Curriculum Vitae – Andrea Maria Hodge, Ph.D.

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Educational Background:

Ph.D. Materials Science and Engineering (minor in Civil Engineering)	Northwestern University Evanston, IL	2002
B.S. Mechanical Engineering	University of Nevada Las Vegas, NV	1997

Professional Services:

08/2012-Present: *B. H. Barkalow & Associates, LLC*, Newaygo, MI. **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.

09/2007-Present: *University of Southern California*, Los Angeles, CA. **Assistant Professor and Philip and Cayley MacDonald Early Career Chair**, Department of Aerospace and Mechanical Engineering, Department of Chemical Engineering and Materials Science.

Selected Courses Taught:

ENGR 102, Engineering Freshman Academy (Fall 2008, 2009, 2011). Course required for all engineering freshman that covers introductory material relevant to the engineering profession including ethics, societal impact, and innovations. Students engage in a team project that spans the entire semester.

AME/MASC 551, Mechanical Behavior of Engineering Materials (Fall 2009, 2010, 2011). Course covers mechanical properties of materials; macroscopic mechanical behavior related to structure and microstructure of the material; elementary dislocation theory related to basic strengthening mechanisms; fatigue and fracture; nanomaterials.

AME 204, Strength of Materials (Spring 2008, 2009). Stress, strain and deflection of mechanical elements due to tension, shear, bending, or torsion; combined loads; energy methods, statically indeterminate structures; strength-based design.

01/2004-08/2007: *Lawrence Livermore National Laboratory*, Livermore, CA. **Staff Scientist**, Materials Science and Technology Division.

08/2002-12/2004: *Lawrence Livermore National Laboratory*, Livermore, CA. **Post-Doctoral Fellow,** Materials Science and Technology Division.

09/1997-06/2002: *Northwestern University*, Evanston, IL. **Graduate Research Assistant,** Materials Science and Engineering Department.

09/2001-12/2001: *NASA Glenn Research Center*, Cleveland, OH. **Engineer Intern.** Advisor: Michael V. Nathal.

06/1996-08/1996: *National Science Foundation Research Fund*, Las Vegas, NV. **Undergraduate Researcher.**

Visiting/Guest Scientist Positions
Institute of Nanotechnology, Karlsruhe Institute of Technology, June 2010.
National Institute for Materials Science (NIMS), Tsukuba, Japan March 2011.

Research Interests:

Nanomechanics, nanocrystalline materials processing, high temperature mechanics, thin and thick film coatings, biomaterials mechanics, foam processing.

Invited Book Chapters:

A.M. Hodge, J.T. Balk., "Mechanical properties of nanoporous gold," in *Nanoporous Gold: From an Ancient Technology to a High-Tech Material*, edited by A. Wittstock, J. Biener, J. Erlebacher, M. Baumer, RSC Nanoscience & Nanotechnology No. 22, Royal Society of Chemistry, 2012.

J. Biener, **A.M. Hodge**, A.V. Hamza, "Deformation behavior of nanoporous materials," in *Micro and Nano Mechanical Testing of Materials and Devices*, edited by F. Yang, J.C.M. Li, Springer 2008.

Journal Publications (peer reviewed):

O. Franke , J. Alcalá, R. Dalmau, Z.C. Duan, J. Biener, M. Biener, **A.M. Hodge**, **"**Incipient plasticity of single Crystal Tantalum as a function of temperature and orientation," submitted to *International Journal of Plasticity*.

Y.F. Zhao, T.A. Furnish, M.E. Kassner, A.M. Hodge "Thermal stability of highly nanotwinned copper: the role of grain boundaries and texture," submitted to *Journal of Materials Research*.

I.C. Cheng, **A.M. Hodge**, "High temperature morphology and stability of nanoporous Ag foams," submitted to *Philosophical Magazine Letters*.

V.T. Nayar, J.D. Weiland, **A.M. Hodge**, "Size and scale effects on the viscoelastic characterization of soft biological materials," *Tissue Engineering, Part C: Methods* (2012, in press).

J. Alcalá, R. Dalmau, O. Franke, M. Biener, J. Biener, **A.M. Hodge**, "Planar defect nucleation and annihilation mechanisms in nanocontact plasticity of metal surfaces," *Physical Review Letters* (2012, in press).

A.M. Hodge, T.A. Furnish, C.J. Shute, Y. Liao, X. Huang, C.S. Hong, Y.T. Zhu, T.W. Barbee Jr., J.R. Weertman, "Twin stability in highly nanotwinned Cu under compression, torsion and tension," *Scripta Materialia*, 66(11), pp. 872–877 (2012).

I.C. Cheng, **A.M. Hodge**, "Morphology, oxidation and mechanical behavior of nanoporous Cu foams," *Advanced Engineering Materials*, 14(4), pp. 219-226 (2012).

A.A. Navid, **A.M. Hodge**, "Alpha and beta tantalum phase formation–relationship between plasma parameters and microstructure," *Materials Science and Engineering: A*, 536, pp. 49–56 (2012).

V.T. Nayar, J.D. Weiland, C.D. Nelson, **A.M. Hodge**, "Elastic and viscoelastic behavior of Agar," *Journal of the Mechanical Behavior of Biomedical Materials*, 7, pp. 60–68 (2012).

A.M. Hodge, T.A. Furnish, A.A. Navid, T.W. Barbee, "Shear band formation and ductility in nanotwinned Cu," *Scripta Materialia*, 65(11), pp. 1006-1009 (2011).

C.J. Shute, B.D. Myers, Y. Liao, S. Li, **A.M. Hodge**, T.W. Barbee, Y.T. Zhu, J.R. Weertman, "High pressure torsion of copper samples containing columns of highly aligned nanotwins" *Scripta Materialia*, 65(10), pp. 899-902 (2011).

C.J. Shute, B.D. Myers, S. Xie, S.-Y. Li, T.W. Barbee Jr., **A.M. Hodge**, J.R. Weertman, "Detwinning, damage and crack initiation during cyclic loading of Cu samples containing aligned nanotwins," *Acta Materialia*, 59(11), pp. 4569–4577 (2011).

O. Franke, M. Göken, M. Meyers, K. Durst, **A.M. Hodge**, "Dynamic nanoindentation of articular porcine cartilage," *Materials Science and Engineering: C*, 31(4), pp. 789-795 (2011).

V.T. Nayar, J.D. Weiland, **A.M. Hodge**, "Characterization of porcine sclera using instrumented nanoindentation," *Materials Science and Engineering: C*, 31(4), pp. 796-800 (2011).

A.A. Navid, **A.M. Hodge**, "Controllable residual stresses in sputtered nanostructured alpha- Ta," *Scripta Materialia*, 63(8), pp. 867-870 (2010).

A.A. Navid, E. Chason, **A.M. Hodge**, "Evaluation of stress during and after sputter deposition of Cu and Ta films," *Surface and Coatings Technology*, 205(7), pp. 2355–2361 (2010).

K. Rajulapati, M. Biener, J. Biener, **A.M. Hodge**, "Temperature dependence of the plastic flow behavior of tantalum," *Philosophical Magazine Letters*, 90(1), pp. 35–42 (2010).

C.J. Shute, B. Myers, S. Xie, T.W. Barbee Jr., **A.M. Hodge**, J.R. Weertman, "Detwinning and crack initiation during cyclic loading in multilayer copper/copper samples with nanoscale twining," 30th Riso International Symposium on Materials Science: Nanostructured Metals – Fundamentals to applications, pp. 171-182 (2009).

Z.C. Duan, **A.M. Hodge**, "High temperature nanoindentation: new developments and ongoing

challenges," *JOM*, 61(12), pp. 32-36 (2009).

P.L. Martin, **A.M. Hodge**, G.H. Campbell, "Compaction behavior and mechanical properties of uniaxially pressed Bi-W composites," *Metallurgical and Materials Transactions A*, 40A, pp. 2124-2136 (2009).

J. Weissmüller, R.C. Newman, H-J Jin, **A.M. Hodge**, J.W. Kysar, "Nanoporous metals by alloy corrosion: formation and mechanical properties," *MRS Bulletin*, 34(8), pp. 577-586 (2009).

M. Kassner P. Geantil, **A.M. Hodge**, R.S. Rosen, "The assessment of the ambient-temperature mechanical properties of ultra-fine-grained silver with nano-twins using microshear tests," *Scripta Materialia*, 61(7), pp. 9721-9724 (2009).

A.J. Detor, **A.M. Hodg**e, E. Chason, Y.M. Wang, H.W. Xu, M. Conyers, A. Nikroo, A. Hamza, "Stress and microstructure of thick sputtered films," *Acta Materialia*, 57(7), pp. 2055-2065 (2009).

S. Van Petegem, S. Brandstetter, R. Maass, **A.M. Hodge**, B.S. El-Dasher, J. Biener, B. Schmitt, C. Borca, H. Van Swygenhoven, "On the microstructure of nanoporous gold: an x-ray diffraction study," *Nano Letters*, 9(3), pp. 1158-1163 (2009).

C.J. Shute, B.D. Myers, S. Xie, T.W. Barbee, **A.M. Hodge**, J.R. Weertman, "Microstructural stability during cyclic loading of multilayer copper/copper samples with nanoscale twinning," *Scripta Materialia*, 60(12), pp. 1073–1077 (2009).

A.M. Hodge, R.T. Doucette, M.M. Biener, J. Biener, O. Cervantes, A.V. Hamza, "Ag effects on the elastic modulus values of nanoporous Au foams," *Journal of Materials Research*, 24(4), pp. 1600-1606 (2009).

B. Ahn, R. Mitra, **A.M. Hodge**, E.J. Lavernia, S.R. Nutt, "Strain rate sensitivity studies of cryomilled Al alloy performed by nanoindentation," *Material Science Forum*, 584-586, pp. 221-226 (2008).

A.M. Hodge, M. Kumar, P.W. Martin, G. H. Campbell, **"**Effect of intermetallic layer formation on the mechanical behavior of laminated Ta/Au composites," *Materials Science and Engineering: A*, 494, pp. 276-280 (2008).

O. Franke, M. Göken**, A.M. Hodge**, "The nanoindentation of soft tissue: current and developing approaches," *Journal of Metals*, 60(6), pp. 49-53 (2008).

A.M. Hodge, Y.M. Wang, T.W. Barbee Jr, "Mechanical deformation of high-purity sputterdeposited nano-twinned copper," *Scripta Materialia*, 59(2), pp. 163-166 (2008).

J. Biener, G.W. Nyce, **A.M. Hodge**, M.M. Biener, A.V. Hamza, S.A. Maier, "Nanoporous plasmonic metamaterials," *Advanced Materials*, 20(6), pp. 1211-1217 (2008).

M. Biener, J. Biener, **A.M. Hodge**, A.V. Hamza, "Dislocation nucleation in bcc Ta single crystals

studied by nanoindentation," *Physical Review B*, 76, article 165422 (2007).

L.A. Zepeda-Ruiz, B. Sadigh, J. Biener, A.M. Hodge, A.V. Hamza, "Mechanical response of freestanding Au nanopillars under compression," *Applied Physics Letters*, 91(1), article 101907 (2007).

P.W. Martin, **A.M. Hodge**, G.H. Campbell, "Compaction behavior of uniaxially cold-pressed Bi-Ta composites," *Scripta Materialia* 57(3), pp. 229-232 (2007).

A.M. Hodge, J. Biener, J.R. Hayes, P.W. Bythrow, A.V. Hamza, "Scaling equations for nanoporous open-cell foams," *Acta Materialia*, 55(4), pp. 1343-1349 (2007).

J. Biener, **A.M. Hodge**, J.R. Hayes, Cynthia A. Volkert, L.A. Zepeda-Ruiz, A.V. Hamza, "Size effects on the mechanical behavior of nanoporous Au," *Nano Letters*, 6(10), pp. 2379-2382 (2006).

J.R. Hayes**, A.M. Hodge**, J. Biener, K. Sieradzki, A.V. Hamza, "Monolithic nanoporous copper by dealloying of Mn-Cu," *Journal of Materials Research*, 21(10), pp. 2611-2616 (2006).

Y.M. Wang, **A.M. Hodge**, P.M. Bythrow, T.W. Barbee, A.V. Hamza, "Negative strain rate sensitivity in ultrahigh-strength nanocrystalline tantalum," *Applied Physics Letters*, 89(8), article 081903 (2006).

A.M. Hodge, Y.M. Wang, T.W. Barbee Jr., "Large-scale production of nano-twinned, ultrafine-grained copper," *Materials Science and Engineering: A*, 429, pp. 272-276 (2006).

A.M. Hodge, J.R. Hayes, J.A. Caro, J. Biener, A.V. Hamza, "Characterization and mechanical behavior of nanoporous gold," *Advanced Engineering Materials*, 8(9), pp. 853-857 (2006).

Y.M. Wang, E.M. Bringa, J.M. McNaney, M. Victoria, A. Caro, **A.M. Hodge**, R. Smith, B. Torralva, B.A. Remington, C.A. Schuh, H. Jamarkani, M.A. Meyers, "Deforming nanocrystalline nickel at ultrahigh strain rates," *Applied Physics Letters*, 88(6), article 061917 (2006).

J. Biener, **A.M. Hodge**, A.V. Hamza, "Microscopic failure behavior of nanoporous gold," *Applied Physics Letters*, 87(12), article 121908 (2005).

A.M. Hodge, G.F Gallegos, R.J. Foreman, "Analysis of residual stresses in thick uranium coatings," *Journal of Nuclear Materials*, 342, pp. 8-13 (2005).

Y.M. Wang**, A.M. Hodge**, J. Biener, A.V. Hamza, D.E. Barnes, K. Liu, T.G. Nieh, "Deformation twinning during nanoindentation of nanocrystalline Ta," *Applied Physics Letters*, 86(10), article 101915 (2005).

A.M. Hodge, J. Biener, L.M. Hsiung, Y.M. Wang, A.V Hamza, J. Satcher Jr., "Monolithic nanocrystalline Au fabricated by the compaction of nanoscale foam," *Journal of Materials Research*, 20(3), pp. 554-557 (2005).

J. Biener, **A.M. Hodge**, A.V. Hamza, L.M. Hsiung, J.H. Satcher Jr., "Nanoporous Au – a high yield

strength material," *Journal of Applied Physics*, 97, article 024301 (2005).

A.C. Lund, **A.M. Hodge**, C.A. Schuh, "Incipient plasticity during nanoindentation at elevated temperatures," *Applied Physics Letters*, 85(8), pp. 1362-1364 (2004).

A.M. Hodge, L.M. Hsiung, T.G. Nieh, "Creep of nearly lamellar TiAl alloys containing W," *Scripta Materialia*, 51(5), pp. 411-415 (2004).

A.M. Hodge, T.G. Nieh, "Evaluating abrasive wear of amorphous alloys using nanoscratch technique," *Intermetallics*, 12(7-9), pp. 741-748 (2004).

A.M. Hodge, D.C. Dunand, "Measurements and modeling of creep in open-cell NiAl foams," *Metallurgical and Materials Transactions A*, 34, pp. 2353-2363 (2003).

D.C. Dunand, **A.M. Hodge**, C. Schuh, "Pack aluminisation kinetics of nickel rods and foams," *Materials Science and Technology*, 18, pp. 326-332 (2002).

A.M. Hodge, D.C. Dunand, "Synthesis of nickel-aluminide foams by pack-aluminization of nickel foams," *Intermetallics*, 9(7), pp. 581-589 (2001).

Invited and Keynote Presentations:

Cornell University, Materials Science Department Seminar, October 2012

European Solid Mechanics Conference, Graz, Austria, July 2012

Boise State University, Materials Science Department Seminar, April 2012

UC Irvine, Materials Science Department Seminar, November 4, 2011.

"How to become a better researcher: from graduate school to the workforce," Society of Hispanic Professional Engineers (SHPE) National Conference, Anaheim, CA, October 26, 2011.

Nanomechanical Testing in Materials Research & Development Conference, Lanzarote, Spain, October 10, 2011.

"High temperature nanoindentation: RT to 200C," Materials Today Webinar, July 27, 2011. (This presentation was viewed by over 700 world-wide users.)

Karlsruhe Institute of Technology (KIT), Germany, July 20, 2011.

National Institute for Materials Science (NIMS), Tsukuba, Japan, March 9, 2011.

Gordon Conference, Thin Film & Small Scale Mechanical Behavior, Colby College, August 2010.

"Mechanics of metallic nanoscale multilayers," MRS Mexico Meeting, Cancun, Mexico, August 2010.

Department of Materials Science and Engineering Seminar, MIT, Cambridge, MA, April 1, 2010.

JSME Conference, Caltech, Los Angeles, CA, March 2010.

Materials Science Department Seminar, UCLA, Los Angeles, CA, April 2010.

TMS Spring Meeting, Seattle WA, February 2010.

Plenary Speaker, Nanomechanical Testing in Materials Research & Development Conference, Barga (Tuscany), Italy, September 2009. (This is the European Gordon Conference.)

Thermec Conference, Berlin, Germany, August 2009.

Chemistry Department Seminar, Cal State, Los Angeles, CA, Spring 2009.

Department of Mechanical Engineering Colloquium, UC San Diego, San Diego, CA, Spring 2009.

20. ASME Annual Meeting, Boston, MA, November 2008.

Department of Mechanical Engineering Colloquium, UC Riverside, Riverside, CA, Fall 2008.

UCLA/Hysitron Nanomechanical Testing Workshop: Frontiers of Materials Characterization, June 2008.

Keynote Speaker, Hysitron User's Meeting, TMS 2008 Spring Meeting, New Orleans, LA, March 2008.

School of Materials Seminar, Arizona State University, Tempe, AZ, Fall 2006.

Materials Science and Engineering Department Seminar, UC Berkeley, Berkeley, CA, Fall 2006.

Mechanical Engineering Department Seminar, UC Berkeley, Berkeley, CA, Spring 2006.

Keynote Speaker, College of Engineering Honors Convocation, University of Nevada, Las Vegas, Las Vegas, NV, April 25, 2005.

Mechanical Engineering Department Seminar, University of Nevada, Las Vegas, Las Vegas, NV, 2003.

TMS 2003 Spring Meeting, San Diego, CA, March 2003.

Selected Contributed Presentations:

A.M. Hodge, "The mechanical deformation of highly nanotwinned Cu," TMS 2012 Annual Meeting & Exhibition, Orlando, FL, March 13, 2012.

I.C. Chung, **A.M. Hodge**, "Synthesis and morphology of nanoporous Cu and Cu oxide Foams,"

TMS 2012 Annual Meeting & Exhibition, Orlando, FL, March 14, 2012.

T.A. Furnish, **A.M. Hodge**, "Microstructural changes across shear bands in nanotwinned Cu foils deformed at room temperature and 77K," TMS 2011 Annual Meeting & Exhibition, Orlando, FL, March 12, 2012.

A.M. Hodge, "Nanoscale behavior of Ta single crystals – Orientation and temperature Dependence," TMS 2011 Annual Meeting & Exhibition, San Diego, CA, February 28, 2011.

I.C. Cheng, **A.M. Hodge**, "The behavior of nanoporous Au and Cu foams with controllable pore size," TMS 2011 Annual Meeting & Exhibition, San Diego, CA, February 28, 2011.

V.T. Nayar, J.D. Weiland, C.S. Nelson, **A.M. Hodge**, "Elastic and viscoelastic characterization of Agar," TMS 2011 Annual Meeting & Exhibition, San Diego, CA, February 2011

I.C. Cheng, **A.M. Hodge**, "Synthesis, morphology, and oxidation of nanoporous Cu foams," IMRC, Cancún, Mexico, August 2011.

V.T. Nayar, J.D. Weiland, **A.M. Hodge**, "Viscoelastic characterization of soft biological materials using nanoindentation," IMRC, Cancún, Mexico, August 2011.

C.S. Nelson, V.T. Nayar, J.D. Weiland, **A.M. Hodge**, "Characterization of ultrasoft biological materials via quasi-static nanoindentation," IMRC, Cancún, Mexico, August 2011.

V.T. Nayar, J.D. Weiland, C.S. Nelson, **A.M. Hodge**, "Elastic and viscoelastic characterization of Agar," TMS Annual Meeting & Exhibition, San Diego, CA, Feb 2011.

T.A. Furnish, A.A. Navid, T.W. Barbee Jr., **A.M. Hodge**, "Synthesis and deformation of nano-twinned copper foils," USC AME Ph.D. Poster Competition, Los Angeles, CA. Sept 9, 2011. (Awarded Best Poster.)

T.A. Furnish, A.A. Navid, T.W. Barbee Jr., **A.M. Hodge**, "Synthesis and deformation of nano-twinned copper foils," TMS 2011 Annual Meeting & Exhibition, MPMD Technical Division Student Poster Contest Symposium, San Diego, CA, February 28, 2011.

V.T. Nayar, J.D. Weiland, **A.M. Hodge**, "Viscoelastic characterization of soft biological materials using nanoindentation." IMRC, Cancún, Mexico, August 2011.

C.S. Nelson, V.T. Nayar, J.D. Weiland, **A.M. Hodge**, "Characterization of ultrasoft biological materials via quasi-static nanoindentation," IMRC, Cancún, Mexico, August 2011.

A.A. Navid, **A.M. Hodge**, "Study of phase formation on nanostructured Tantalum," TMS 2010 Annual Meeting & Exhibition, Seattle, WA, February 14-18, 2010.

A.A. Navid, E. Chason, **A.M. Hodge**, "Evaluation of thermal and growth stress in Copper and Tantalum sputtered films," TMS 2010 Annual Meeting & Exhibition, Seattle, WA, February 14-18,

2010.

V.T. Nayar, J.D. Weiland, **A.M. Hodge**, "Nanoindentation of porcine sclera," Neural Interfaces Conference, Long Beach, CA, June 2010.

A.M. Hodge, A.A. Navid, T.A. Furnish, I. Golosker, "Processing of metallic thin films via magnetron," poster presented at NSF CMMI Engineering Research and Innovation Conference, Honolulu, Hawaii, June 22, 2009.

A.A. Navid, A. Detor, E. Chason, **A.M. Hodge**, "*In situ* multi-beam optical stress sensor (MOSS) measurement for low stress deposition," poster presented at the MRS Spring Meeting & Exhibit, San Francisco, CA, April 14-17, 2009.

A.M. Hodge, J. Biener, "Nanoscale deformation in tantalum single crystals," MRS Spring Meeting, San Francisco, CA, March 2008.

A.M. Hodge, "Synthesis of nanoporous materials," AVS Conference, Dublin, Ireland, July 2008.

A.M. Hodge, J. Biener, "From nanoscale Au columns to nanoporous Au: simulations and Experiments," MRS Fall Meeting & Exhibit, Boston, MA, November 2006.

A.M. Hodge, M. Kumar, "Role of interfacial phases on the mechanical behavior of Ta-Au multilayers," MRS Fall Meeting & Exhibit, Boston, MA, November 2006.

A.M. Hodge, G. Gallegos, "Processing and stress analysis of thick Uranium films," MRS Fall Meeting, Boston, MA, November 2006.

A.M. Hodge, T.W. Barbee, "UFG materials synthesized by multilayer technology," TMS 2006 Annual Meeting & Exhibition, San Antonio, TX, March 2006.

A.M. Hodge, T.W. Barbee, "Characterization and mechanical behavior of Cu/Cu nanolaminates," MRS Spring Meeting & Exhibit, San Francisco, CA, March 2005.

A.M. Hodge, J. Biener, "An overview on the characterization and mechanical behavior of nanoporous gold," MetFoam 2005, Kyoto, Japan, September 2005.

A.M. Hodge, A.V. Hamza, J Biener, "Scaling laws for open-cell nanoporous nanocrystalline gold," MRS Fall Meeting & Exhibit, Boston, MA, December 2004.

A.M. Hodge, C.A. Schuh, "Nanoindentation of Pt at elevated temperatures," Materials Science & Technology 2004, Orleans, LA, September 2004.

A.M. Hodge, T.G. Nieh, L.M. Hsiung, "Creep of nearly lamellar TiAl alloys containing 1.0 and 2.0 % W," Materials Science & Technology 2004, Orleans, LA, September 2004.

A.M. Hodge, A.V. Hamza, **"**Characterization and mechanical behavior of nanoporous

nanocrystalline gold," Chemistry and Materials Science Directorate Post-Doctoral Symposium, Livermore, CA 2004.

A.M. Hodge, D.C. Dunand, "Processing of NiAl foams by pack aluminization," TMS Fall Meeting 2001, Indianapolis, IN, November 2001.

A.M. Hodge, D.C. Dunand, "Aluminization of NiAl and Ni3Al foams," poster presented at the MRS Fall Meeting & Exhibit, Boston, MA, November 2001. (Awarded First Prize.)

A.M. Hodge, D.C. Dunand, "Processing of intermetallic foams by aluminization," Society of Hispanic Professional Engineers 23rd Annual Technical Career Conference (NTTC 2001), Fresno, CA. (Awarded Third Prize.)

Professional Activities:

Selected Honors/Awards
DARPA YFA 2012
ONR YIP Award 2012
Alexander von Humboldt Senior Research Fellow 2011
Philip and Cayley MacDonald Early Career Chair 2011
NSF CAREER Award 2010
NSF BRIGE Award 2008
Excellence in Publication award (LLNL) 2006
TMS Young Leader Award 2004
Crown Graduate Internship 2001
Amelia Earhart Fellowship 2000-01
NSF Graduate Fellowship 1997-00
Walter P. Murphy Fellowship 1997-98
National Hispanic Engineer of the Year- Student (National) 1996-97
NASA Scholarship 1996

Professional Memberships
Materials Research Society (MRS)
The Minerals, Metals and Materials Society (TMS)
Society of Hispanic Professional Engineers (SHPE)

Professional and Character References:

Available upon request.