

Curriculum Vitae – Wojciech Z. Misiolek, Ph.D.

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Educational Background:

Ph.D. Metallurgy (with honors)	AGH-University of Science and Technology Krakow, Poland	1985
M.S. Metallurgy (with distinction)	AGH-University of Science and Technology Krakow, Poland	1980

Professional Experience:

2012-present: *B. H. Barkalow & Associates, Inc.*, Newaygo, MI. **Senior Materials Science Engineering Expert Consultant** for hospitals, medical device companies, legal firms, and insurance carriers. Responsibilities consist of providing materials science and mechanical engineering client support which can include microscopic examinations of subject and exemplar devices for fracture as well as elemental analysis, reports of findings, as well as expert witness testimony.

06/2005-present: *Lehigh University*, Bethlehem, PA. Loewy Professor of Materials Forming and Processing; Director, Institute for Metal Forming- joint appointment, Materials Science and Engineering and Mechanical Engineering and Mechanics.

Research Fields: Deformation Processing; Physical Metallurgy, Process Engineering, Physical and Numerical Modeling, Workability, Material Flow, Microstructure Characterization, Powder Metallurgy and Powder Processing, Metal-Matrix Composites, Machinability of Metals and Alloys, Bio-Materials and Devices.

07/2011-01/2012: *Technical University of Dortmund*, Dortmund, Germany. Mercator Visiting Professor.

05/2002-present: *EMV Innovative Material Technologies LLC*, Bethlehem, PA. Senior Scientist.

05/2006-08/2006: *Austrian Research Center – LKR*, Ranshofen, Austria. Hertha-Firnberg Fellow.

06/2005-08/2005: *Norwegian University of Science and Technology (NTNU)*, Trondheim, Norway. Visiting Professor, Department of Engineering Design and Materials.

08/1997-05/2005: *Lehigh University*, Bethlehem, PA. Loewy Associate Professor.

07/2004-01/2005: *The University of Queensland*, Brisbane, Australia. Visiting Professor, Division of Materials.

09/1984-07/1997: *Rensselaer Polytechnic Institute*, Troy, NY.

08/1996-07/1997: Associate Professor, Materials Science and Engineering.

09/1992-05/1997: Co-Director of Aluminum Processing Program.

08/1993-07/1996: Research Associate Professor.

08/1991-07/1993: Research Assistant Professor.

Curriculum Vitae – Wojciech Z. Misiolek, Ph.D.

07/1988-07/1991: Visiting Research Associate (with Profs. R. N. Wright and R. M. German).

09/1987-07/1988: *Lehigh University*, Bethlehem, PA. Visiting Scientist (with Prof. B. Avitzur), Institute for Metal Forming.

09/1984-07/1991: *AGH-University of Science and Technology*, Krakow, Poland. Assistant Professor.

Professional Affiliations:

American Powder Metallurgy Institute, American Society for Materials International (Member of Executive Committee of Lehigh Valley Chapter)

European Society for Forming of Materials (ESAFORM)

Polonia Technica, Society of Manufacturing Engineers

The Minerals, Metals & Materials Society (TMS)

Tube & Pipe Association, International (Member of the Extrusion, Drawing and Tube Reducing Council; 1995-2003)

Honors:

Fellow of the ASM International, 2005

ASM Bradley Stoughton Award, Lehigh Valley Chapter, 2006

Academic Partner Award, Ben Franklin of North East Pennsylvania, Bethlehem, PA, May 11, 2004

Tube and Pipe Association Industry Education Activities Award, 1999

Alfred H. Geisler Memorial Award, Eastern New York Chapter of ASM International, 1995

Senior Class Award, Materials Science & Engineering, RPI, 1997

Theodore M. Hesburgh Award for Faculty Development to Enhance Undergraduate Teaching sponsored by TIAA CREF, 1995

Who's Who in Science and Engineering

Who's Who Among America's Teachers

Who's Who in Polish America

Strathmore's Who's Who

Metallurgical and Materials Transactions – Editorial Board (since 2003)

JSME Journal of Mechanics, Materials and Processing (2006-2007)

Aluminum Transactions - Editorial Board (1999-2002)

The Best Scientific Paper Award at the Sixth International Aluminum Extrusion Technology Seminar, Chicago, IL, May 15, 1996

The Best Technical Paper Awards (two) at the Fifth International Aluminum Extrusion Technology Seminar, Chicago, IL, May 20, 1992

Kosciuszko Foundation Fellowship, New York, NY, to conduct research at Lehigh University, Bethlehem, PA (09/1987-07/1988)

Curriculum Vitae – Wojciech Z. Misiolek, Ph.D.

Publications:

W. Z. Misiolek, P. Kastner and J. Zasadzinski

Analysis of the Process of M1E and M2S Copper Wire Flattening in Rolling Dies, *Metalurgia i Odlewnictwo*, 1982, Vol. 8, No. 1, 115-134 (in Polish and in English).

W. Z. Misiolek and J. Zasadzinski

Estimation of Extrudability of Metals by Means of Special Test Die, *Archiwum Hutnictwa*, 1985, Vol. 30, No. 4, 509-522.

W. Z. Misiolek and J. Zasadzinski

Extrudability of Selected Aluminium Alloys, *Zeszyty Naukowe AGH Mechanika*, 1986, Vol. 9, 89-94 (in Polish).

W. Z. Misiolek and J. Zasadzinski

Extrudability Testing of Aluminium Alloys of Different Formability, *Archives of Metallurgy*, 1987, Vol. 32, No. 3, 439-451.

J. Zasadzinski, J. Richert and W. Z. Misiolek

Physical Modeling Pertaining to Extrusion of Asymmetric Shapes, *Journal of Materials Shaping Technology*, 1989, Vol. 7, No. 2, 113-116.

M. S. Oh, Q. F. Liu, W. Z. Misiolek, A. Rodrigues, B. Avitzur and M. R. Notis

Fabrication and Microstructure of Composite Metal Clad Ceramic Superconducting Wire, *Journal of American Ceramic Society*, 1989, Vol. 72, No. 11, 2142-2147.

W. Z. Misiolek and R. M. German

Reactive Sintering and Reactive Hot Isostatic Compaction of Aluminide Matrix Composites, *Materials Science and Engineering: A*, 1991, Vol. A144, No. 1, 1-10.

S. R. Martins and W. Z. Misiolek

Consolidation of Particulate Materials in Extrusion, *Reviews in Particulate Materials*, Princeton, NJ, 1996, Vol. 4, 43-70.

W. Z. Misiolek

Material Physical Response in the Extrusion Process, *Journal of Materials Processing Technology*, 1996, Vol. 60, Nos. 1-4, 117-124.

S. J. Rock, C. R. Gilman, and W. Z. Misiolek

Freeform Powder Molding: From CAD Model to P/M Part without Hard Tooling, *International Journal of Powder Metallurgy*, 1997, Vol. 33, No. 6, 37-44.

R. Bandar, S. Lorcharoensery, and W. Z. Misiolek

3-D Material Flow Analysis of Asymmetric Hollow Extrusions, *Journal of Materials Processing Technology*, Vols. 1998, 80-81, 657-664.

W. Z. Misiolek, K. T. Winther, A. E. Prats, and S. J. Rock

Rapid Prototyping of Extrusion Dies Using Layer-Based Techniques, *Journal of Materials Engineering and Performance*, 1999, Vol. 8, No. 1, 23-30.

N. D. Sopchak and W. Z. Misiolek

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- S. R. Claves, W. Z. Misiolek, W. H. Van Geertruyden and D. B. Williams
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- D. F. Susan, W. Z. Misiolek, and A. R. Marder
Reaction Synthesis of Ni-Al Based Particle Composite Coatings, *Metallurgical and Materials Transactions*, 2001, Vol. 32A, February 379.
- S. R. Claves, W. Z. Misiolek, and D. B. Williams
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- A. Toro, W. Z. Misiolek, A. P. Tschiptschin
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- W. H. Van Geertruyden and W. Z. Misiolek
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- W. H. Van Geertruyden, S. R. Claves, and W. Z. Misiolek
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- M. Galanty, P. Kazanowski, P. Kansuwan, and W. Z. Misiolek
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- M. Galanty, P. Kazanowski, P. Kansuwan, and W. Z. Misiolek
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- W. H. Van Geertruyden, W. Z. Misiolek, M. Gonçalves, G. Szilagyi and M. Nowell
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- M. Gonçalves, M. Martins, W. Z. Misiolek and W. H. Van Geertruyden
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- P. Kazanowski, W. Z. Misiolek, and V. K. Sikka
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- W. Z. Misiolek, W. H. Van Geertruyden, S. R. Claves, A. Bandar, P. Kazanowski, P. Kansuwan
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- S. K. Lorcharoensery, F. C. Gift, W. Z. Misiolek, F. G. Hanejko, and K. S. Narasimhan
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P. Kazanowski, W. Z. Misiolek, M. E. Epler, V. K. Sikka
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W. H. Van Geertruyden, W. Z. Misiolek, and P. T. Wang
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P. Kazanowski, H. M. Browne, W. Libura, W. Z. Misiolek
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W. Van Geertruyden, W. Z. Misiolek, P. Wang
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M. E. Epler, W. Z. Misiolek
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R. M. Deacon, C. A. Prescott, W. Z. Misiolek
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M. E. Epler, W. Z. Misiolek
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L. DePari Jr., W. Z. Misiolek, A. R. Bandar, W. H. Van Geertruyden
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L. De Pari Jr., W. Z. Misiolek
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A. Belwalkar, E. Grasing, W. Van Geertruyden, Z. Huang, W. Z. Misiolek
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V. V. Dabhade, P. Kansuwan and W. Z. Misiolek
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B. F. Gerard, L. De Pari Jr., W. Z. Misiolek
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A. Attaluri, Z. Huang, A. Belwalkar, W. Van Geertruyden, D. Gao, W. Z. Misiolek
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K. Song, V. Dabhade, W. Z. Misiolek
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A. Toro, F. Zhou, M. H. Wu, W. Van Geertruyden, W. Z. Misiolek
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J. Biedronska, W. Z. Misiolek

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Application of Aluminum in "Green" Architecture – Today and Tomorrow, *ACEE Journal*, 2009, Vol.2, No. 1, 5.

N. D. Hurley, W. H. Van Geertruyden, W. Z. Misiolek
Surface Grain Structure Evolution in Hot Rolling of 6061 Aluminum Alloy, *Journal of Materials Processing Technology*, 2009, Vol. 209, Nos. 18-19, 5990-5995.

A. Jäger, M. Heilmann, W. Z. Misiolek, M. Schikorra, A. E. Tekkaya
Influence of Cooling Rate on Distortion Microstructure in Extrusion of Al-Mg-Si Alloys, *International Journal of Materials Forming*, 2009, Vol. 2, Suppl. 1, 81-84.

W. Z. Misiolek and W. R. Van Geertruyden
Combined Numerical Simulation and Microstructure Characterization for Prediction of Physical Properties in Extruded Aluminum Alloys *Key Engineering Materials*, 2009, Vol. 424, 1-8.

A. Belwalkar, H. Xiao, W. Z. Misiolek, J. Toulouse
Extruded Tellurite Glass Optical Fiber Preforms, *Journal of Materials Processing Technology*, 2010, Vol. 210, 2016-2022.

A. Belwalkar, W. Z. Misiolek and J. Toulouse
Study of the Viscosity of the Optical Tellurite Glass: 75TeO₂.20ZnO.5Na₂O, *Journal of Non-Crystalline Solids*, 2010, Vol. 356, 1354-1358.

L. De Pari Jr., W. Z. Misiolek, J. H. Forsmark, A. A. Luo
Flow Stress Numerical Modeling for Large Strain Deformation in Magnesium, *Computer Methods in Materials Science*, 2010, Vol. 10, No. 2., 108-129.

M. Epler and W. Z. Misiolek
Combined Physical and Numerical Simulation of Bimetallic Tube Extrusion, *Steel Research International*, 2010, Vol. 81, No. 9, 402-405.

M. K. McQuaig Jr., A. Toro, W. Van Geertruyden, W. Z. Misiolek
The Effect of High Temperature Heat Treatment on the Structure and Properties of Anodic Aluminum Oxide (AAO), *Journal of Materials Science*, 2011, Vol. 46, 243-253.

W. Z. Misiolek
Modeling of Microstructure Response to Deformation Parameters in Selected Metal Forming Processes, *Steel Research International*, 2011, Special Edition - ICTP 2011, 56-62.

T. Pasang, J. C. Sabol, W. Z. Misiolek, R. M. Mitchell, A. B. Short, A. J. Thome
Metallurgical Characterization of Deformed Electron Beam Welded Dissimilar Titanium Alloys, *Steel Research International*, 2011, Special Edition - ICTP 2011, 657-661.

Y. Xu and W. Z. Misiolek
Numerical Modeling of Extrusion Welding in Magnesium Alloys, *Key Engineering Materials*, 2011, Vol. 491, 159-172.

M. Haase, N. Ben Khalifa, A. E. Tekkaya and W. Z. Misiolek
Improving Mechanical Properties of Solid State Recycled Aluminum Chips by Integrated Extrusion and Equal Channel Angular Pressing, *Materials Science and Engineering: A*, 2012, Vol. 539, 194-204.

T. Pasang, J. C. Sabol, W. Z. Misiolek, R. Mitchell, A. B. Short, G. Littlefair
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L. De Pari Jr., W. Z. Misiolek

Numerical Modeling of Copper Tube Extrusion – Process and Eccentricity Analysis, *ASME- Journal of Manufacturing Science and Engineering*, (in press).

W. Z. Misiolek, M. Haase, V. Güley, N. Ben Khalifa, A. E. Tekkaya, M. Kleiner

High Quality Extrudates from Aluminum Chips by New Billet Compaction and Deformation Routes, *CIRP Annals*, Vol. 61, No. 1, 2012, 239-242.

J. J. Blaney, S. Neti, W. Z. Misiolek, A. Oztekin

Containment Capsule Stresses for Encapsulated Phase Change Materials, *Applied Thermal Engineering*, (submitted for publication).

J. C. Sabol, T. Pasang, W. Z. Misiolek, J. C. Williams

Localized Tensile Strain Distribution and Metallurgy of Electron Beam Welded Ti-5Al-5V-5Mo-3Cr Titanium Alloys, *Journal of Materials Processing Technology*, (submitted for publication).

Refereed Chapters in Books or Monographs:

K. Rajan, W. Z. Misiolek, R. Garcia and R. N. Wright

Microstructural Effects of Hot Extrusion of YBa₂Cu₃O_{7-x}. *High Temperature Superconducting Compounds II* (eds. S. H. Wang, A. Das Gupta, and R. Laibowitz), TMS, Warrendale, PA, 1990, 291-298.

W. Z. Misiolek and R. M. German

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R. N. Wright, R. M. German, D. B. Knorr, R. K. MacCrone, K. Rajan, and W. Z. Misiolek

Mechanical Consideration in the Processing of High T_c Superconductors. *High Temperature Superconducting Compounds II* (eds. S. H. Wang, A. Das Gupta, and R. Laibowitz), TMS, Warrendale, PA, 1990, 217-225.

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M. R. Wegmann, W. Z. Misiolek and R. M. German

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A. Bose, R. A. Page, W. Z. Misiolek and R. M. German

Reactive Sintering and Reactive Hot Isostatic Pressing of Iron Aluminides. *Advances in Powder Metallurgy - 1991*, MPIF, Princeton, NJ, 1991, Vol. 6, 31-146.

K. Shaw, W. Z. Misiolek and R. M. German

The Properties of Plasma Atomized NiAl Powders. *Advances in Powder Metallurgy - 1991*, MPIF, Princeton, NJ, 1991, Vol. 6, 159-166.

W. Z. Misiolek and R. M. German

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W. Z. Misiolek
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