CURRICULUM VITAE

William E. Buhro

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Personal: Born March 20, 1958 in Lansing, Michigan. Married, with two sons.

Education:

A.B., *magna cum laude* in Chemistry, Hope College, Holland, Michigan, 1980.
Undergraduate Research Advisor: Distinguished Professor Michael P. Doyle

Ph.D., University of California, Los Angeles, 1985
Thesis Title: "Synthesis, Structure and Reactivity of Formaldehyde, Thioformaldehyde, and Phosphide Complexes of Rhenium"
Thesis Advisor: Professor John A. Gladysz

Professional History:

2010 – present	Chair, Department of Chemistry, Washington University, St. Louis, MO.
2006 – present	George E. Pake Professor in Arts & Sciences, Washington University, St. Louis, MO.
2004 – 2010	Associate Director, Center for Materials Innovation Washington University, St. Louis, MO.
2001 - 2006	Professor of Chemistry, Washington University, St. Louis, MO.
1993 - 2001	Associate Professor of Chemistry, Washington University, St. Louis, MO.
1987 - 1993	Assistant Professor of Chemistry, Washington University, St. Louis, MO.
1985 - 1987	Postdoctoral Fellow, Indiana University, Bloomington, Indiana. Advisor: Distinguished Professor Malcolm H. Chisholm.

Honors:

Fellow of the American Chemical Society, 2010-
St. Louis Award, St. Louis Section, American Chemical Society, 2010
Chair, Inorganic Chemistry Gordon Research Conference, 2007
Editor, *Chemistry of Materials*, 2005-
Associate Editor, *Chemistry of Materials*, 2002-2005
Secretary, Division of Inorganic Chemistry, ACS, 2005-2007
Chair, Solid-State Subdivision, Division of Inorganic Chemistry, ACS, 2003
Member, International Advisory Editorial Board, *Dalton Transactions*, 2001-2007
Member, Board of Editors, *Chemistry of Materials*, 1998-2002
Member, Board of Editors, *Inorganic Chemistry*, 1997-1998
Emerson Electric Co. Excellence in Teaching Award, 1996
Washington University CSAS Faculty Award for Teaching, 1995-1996
NSF Presidential Young Investigator, 1991-1996
Washington University CSAS Faculty Award for Teaching, 1989-1990
Chester Davis Research Fellow, 1985-1986
Regents of the University of California Fellow, 1980-1981
Phi Beta Kappa, 1980
National Merit Scholarship Finalist, 1976

Professional Societies:

The American Chemical Society, 1982-
ACS Inorganic Division, 1983-
Materials Research Society, 2002–

Reviewer:

Journals
Polyhedron, 1986-
Journal of the American Chemical Society, 1986-
Chemical Reviews, 1987-
Inorganic Chemistry, 1989-
Synthesis and Reactivity in Inorganic and Metal-organic Chemistry, 1989-
Materials Research Society Symposium Proceedings, 1990-
Organometallics, 1991-
Heteroatom Chemistry, 1991-
Chemistry of Materials, 1991-
Journal of Organometallic Chemistry, 1992-
Journal of the American Ceramic Society, 1995-2000
Angewandte Chemie, 1995-
Inorganica Chimica Acta, 1996-
Science, 1996-
Chemical Communications, 1996-
Langmuir, 1996-
Advanced Materials, 1996-
Journal of Solid State Chemistry, 1997-
Materials Research Bulletin, 1998-
Dalton Transactions, 1999-
Journal of Physical Chemistry, 1999-
Journal of Chemical Education, 1999-
European Journal of Inorganic Chemistry, 1999-
Journal of Materials Chemistry, 2000-

Nano Letters, 2000-
Materials & Design, 2001-
Chemistry – A European Journal, 2002-
Nature Materials, 2003-
J. Crystal Growth, 2004-
J. Chemical Education, 2006-

Funding Agencies
ACS-PRF, 1989-
NSF, 1990-
NRC-AFOSR, 1991-
DOE, 1993-
ASEE-ONR, 1993-
NSF Graduate Research Fellowship Panelist, 1996-
NSF Postdoctoral Research Fellowship Panelist, 1996-

Research Interests: synthetic inorganic and materials chemistry, semiconductor quantum wires, inorganic nanoparticles, nanofibers, nanowhiskers, nanotubes and their growth mechanisms, nanocrystalline and nanocomposite materials

Publications:

1. Doyle, M.P.; Buhro, W.E.; Dellaria, J.F., Jr. *Tetrahedron Lett.* **1979**, 4429. "Lewis Acid-Promoted Cyclopropanation of α,β-Unsaturated Carbonyl Compounds by Diazocarbonyl Compounds. A Facile Synthesis of 1,2-Disubstituted Cyclopropylcarbonyl Compounds of High Isomeric Purity".
2. Doyle, M.P.; Buhro, W.E.; Davidson, J.G.; Elliot, R.C.; Hoekstra, J.W.; Oppenhuizen, M. *J. Org. Chem.* **1980**, *45*, 3657. "Lewis Acid Promoted Reactions of Diazocarbonyl Compounds. 3. Synthesis of Oxazoles from Nitriles through Intermediate β-Imidatoalkenediazonium Salts".
3. Doyle, M.P.; Tamblyn, W.H.; Buhro, W.E.; Dorow, R.L. *Tetrahedron Lett.* **1981**, *22*, 1783. "Exceptionally Effective Catalysis of Cyclopropanation Reactions by the Hexarhodium Carbonyl Cluster".
4. Doyle, M.P.; Dorow, R.L.; Tamblyn, W.H.; Buhro, W.E. *Tetrahedron Lett.* **1982**, *23*, 2261. "Regioselectivity in Catalytic Cyclopropanation Reactions".
5. Buhro, W.E.; Patton, A.T.; Strouse, C.E.; Gladysz, J.A.; McCormick, F.B.; Etter, M.C. *J. Am. Chem. Soc.* **1983**, *105*, 1056. "Synthesis, Chemical Properties, and X-ray Crystal Structures of Rhenium Formaldehyde and Thioformaldehyde Complexes".
6. Buhro, W.E.; Wong, A.; Merrifield, J.H.; Lin, G.-Y.; Constable, A.C.; Gladysz, J.A. *Organometallics* **1983**, *2*, 1852. "Synthesis and Chemistry of Chiral Rhenium Acyls (η-C_5H_5)Re(NO)(PPh_3)(COR)".
7. Doyle, M.P.; Dorow, R.L.; Buhro, W.E.; Griffin, J.H.; Tamblyn, W.H.; Trudell, M.L. *Organometallics* **1984**, *3*, 44. "Stereoselectivity of Catalytic Cyclopropanation Reactions. Catalyst Dependence in Reactions of Ethyl Diazoacetate with Alkenes".
8. Kiel, W.A.; Buhro, W.E.; Gladysz, J.A. *Organometallics* **1984**, *3*, 879. "Reactions of Benzyl Rhenium Complexes (η-C_5H_5)Re(NO)(L)(CH_2Ar) with $Ph_3C^+PF_6^-$; Analysis of the Re-C_α Rotamers Involved in α-Hydride Abstraction".

9. Merrifield, J.H.; Fernandez, J.M.; Buhro, W.E.; Gladysz, J.A. *Inorg. Chem.* **1984**, *23*, 4022. "Cleavage of the Rhenium-Methyl Bond of $(\eta^5\text{-}C_5H_5)Re(NO)(PPh_3)(CH_3)$ by Protic and Halogen Electrophiles: Stereochemistry at Rhenium".
10. Nakazawa, H.; Buhro, W.E.; Bertrand, G.; Gladysz, J.A. *Inorg. Chem.* **1984**, *23*, 3431. "Reactions of Phosphorus Electrophiles with $[(\eta^5\text{-}C_5Me_5)Fe(CO)_2]^-$; Spectroscopic Evidence for a Phosphinidene Complex".
11. Buhro, W.E.; Georgiou, S.; Hutchinson, J.P.; Gladysz, J.A. *J. Am. Chem. Soc.* **1985**, *107*, 3346. "Synthesis, Conformation, and Reactivity of the Rhenium Phosphide Complex $(\eta^5\text{-}C_5H_5)Re(NO)(PPh_3)(PPh_2)$; the "Gauche Effect" in Transition-Metal Chemistry".
12. Buhro, W.E.; Gladysz, J.A. *Inorg. Chem.* **1985**, *24*, 3505. "Configurational Processes in Coordinated Ligands: Extremely Facile Phosphorus Inversion in Pyramidal Terminal Phosphide Complexes $(\eta^5\text{-}C_5H_5)Re(NO)(PPh_3)(PRR')$".
13. Buhro, W.E.; Georgiou, S.; Fernandez, J.M.; Patton, A.T.; Strouse, C.E.; Gladysz, J.A. *Organometallics* **1986**, *5*, 956. "Synthesis, Structure and Reactivity of the Formaldehyde Complex $[(\eta^5\text{-}C_5H_5)Re(NO)(PPh_3)(\eta^2\text{-}H_2C{=}O)]^+PF_6^-$".
14. Buhro, W.E.; Chisholm, M.H. *Adv. Organomet. Chem.* **1987**, *27*, 311. "Organometallic Chemistry of Molybdenum and Tungsten Supported by Alkoxide Ligands".
15. Buhro, W.E.; Chisholm, M.H.; Folting, K.; Huffman, J.C. *J. Am. Chem. Soc.*, **1987**, *109*, 905. "A Comparison of the Relative π-Donor Abilities of Amido and Phosphido Ligands. 1,2-Bis(di-t-butylphosphido)tetrakis(dimethylamido)- dimolybdenum and -ditungsten: $1,2\text{-}M_2(P(t\text{-}Bu)_2)_2(NMe_2)_4$ (M≡M)".
16. Buhro, W.E.; Etter, M.C.; Georgiou, S.; Gladysz, J.A.: McCormick, F.B. *Organometallics* **1987**, *6*, 1150. "Synthesis, Structure, and Reactivity of the Thioformaldehyde Complex $[(\eta^5\text{-}C_5H_5)Re(NO)(PPh_3)(\eta^2\text{-}H_2C{=}S)]^+PF_6^-$".
17. Buhro, W.E.; Chisholm, M.H.; Folting, K.; Eichhorn, B.W.; Huffman, J.C. *J. Chem. Soc., Chem. Commun.* **1987**, 845. "The First Example of a d^3-d^3 Dinuclear Compound Containing Four-Coordinate Metal Atoms Sharing a Pair of Bridging Ligands: $[(Bu^tO)_2W(\mu\text{-}PPh_2)]_2$".
18. Buhro, W.E.; Chisholm, M.H.; Folting, K.; Huffman, J.C. *Inorg. Chem.* **1987**, *26*, 3087. "Phosphinecarboxylate Ligands Formed by the Insertion of Carbon Dioxide into MetalPhosphido Bonds. Preparation and Structural Characterization of Tetrakis(di-tert-butylphosphine-carboxylato)dimolybdenum".
19. Buhro, W.E.; Zwick, B.D.; Georgiou, S.; Hutchinson, J.P.; Gladysz, J.A. *J. Am. Chem. Soc.* **1988**, *110*, 2427. "Synthesis, Structure, Dynamic Behavior, and Reactivity of Rhenium Phosphido Complexes $(\eta^5\text{-}C_5H_5)Re(NO)(PPh_3)(PR_2)$; the "Gauche Effect" in Transition Metal Chemistry".
20. Buhro, W.E.; Chisholm, M.H.; Folting, K.; Huffman, J.C.; Martin, J.D.; Streib, W.E. *J. Am. Chem. Soc.* **1988**, *110*, 6563. "Unbridged and Bridged Isomers of $W_2(PCy_2)_2(NMe_2)_4$: Preparations, Characterizations and Comments on Thermodynamic and Activation Parameters for the Closing of Phosphido Bridges in d^3-d^3 Dinuclear Compounds".
21. Buhro, W.E.; Chisholm, M.H.; Martin, J.D.; Huffman, J.C.; Folting, K.; Streib, W.E. *J. Am. Chem. Soc.* **1989**, *111*, 8149. "Reactions Involving Carbon Dioxide and Mixed Amido-Phosphido Dinuclear Compounds: $M_2(NMe_2)_4(PR_2)_2$(M≡M), Where M = Mo and W. "A Comparative Study of the Insertion of Carbon Dioxide into Metal-Nitrogen and Metal-Phosphorus Bonds".
22. Goel, S.C.; Kramer, K.S.; Gibbons, P.C.; Buhro, W.E. *Inorg. Chem.* **1989**, *28*, 3619. "A Soluble Cu(II) Alkoxide for Solution-Based Syntheses of $YBa_2Cu_3O_{7-x}$".

23. Buhro, W.E.; Arif, A.M.; Gladysz, J.A. *Inorg. Chem.* **1989**, *28*, 3837. "Synthesis and Reactivity of Functionalized Rhenium Phosphido Complexes (η^5-C_5H_5)Re(NO)(PPh_3)(PXX'); An Unusual 1,3-CCl_4 Addition Leading to an exo-Substituted η^4-Cyclopentadiene Complex".
24. Goel, S.C.; Kramer, K.S.; Chiang, M.Y.; Buhro, W.E. *Polyhedron* **1990**, *9*, 611. "Preparation and X-Ray Crystal Structures of Volatile Cu(II) Alkoxides".
25. Matchett, M.A.; Chiang, M.Y.; Buhro, W.E. *Inorg. Chem.* **1990**, *29*, 358. "Soluble and Volatile Alkoxides of Bismuth. The First Structurally Characterized Bismuth Trialkoxide: [Bi(μ,η^1-$OCH_2CH_2OMe)_2$(η^1-OCH_2CH_2OMe)]$_\infty$".
26. Goel, S.C.; Chiang, M.Y.; Buhro, W.E. *Inorg. Chem.* **1990**, *29*, 4640. "Preparation of Six Lead(II) Dialkoxides, the X-ray Crystal Structures of [Pb(μ,η^1-$OCH_2CH_2OMe)_2$]$_\infty$ and [Pb_3(μ-O-t-Bu)$_6$], and Hydrolysis Studies".
27. Goel, S.C.; Chiang, M.Y.; Buhro, W.E. *Inorg. Chem.* **1990**, *29*, 4646. "Preparation of Soluble and Volatile Zinc Dialkoxides. X-ray Crystal Structures of an Amidozinc Alkoxide and a Mononuclear Zinc Enolate: {Zn(μ-$OCEt_3$)[$N(SiMe_3)_2$]}$_2$ and Zn(1,4,7-η^3-$OCH=CHNMeCH_2CH_2NMe_2)_2$".
28. Goel, S.C.; Chiang, M.Y.; Buhro, W.E. *J. Am. Chem. Soc.* **1990**, *112*, 5636. "Synthesis of Homoleptic Silylphosphido Complexes {M[$P(SiMe_3)_2$][μ-$P(SiMe_3)_2$]}$_2$, where M = Zn and Cd, and Their Use in Metalorganic Routes to Cd_3P_2 and $MGeP_2$".
29. Goel, S.C.; Chiang, M.Y.; Buhro, W.E. *J. Am. Chem. Soc.* **1990**, *112*, 6724. "The First Square-Planar Complex of Cd(II): Cd$(OAr)_2(THF)_2$ where OAr = 2,6-di-*tert*-Butylphenoxide. A Structure Governed By Two Strong Covalent and Two Weak Dative Bonds".
30. Goel, S.C.; Matchett, M.A.; Chiang, M.Y.; Buhro, W.E. *J. Am. Chem. Soc.* **1991**, *113*, 1844. "A Very Large Calcium Dialkoxide Molecular Aggregate Having a CdI_2 Core Geometry: $Ca_9(OCH_2CH_2OMe)_{18}(HOCH_2CH_2OMe)_2$".
31. Goel, S.C.; Chiang, M.Y.; Buhro, W.E. *J. Am. Chem. Soc.* **1991**, *113*, 7069. "Conformational Dichotomy and Pyramidalized Carbonyl Groups in Zinc-Aldolate Chelates Obtained From Aldol Condensations of Ketones: Crystallographic Characterization of {[$(Me_3Si)_2N$]Zn[μ,η^2-$OCR^1(CH_2R^2)CHR^2C(O)R^1$]}$_2$".
32. Buhro, W.E.; Chisholm, M.H.; Folting, K.; Huffman, J.C.; Martin, J.D.; Streib, W.E. *J. Am. Chem. Soc.* **1992**, *114*, 557. "The Tungsten-Tungsten Triple Bond. Part 17. Mixed Amido-Phosphido Compounds of Formula $M_2(PR_2)_2(NMe_2)_4$. Comparisons of Amido and Phosphido Ligation and Bridged and Unbridged Isomers".
33. Tripathi, U.M.; Singh, A.; Mehrotra, R.C.; Goel, S.C.; Chiang, M.Y.; Buhro, W.E. *J. Chem. Soc., Chem. Commun.* **1992**, 112. "Synthesis, Reactivity, and X-Ray Crystallographic Characterization of Chloro(propan-2-ol)bis(tetraisopropoxoaluminato)praseodymium(III) Dimer, [{Pr[Al(OPr^iOH)(η-Cl)}$_2$]".
34. Matchett, M.A.; Viano, A.M.; Adolphi, N.L.; Stoddard, R.D.; Buhro, W.E.; Conradi, M.S.; Gibbons, P.C. *Chem. Mater.* **1992**, *4*, 508. "A Sol-Gel-Like Route to Crystalline Cadmium Phosphide Nanoclusters".
35. Adolphi, N.L.; Conradi, M.S.; Buhro, W.E. *J. Phys. Chem. Solids* **1992**, *53*, 1073. "The ^{31}P NMR Spectrum of InP".
36. Zwick, B.D.; Dewey, M.A.; Knight, D.A.; Buhro, W.E.; Arif, A.M.; Gladysz, J.A. *Organometallics* **1992**, *11*, 2673. "Synthesis, Structure, Dynamic Behavior, and Reactivity of Chiral Rhenium Primary Phosphine and Phosphido Complexes of the Formulae [(η^5-C_5H_5)Re(NO)(PPh_3)(PRH_2)]$^+X^-$ and (η^5-C_5H_5)Re(NO)(PPh_3)(PRH)".
37. Adolphi, N.L.; Stoddard, R.D.; Goel, S.C.; Buhro, W.E.; Gibbons, P.C.; Conradi, M.S. *J. Phys. Chem. Solids* **1992**, *53*, 1275. "The ^{31}P NMR Spectra of Cd_3P_2 and Zn_3P_2".

38. Goel, S.C.; Chiang, M.Y.; Gibbons, P.C.; Buhro, W.E. *Mater. Res. Soc. Symp. Proc.* **1992**, *271*, 3 ("Better Ceramics Through Chemistry V"; M. J. Hampden-Smith, W. G. Klemperer, C. J. Brinker, Eds.). "New Chemistry for the Sol-Gel Process: Acetone as a New Condensation Reagent".
39. Goel, S.C.; Chiang, M.Y.; Rauscher, D.J.; Buhro, W.E. *J. Am. Chem. Soc.* **1993**, *115*, 160. "Comparing the Properties of Homologous Phosphido and Amido Complexes; the Synthesis and Characterization of the Disilylphosphido Complexes $\{M[P(SiMe_3)_2]_2\}_2$ where M = Zn, Cd, Hg, Sn, Pb, and Mn".
40. Goel, S.C.; Matchett, M.A.; Cha, D.; Chiang, M.Y.; Buhro, W.E. *Phosphorus, Sulfur* **1993**, *76*, 289. "Homoleptic Disilylphosphido Complexes $\{M[P(SiR_3)_2]_x\}_n$ and Their Use as Precursors to Phosphide Semiconductor Nanoclusters".
41. Goel, S.C.; Buhro, W.E.; Adolphi, N.L.; Conradi, M.S. invited submission to a special materials-chemistry issue of *J. Organomet. Chem.* **1993**, *449*, 9. "Low-Temperature Organometallic Synthesis of Crystalline and Glassy Ternary Semiconductors $M^{II}M^{IV}P_2$ Where M^{II} = Zn and Cd, and M^{IV} = Ge and Sn".
42. Axelbaum, R.L.; Bates, S.E.; Buhro, W.E.; Frey, C.; Kelton, K.F.; Lawton, S.F.; Rosen, L.J.; Sastry, S.M. *Nanostruct. Mater.* **1993**, *2*, 139. "Wet Chemistry and Combustion Synthesis of Nanoparticles of Titanium Boride (TiB_2)".
43. Viano, A.M.; Gibbons, P.C.; Buhro, W.E.; Goel, S.C.; Matchett, M.A. *Nanostruct. Mater.* **1993**, *3*, 239. "Structural Characterization of Phosphide and Related Semiconductor Nanoclusters".
44. Buhro, W.E., invited submission to the *Polyhedron* Symposium-in-Print "Chemical Approaches to Advanced Materials", *Polyhedron* **1994,** 13, 1131. "Metallo-Organic Routes to Phosphide Semiconductors".
45. Matchett, M.A.; Chiang, M.Y.; Buhro, W.E. *Inorg. Chem.* **1994**, *33*, 1109. "Disilylphosphido Complexes $M[P(SiPh_3)_2]_2$ where M = Zn, Cd, Hg, and Sn; the Effective Steric Equivalency of $P(SiPh_3)_2$ and $N(SiMe_3)_2$ Ligands".
46. Kowalewski, T.; Matchett, M.A.; Buhro, W.E. in *Atomic Force Microscopy/Scanning Tunneling Microscopy*; Cohen, S.H.; Bray, M.T.; Lightbody, M.L., Eds.; Plenum: New York, 1994, p 271. "Atomic Force Microscopy Studies of Ultra-Thin Films of Cadmium Phosphide Nanoclusters on Mica".
47. Trentler, T.J.; Suryanarayanan, R.; Sastry, S.M.L.; Buhro, W.E. *Mater. Sci. Eng. A* **1995**, *A204*, 193. "Sonochemical Synthesis of Nanocrystalline Molybdenum Disilicide ($MoSi_2$)".
48. Gangopadhyay, A.K.; Schilling, J.S.; DeLeo, M.; Buhro, W.E.; Robinson, K.; and Kowalewski, T. *Solid State Communications* **1995**, *96*, 597. "Synthesis and Characterization of $C_{60}\cdot\{CCl_4\}_{10}$".
49. Bates, S.E.; Buhro, W.E.; Frey, C.A.; Sastry, S.M.L.; Kelton, K.F. *J. Mater. Res.* **1995**, *10*, 2599. "Synthesis of titanium boride (TiB_2) nanocrystallites by solution-phase processing".
50. Buhro, W.E.; Haber, J.A.; Waller, B.E.; Trentler, T.J.; Suryanarayanan, R.; Frey, C.A.; Sastry, S.M.L. *Polym. Mater. Sci. Eng.* **1995**, *73*, 39. "Nanocrystalline Metals, Intermetallics, and a Metal-Matrix Nanocomposite by Solution-Based Chemical Reductions".
51. Trentler, T.J.; Hickman, K.M.; Goel, S.C.; Viano, A.M.; Gibbons, P.C.; Buhro, W.E. *Science* **1995**, *270*, 1791-1794. "Solution-Liquid-Solid Growth of Crystalline III-V Semiconductors; An Analogy to Vapor-Liquid-Solid Growth".
52. Suryanarayanan, R.; Frey, C.A.; Sastry, S.M.L.; Waller, B.E.; Bates, S.E.; Buhro, W.E. *J. Mater. Res.* **1996**, *11*, 439. "Mechanical properties of nanocrystalline copper produced by solution phase synthesis".
53. Suryanarayanan, R.; Frey, C.A.; Sastry, S.M.L.; Waller, B.E.; Buhro, W.E. *J. Mater. Res.* **1996**, *11*, 449. "Deformation, recovery, and recrystallization behavior of nanocrystalline copper produced from solution-phase synthesized nanoparticles".

54. Haber, J.H.; Crane, J.L.; Buhro, W.E.; Frey, C.A.; Sastry, S.M.L.; Balbach, J.J.; Conradi, M.S. *Adv. Mater.* **1996**, *8*, 163. "Chemical Synthesis of Nanocrystalline Titanium and Nickel Aluminides from the Metal Chlorides and Lithium Aluminum Hydride".
55. Buhro, W.E.; Hickman, K.H.; Trentler, T.J. *Adv. Mater.* **1996**, *8*, 685-688. "Turning Down the Heat on Semiconductor Growth: Solution-Chemical Syntheses and the Solution-Liquid-Solid Mechanism".
56. Buhro, W.E. *Adv. Mater. for Optics and Electronics* **1996**, *6*, 175-184. "Progress in Molecular Precursors for Electronic Materials".
57. Suryanarayanan, R.; Sastry, S.M.L.; Jerina, K.L.; Trentler, T.J.; Waller, B.E.; Buhro, W.E. in *Synth. Process. Nanocryst. Powder, Proc. Symp.*; Bourell, D.L., Ed.; Minerals, Metals & Materials Society: Warrendale, PA, 1996, 281-288. "Densification of nanocrystalline powder produced by solution phase synthesis: theoretical modeling and comparison with experiments".
58. Suryanarayanan, R.; Frey, C.A.; Sastry, S.M.L.; Waller, B.E.; Buhro, W. E. in *Process. Prop. Nanocryst. Mater., Proc. Symp.*; Suryanarayana, C.; Singh, J.; Froes, F.H., Eds.; Minerals, Metals & Materials Society: Warrendale, PA, 1996, 407-413. "Deformation behavior of nanocrystalline Cu and Cu-0.2 wt% B produced by hot pressing of solution phase synthesized powder".
59. Goel, S.C.; Buhro, W.E. invited submission to *Inorg. Synth.* **1997**, *31*, 294-299. "Copper(II) Alkoxides".
60. Trentler, T.J.; Goel, S.C.; Hickman, K.M.; Viano, A.M.; Chiang, M.Y.; Beatty, A.M.; Gibbons, P.C.; Buhro, W.E. *J. Am. Chem. Soc.* **1997**, *119*, 2172-2181. "Solution-Liquid-Solid Growth of Indium Phosphide Fibers from Organometallic Precursors; Elucidation of Molecular and Nonmolecular Components of the Pathway".
61. Haber, J.A.; Gibbons, P.C.; Buhro, W.E. *J. Am. Chem. Soc.* **1997**, *119*, 5455-5456. "Morphological Control of Nanocrystalline Aluminum Nitride; Aluminum-Chloride-Assisted Nanowhisker Growth".
62. Haber, J.A.; Gunda, N.V.; Buhro, W.E. *J. Aerosol Sci.* **1998**, *29*, 637-645. "Nanostructure by Design: Solution-Phase-Processing Routes to Nanocrystalline Metals, Ceramics, Intermetallics, and Composites".
63. Goel, S.C.; Hollingsworth, J.A.; Beatty, A.M.; Robinson, K.D.; Buhro, W.E. invited submission to the Symposium-in-Print on "Metal Alkoxides and Amides" in honor of Prof. D. C. Bradley, *Polyhedron* **1998**, *17*, 781-790. "Preparation of Volatile Molecular Lithium–Niobium Alkoxides. Crystal Structures of $[Nb(\mu\text{-}OCH_2SiMe_3)(OCH_2SiMe_3)_4]_2$ and $[LiNb(\mu_3\text{-}OCH_2SiMe_3)\text{-}(\mu_2\text{-}OCH_2SiMe_3)_2(OCH_2SiMe_3)_3]_2$".
64. Hollingsworth, J.A.; Buhro, W.E.; Hepp, A.F.; Jenkins, P.P.; Stan, M.A. *Mater. Res. Soc. Symp. Proc.* **1998**, *495*, 171-176 ("Chemical Aspects of Electronic Ceramics Processing"; P. N. Kumta, A. F. Hepp, D. B. Beach, B. Arkles, and J. J. Sullivan, Eds.). "Spray Chemical Vapor Deposition of $CuInS_2$ Thin Films for Application in Solar Cell Devices".
65. Hollingsworth, J.A.; Buhro, W.E. *Mater. Res. Soc. Symp. Proc.* **1998**, *495*, 197-202 ("Chemical Aspects of Electronic Ceramics Processing"; P. N. Kumta, A. F. Hepp, D. B. Beach, B. Arkles, and J. J. Sullivan, Eds.). "Low-Temperature, Solution-Based Routes to Nanocrystalline InS Powders and Thin Films".
66. Haber, J.A.; Buhro, W.E. *J. Am. Chem. Soc.* **1998**, *120*, 10847-10855. "Kinetic Instability of Nanocrystalline Aluminum Prepared by Chemical Synthesis; Facile Room-Temperature Grain Growth".
67. Haber, J.A.; Gibbons, P.C.; Buhro, W.E. *Chem. Mater.* **1998**, *10*, 4062-4071. "Morphologically Selective Synthesis of Nanocrystalline Aluminum Nitride".
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