. patent 7,016,052.
- Non-Contact Hole Depth Gauge, U.S. patent 6,882,436.
- Optical Fiber Sensor System, U.S. patent 6,204,920.
- Foreign Object Video Detection and Alert System and Method, U.S. patent 6,064,429.
- Remotely Interrogatable Apparatus and Method for Detecting Defects in Structural Members, U.S. patent 5,969,260.
- Fiber Optic Sensing Systems and Methods Including Contiguous Cavities, U.S. patent 5,698,848.
- Fiber Strain Sensor and System Including One Intrinsic and One Extrinsic Fabry-Perot Interferometer, U.S. patent 5,682,237.
- Strain and Fabry-Perot Etalon Measurement System and Method, U.S. patent 5,589,641.

International Patents

- Many of the US patents listed above have multiple counterparts globally as dictated by business needs.

Speaking Engagements (in part)

- Ground Assault: Obsoleteing of Facility Protections, Broadcast Engineering and IT Conference, 25 April 2022, Las Vegas, Nevada.
- Co-chair, Nanofluids for Lubrication and Thermal Management in Manufacturing, 2020 ASME International Manufacturing Science and Engineering Conference (MSEC), June 22 – 26, 2020 Cincinnati, Ohio.
- Invited speaker, KAUST-NSF Conference on Electronic Materials, Devices and Systems for a Sustainable Future, KAUST, Jeddah, Saudi Arabia, March 15, 2016.
- Guest speaker, O. M. Stewart Colloquium (Physics), University of Missouri – Columbia, April 2014.
- Invited speaker, Indian Institute of Technology – Kanpur, November 2013.
- Invited speaker, "Emerging Materials and Capabilities of Interest to Boeing", University of Missouri – St. Louis Center for Nanoscience, April 2008.
- Invited speaker, Tsinghua University, May 2006.
- Invited speaker, Nano2005 Conference, June 2005.
- Keynote address, Albuquerque Nano-Network of New Mexico, Albuquerque, NM, January 2005.
- Keynote address "Nanotechnology and the Aerospace Industry," Cleveland NanoNetwork, Cleveland, Ohio, November 11, 2004.
- Plenary address "The Aerospace Industry's Strategic Outlook on Nanotechnology", Nanomaterials for Defense Conference, Maui, HI, February 24, 2004.
- Invited speaker, Southern U.S. Regional NNI Workshop, Nanotechnology: From the Laboratory to New Commercial Frontiers, Rice University, May 23, 2002.
- Invited by the U.S. Department of Commerce, National Science Foundation, DOE, FAA, and NASA to participate and speak on nanotechnology workshop panels on issues including productivity, industry needs, global competitiveness, and air safety as an aerospace industry or aircraft manufacturer expert.

Professional Societies and Committees, Recognitions

- Fellow, Optica (Formerly OSA). Local Section Liaison Committee.
- Fellow, American Physical Society (APS).

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- Defense Manufacturing Conference award.
- Boeing Special Invention Award 2018 (2nd place).
- ANSI Nanotechnology Standards Panel (ANSI-NSP) Steering Committee, 2004-present.
- Conference Committee, Midwest Nanoparticle Conference, Cleveland, OH, October 2005.
- Aerospace Industry CBAN (Consultative Board for Advancing Nanotechnology), 2004-2005.
- Industrial Research Institute CBAN, 2005-2006.
- Nanomaterials for Defense Conference Program Committee, 2003-2005.
- SPIE Smart Electronics, MEMS, BioMEMS, and Nanotechnology Program Committee, 1993-2005.
- SPIE Industrial and Commercial Applications Committee, 1993-1998. Session Chair, 1997 SPIE Symposium on Industrial and Commercial Applications of Smart Structures Technologies.
- ASME Active Structures and Materials Committee, 1993-1998. Session Chair, 1996 ASME Symposium on Adaptive Structures and Material Systems.
- Optical Society of Greater St. Louis 1981 - 2015. (President 1997-1999.)
- Other professional society memberships have included ASM, SPIE, IEEE Lasers, SAMPE, AIAA, AAAS, and MRS.

Technical Publications (in part)

- Tom Labarge, Nancy Swartz, John H. Belk, “Ground Assault: Obsoleteing of Facility Protections”, Broadcast Engineering and IT Conference, April 2022, Las Vegas, Nevada.
- Tom Labarge, John Broccoli, Nancy Swartz, John H. Belk, “Living with Current Faults at End-of-Branch Broadcast Facilities,” Broadcast Engineering and IT Conference, October 2021, Las Vegas, Nevada.
- Tom Labarge, Nancy Swartz, Gordon Wysong, John Broccoli, John H. Belk, “Toward a New Understanding of Frequency- and Impedance-Related Failures in Grounding Systems,” Broadcast Engineering and IT Conference, April 2020, Las Vegas, Nevada.
- Mohsen Mosleh, Keron K. Bradshaw, Sonya T. Smith, John H. Belk, Khosro A. Shirvani, “[Roughness Effect in Micropitting and Rolling Contact Fatigue of Silicon Nitride](#)”, *Ceramics* 2019, 2(1), 135-147; <https://doi.org/10.3390/ceramics2010013>.
- Tom Labarge, Nancy Swartz, John H. Belk, “Protecting the Broadcasting Plant: A Critical Look at Accepted Electrical Grounding Techniques,” Broadcast Engineering and IT Conference, April 2019, Las Vegas, Nevada.
- Mohsen Mosleh, Khosro A. Shirvani, Sonya T. Smith, John H. Belk, Gary Lipczynski, “[A Study of Minimum Quantity Lubrication \(MQL\) by Nanofluids in Orbital Drilling and Tribological Testing](#),” *J. Manuf. Mater. Process.* 2019, 3(1), 5; <https://doi.org/10.3390/jmmp3010005>.
- T. E. Huber, K. Asghari, J. H. Belk, J. H. Hunt, "[Charge Transfer and Photocurrent in interface Junction between Bismuth and Graphene](#)," *Physical Review Applied* 10/2018; 10(4). [Impact factor 4.808.]
- T. E. Huber, T. Brower, S. D. Johnson, J. H. Belk, J. H. Hunt, "Photocurrent in Bismuth Junctions with Graphene" submitted to *NanoLetters*. [Impact factor 12.712.] [arXiv:1709.05408](https://arxiv.org/abs/1709.05408) [cond-mat.mes-hall]
- TE Huber, T Brower, S Johnson, JH Belk, JH Hunt, “Photocurrent in bismuth junctions with graphene”, arXiv preprint arXiv:1709.05408

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- M. Mosleh, M. Ghaderi, K. A. Shirvani, J. H. Belk, D. J. Grzina, "[Performance of cutting nanofluids in tribological testing and conventional drilling](#)". Journal of Manufacturing Processes, Jan 2017. [Impact factor 2.322.]
- Lingam, R., Prakash, Om, Belk, J.H., Reddy, N.V., "[Automatic feature recognition and tool path strategies for enhancing accuracy in double sided incremental forming](#)", Int J Adv Manuf Technol, 20 May 2016, DOI 10.1007/s00170-016-8880-1. [Impact factor 1.458.]
- T Huber, S Johnson, Q Barclift, T Brower, JH Hunt, JH Belk, "Photoresponse and light trapping in nanowire array-graphene interfaces", APS Meeting Abstracts
- Huber, T.E., Scott, R., Johnson, S., Brower, T., Belk, J.H., and Hunt, J.H., "[Photoresponse in arrays of thermoelectric nanowire junctions](#)", *Applied Physics Letters*, 2013. DOI: 10.1063/1.4816621 [Impact factor 3.8 for 2012.]
- Mosleh, M., Bradshaw, K., Belk, J.H., Waldrop, J.C., "[Fatigue failure of all-steel and steel-silicon nitride rolling ball combinations](#)", *Wear*, v 271, n 9-10, p 2471-2476, July 29, 2011. DOI: 10.1016/j.wear.2010.12.051 [Impact factor 1.262.]
- Mosleh, M., Bradshaw, K., Belk, J.H., Waldrop, J.C., "[Role of component configuration in evaluation of rolling contact fatigue of hybrid bearings](#)", *Wear* (2011). (It appears that I ended up as an acknowledgement.) [Impact factor 1.262.]
- Hersam, Mark and Weiss, Paul, "Chapter 11 Applications: High Performance Materials and Emerging Areas," page 363, in [WTEC Panel Report on Nanotechnology Research Directions for Societal Needs in 2020 Retrospective and Outlook](#), September 30, 2010, Editors Mihail C. Roco, Chad A. Mirkin, and Mark C. Hersam. John Belk, contributor.
- Mirkin, Chad and Tuominen, Mark, "[Chapter 3](#) Synthesis, Processing, and Manufacturing of Components, Devices, and Systems," page 65, in [WTEC Panel Report on Nanotechnology Research Directions for Societal Needs in 2020 Retrospective and Outlook](#), September 30, 2010, Editors Mihail C. Roco, Chad A. Mirkin, and Mark C. Hersam. John Belk, contributor.
- Mosleh, M., Atnafu, N.D., and Belk, J.H., "[Solid Lubricant Nanoparticles as Wear-Reducing Additives in Sheet Metal Forming Fluids](#)", ASME/STLE International Joint Tribology Conference, 2009.
- M. Mosleh, N.D. Atnafu, J.H. Belk, O.M. Nobles, [Modification of sheet metal forming fluids with dispersed nanoparticles for improved lubrication](#), *Wear* (2008), DOI:10.1016/j.wear.2008.12.074. [Impact factor 1.262.]
- Dang, Vivian T, Richey, Michael, "Nanotechnology Education: Learning at the Leading Edge", Materials Research Society Spring Meeting, 24-28 March 2008, San Francisco, California. (It appears that I ended up as an acknowledgement.)
- Belk, J.H., Cormia, R., Dang, V., Drane, D., Krajcik, J., Richey, M., Sabelli, N., & Stevens, S. (2007). [A System View of Nanoscience Education](#).
- Dang, V.T., Richey, M.C., Belk, J.H., and Cormia, R., [Nanotechnology, Education and Workforce Development](#), AIAA Technical Conference 2007.
- DOE [Nanomanufacturing for Energy Efficiency](#), 2007.
- Nanotechnology in aerospace applications, Murday, James S.; Cotter, Frank; Belk, John H.; Rawal, Suraj; Dastoor, Minoo N., *Advanced Materials and Processes*, v 163, n 12, p 21-23, December 2005; ISSN: 08827958. [Impact factor 0.144 in 2001.]
- Miller, John C., Serrato, Ruben, Represas-Cardenas, Jose Miguel, and Kundahl, Griffith, [The Handbook of Nanotechnology: Business, Policy, and Intellectual Property Law](#), Wiley 2004. Back cover credit.
- [Materials by Design: Report of the NNI Workshop, June 11-13, 2003](#).
- [Implications of Emerging Micro and Nanotechnologies](#), National Academies Press, 2002.
- Henson, G.A., et. al., "Quality Assurance," [ASM Composites Handbook](#), Dec 2001.

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- Cure Monitoring and Control, D. Heider, R. Don, E.T. Thostensen, K. Tackitt, J.H. Belk, T. Munns, ASM Int'l, 2001. pp. 692-698.
- [Development of a Structurally Compatible Sensor Element](#), Walsh, S.M., et. al., Proc. SPIE Vol. 4335, p. 63-73, Advanced Nondestructive Evaluation for Structural and Biological Health Monitoring; Tribikram Kundu; Ed.; 2001.
- [Project summary: applied research on remotely queried embedded microsensors](#), Krantz, D.G., et. al., Proc. SPIE Vol. 3990, p. 110-121, Smart Structures and Materials 2000: Smart Electronics and MEMS; Vijay K. Varadan; Ed., 2000.
- [Embedded cure monitor, strain gauge, and mechanical state estimator](#), Joel Dubow, Wenjia Zhang, Yijang Lu, Jeremy Bingham, F. Syammach, Donald G. Krantz, John H. Belk, Paul J. Biermann, Ramesh Harjani, Susan C. Mantell, Dennis L. Polla, and Philip R. Troyk, Proc. SPIE 3673, 336 (1999), DOI:10.1117/12.354288
- [Early demonstration of remotely queried microsensors](#), Lee W. Gause, Donald G. Krantz, Paul J. Biermann, and John H. Belk, Proc. SPIE 3673, 190 (1999), DOI:10.1117/12.354268
- [Project update: applied research on remotely queried embedded microsensors](#), Donald G. Krantz, John H. Belk, Paul J. Biermann, Joel Dubow, Lee W. Gause, Ramesh Harjani, Susan C. Mantell, Dennis L. Polla, and Philip R. Troyk, Proc. SPIE 3673, 157 (1999), DOI:10.1117/12.354261
- [Fiber optic Raman backscatter temperature monitoring in composites](#), John H. Belk, Erwin W. Baumann, and Michael L. Vandernoot, Proc. SPIE 3589, 142 (1999), DOI:10.1117/12.339957
- [Applied research in remotely queried embedded microsensors](#), Donald G. Krantz, John H. Belk, Joel Dubow, Charles Hautamaki, Susan C. Mantell, Dennis L. Polla, and Shayne M. Zurn, Proc. SPIE 3328, 124 (1998), DOI:10.1117/12.320162
- [Remotely queried wireless embedded microsensors in composites](#), Donald G. Krantz and John H. Belk, Proc. SPIE 3044, 219 (1997), DOI:10.1117/12.274666
- [Summary of DARPA's embedded sensors for submarine structures program](#), Belk, J.H. Kelly, J.J.; Crane, R.M. Source: American Society of Mechanical Engineers, Aerospace Division (Publication) AD, v 52, p 497-503, 1996, Proceedings of the ASME Aerospace Division.
- JH Belk, PA Hicks, DG Krantz, "[An etched antenna for autoclaveable RFID tags](#)", Antenna Technology and Applied Electromagnetics, 1996. ANTEM 1996.
- Krantz, JH Belk, An Overview of the Remotely-Queried Embedded Microsensors Program, ANTEM, 811-814.
- [Active wavelength demodulation of Bragg fibre-optic strain sensor using acousto-optic tunable filter](#), T. Coroy, P.J. Ellerbrock, R.M. Measures, and J.H. Belk, Electronics Letters, Volume 31, Issue 18, p. 1602-1603 (1995), DOI:10.1049/el:19951087. [Impact factor 1.038.]
- [Adaptation Of A WYKO LADITE Interferometer To Another Wavelength](#), Jay H. Lowry, John H. Belk, Proc. SPIE 0941, Automated Testing of Electro-Optical Systems, 90 (August 4, 1988); doi:10.1117/12.947182.
- Apollo-Soyuz Test Project, Summary Science Report, [Volume II](#), Farouk El-Baz and D. M. Warner, ed., 1979, photo credit, NASA, page 198.
- S Zeng, J Belk, J Huang, A Kawczak, Collaborating for the Application and Commercialization of Nano Technology, US-China NSF Workshop and Summer Institute of Bio-and Nano-Mechanics and ...
- JH Hunt, JH Belk, "Ultra-low light level photoresponse in thermoelectric nanowire arrays", Boeing Technical Journal.

John H. Belk, cont.

- ***Other Publications***
- Cover of The Handbook of Nanotechnology: Business, Policy, and Intellectual Property Law 1st Edition, John C. Miller, Ruben Serrato, Jose Miguel Represas-Cardenas, Griffith Kundahl. "Chapter by chapter, this book provides comprehensive discussions of the forces that drive the business of nanotechnology today, providing invaluable assistance in avoiding the pitfalls that await start-ups and long-standing corporations alike. It captures the journey we've been through these last few years, and offers the lessons we've learned to those who follow. Every new CEO or CFO of a high-tech company will find this book an invaluable resource." –John H. Belk, Boeing Technology Ventures, Phantom Works; Chairman, Nanotechnology Steering Committee.
- BMW CCA club magazines
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- University art magazines.