

Complete Publication List for D. B. Leznoff

Refereed Journal Publications

Publications resulting from B.Sc., Ph.D. or Post-Doctoral research

1. Stynes, D.V.; Leznoff, D.B.; de Silva, D.G.A.H. "Gated Glyoximes: Conformationally Flexible Boron-Linked Superstructure in Iron(dioximato)borate Complexes", *Inorg. Chem.* **1993**, *32*, 3989-3990.
2. Fryzuk, M.D.; Leznoff, D.B.; Rettig, S.J.; Thompson, R.C. "Magnetic Exchange in Dinuclear Chromium(II) Complexes: Effects of Bridging Chlorides and Bridging Hydrides in Antiferromagnetic Coupling", *Inorg. Chem.* **1994**, *33*, 5528-5534.
3. de Silva, D.G.A.H.; Leznoff, D.B.; Impey, G.; Vernik, I.; Stynes, D.V. "Synthesis, Structure, and Flash Photolysis Kinetic Studies of Borylated Bis(dioximato)iron(II) Carbonyl Complexes", *Inorg. Chem.* **1995**, *34*, 4015-4025.
4. Fryzuk, M.D.; Leznoff, D.B.; Rettig, S.J. "Synthesis and Structure of Even-Electron Paramagnetic Chromium(II) Complexes", *Organometallics* **1995**, *14*, 5193-5202.
5. Fryzuk, M.D.; Clentsmith, G.K.B.; Leznoff, D.B.; Rettig, S.J.; Geib, S.V. "Synthesis and Structure of Nickel(I) and Platinum(I) Hydride Dimers Having Identical Ancillary Ligands", *Inorg. Chim. Acta.* **1997**, *265*, 169-177.
6. Fryzuk, M.D.; Leznoff, D.B.; Rettig, S.J. "Synthesis and Structure of a Five-Coordinate Organochromium(III) Thiolate Complex from a Chromium(II) Alkyl Precursor", *Organometallics* **1997**, *16*, 5116-5119.
7. Fryzuk, M.D.; Leznoff, D.B.; Ma, E.S.F.; Rettig, S.J.; Young, Jr., V.G. "Synthesis, Structure and Reactivity of Paramagnetic Iron(II) and Iron(III) Amidodiphosphine Complexes", *Organometallics* **1998**, *17*, 2313-2323.
8. Fryzuk, M.D.; Leznoff, D.B.; Thompson, R.C.; Rettig, S.J. "One-Electron Transformations of Paramagnetic Cobalt Complexes. Synthesis and Structure of Cobalt(II) Amidophosphine Halide and Alkyl Complexes and their Reaction with Alkyl Halides", *J. Am. Chem. Soc.* **1998**, *120*, 10126-10135.
9. Fryzuk, M.D.; Leznoff, D.B.; Rettig, S.J.; Young, Jr., V.G. "One-Electron Oxidation of Paramagnetic Chromium(II) Alkyl Complexes with Alkyl Halides: Synthesis and Structure of Five-Coordinate Chromium(III) Complexes", *J. Chem. Soc. Dalton Trans.*, **1999**, 147-154.
10. Leznoff, D.B.; Rancurel, C.; Sutter, J-P.; Golhen, S.; Ouahab, L.; Rettig, S.J.; Kahn, O. "Synthesis and Characterization of Paramagnetic Phosphorus-

Containing Ligands and their Metal Complexes", *Mol. Cryst. Liq. Cryst.* **1999**, *334*, 425-436.

11. Rancurel, C.; Leznoff, D.B.; Sutter, J-P.; Golhen, S.; Ouahab, L; Kliava, J.; Kahn, O. "Synthesis, Structure and Magnetism of Mono- and Binuclear Manganese(II) Compounds of Nitronyl- Nitroxide Substituted Phosphine Oxides", *Inorg. Chem.* **1999**, *38*, 4753-4758.
12. Leznoff, D.B.; Rancurel, C.; Sutter, J-P.; Rettig, S.J.; Pink, M.; Paulsen, C.; Kahn, O. "Ferromagnetic Interactions and Polymorphism in Radical-Substituted Gold Phosphine Complexes", *J. Chem. Soc. Dalton Trans.* **1999**, 3593-3599.
13. Leznoff, D.B.; Rancurel, C.; Sutter, J-P.; Rettig, S.J.; Pink, M.; Kahn, O. "Stable Organopalladium(II) and Organoruthenium(II) Complexes with Spin-Labelled Phosphine Ligands", *Organometallics* **1999**, *18*, 5097-5102.
14. Rancurel, C.; Leznoff, D.B.; Sutter, J-P.; Guionneau, P.; Chasseau, D.; Kliava, J.; Kahn, O. "A Linear, Four-Spin Mn(II) Nitronyl Nitroxide-Substituted Phosphine Oxide System Exhibiting Both Antiferro- and Ferromagnetic Interactions", *Inorg. Chem.*, **2000**, *39*, 1602-1605.
15. Grasa, G.; Tuna, F.; Gheorghe, R.; Leznoff, D.B.; Rettig, S.J.; Andruh, M. "Supramolecular heteropolymetallic assemblies constructed from binuclear complexes and hexacyanometallate anions. Synthesis, crystal structure and magnetic properties of $[\text{Cu}_2(\text{fsal-33})(\text{H}_2\text{O})_2]_3[\text{Fe}(\text{CN})_6]_2 \cdot 8\text{H}_2\text{O}$.", *New J. Chem.* **2000**, *24*, 615-618.

Publications resulting from research at SFU

16. Leznoff, D.B.; Xue, B.-Y.; Stevens, C.L.; Storr, A.; Thompson, R.C.; Patrick, B.O. "Synthesis, structure and magnetic properties of 3-D interpenetrating nets of $\text{M}(\text{pyrazine})[\text{Au}(\text{CN})_2]_2$ (M = Cu, Ni, Co) supported by aurophilic interactions", *Polyhedron*, **2001**, *20*, 1247-1254. (Special Issue on Molecular Magnetism, ICCM 2000)
17. Leznoff, D.B.; Xue, B-Y; Patrick, B.O.; Sanchez, V.; Thompson, R.C. "An aurophilicity-determined 3-D bimetallic coordination polymer: Using $[\text{Au}(\text{CN})_2]^-$ to increase structural dimensionality through gold...gold bonds in $(\text{tmeda})\text{Cu}[\text{Au}(\text{CN})_2]_2$.", *J. Chem. Soc., Chem. Commun.* **2001**, 259-260.
18. Leznoff, D.B.; Xue, B.-Y.; Batchelor, R.J.; Einstein, F.W.B.; Patrick, B.O. "Gold-gold interactions as crystal engineering design elements in heterometallic coordination polymers", *Inorg. Chem.*, **2001**, *40*, 6026-34.

19. Mund, G.; Batchelor, R. J.; Sharma, R.D.; Jones, C.H.W.; Leznoff, D.B. "{FeCl[⁻BuN(SiMe₂)₂O]₂}: The first multinuclear Iron(III) System Exhibiting Spin-Admixture." *J. Chem. Soc., Dalton Trans.*, **2002**, 136-137.
20. Shorrocks, C.J.; Xue, B.-Y.; Kim, P.B.; Batchelor, R.J.; Patrick, B.O.; Leznoff, D.B. "Heterobimetallic coordination polymers incorporating [M(CN)₂]⁻ (M=Cu, Ag) and [Ag₂(CN)₃]⁻ units: Increasing structural dimensionality via M-M' and M...NC interactions." *Inorg. Chem.*, **2002**, *41*, 6743-53.
21. Mund, G.; Gabert, A.J.; Batchelor, R.J.; Britten, J.F.; Leznoff, D.B. "A rare ether-bridged cobalt complex which gives rise to an unusual 'serpentine' metal-ligand binding motif." *J. Chem. Soc., Chem. Commun.*, **2002**, 2990-2991.
22. Clot, O.; Akahori, Y.; Moorlag, C.; Leznoff, D.B.; Wolf, M.O.; Batchelor, R.J.; Patrick, B.O.; Ishii, M. "Model complexes for metallated polythiophenes: Gold(I) and palladium(II) complexes of bis(diphenylphosphino)oligothiophenes." *Inorg. Chem.*, **2003**, *42*, 2704-2713.
23. Leznoff, D.B.; Draper, N.D.; Batchelor, R.J. "Using HgX₂ units (X = Cl, CN) to increase structural and magnetic dimensionality in conjunction with (2,2'-bipyridyl)copper(II) building blocks" *Polyhedron*, **2003**, *22*, 1735-1743. (Special Issue on Molecular Magnetism, ICCM 2002)
24. Draper, N.D.; Batchelor, R.J.; Sih, B.C.; Ye, Z.-G.; Leznoff, D.B. "Synthesis, structure and properties of (tmeda)Cu[Hg(CN)₂]₂[HgCl₄]: A non-centrosymmetric 2-D layer structure that exhibits strong optical anisotropy." *Chem. Mater.*, **2003**, *15*, 1612-1616.
25. Shorrocks, C.J.; Jong, H.; Batchelor, R.J.; Leznoff, D.B. "[Au(CN)₄]⁻ as a supramolecular building block for heterobimetallic coordination polymers" *Inorg. Chem.*, **2003**, *42*, 3917-3924.
26. Haftbaradaran, F.; Leznoff, D.B.; Williams, V.E. "A strained silver(I) coordination polymer of 1,4-diazatriphenylene", *J. Chem. Soc., Dalton Trans.*, **2003**, 2105-2106.
27. **Featured on the cover of *Chemistry: A European Journal*, Issue 19, 2003.

Mund, G.; Vidovic, D.; Batchelor, R.J.; Britten, J.F.; Sharma, R.D.; Jones, C.H.W.; Leznoff, D.B. "Unusual iron "ate" complexes stabilized by Li-π interactions." *Chem. Eur. J.*, **2003**, *9*, 4757-4763.
28. Telfer, S.G.; Sato, T.; Kuroda, R.; Lefebvre, J.; Leznoff, D.B. "Dinuclear Complexes of Chiral Tetradentate Pyridyl-imine Ligands: Diastereoselectivity, Positive Cooperativity, Ligand Self Sorting Based on Chirality, and Magnetism", *Inorg. Chem.*, **2004**, *43*, 421-429.

29. Sakai, K.; Sakai, I.; Draper, N.D.; Leznoff, D.B. "Di- μ - α -pyrrolidinonatobis[*cis*-diammineplatinum(II)] sulfate hydrate in a Head-to-Head isomerism", *Acta Cryst. E.*, **2004**, *E60*, m273-m276.
30. Jantunen, K.C.; Batchelor, R.J.; Leznoff, D.B. "Synthesis, Characterization and Organometallic Derivatives of Diamidosilyl Ether Thorium(IV) and Uranium(IV) Halide Complexes", *Organometallics*, **2004**, *23*, 2186-2193.
31. Draper, N.D.; Batchelor, R.J.; Leznoff, D.B. "Tuning the Structures of Mercury Cyanide-based Coordination Polymers with Transition Metal Cations" *Crystal Growth and Design*, **2004**, *4*, 621-632.
32. Telfer, S.G.; Sato, T.; Harada, T.; Kuroda, R.; Lefebvre, J.; Leznoff, D.B. "Mono- and Dinuclear Complexes of Chiral Tri- and Tetradentate Schiff-base Ligands Derived from 1,1'-Binaphthyl-2,2'-diamine (BINAM)", *Inorg. Chem.*, **2004**, *43*, 6168-6176.
33. Draper, N.D.; Batchelor, R.J.; Aguiar, P.M.; Kroeker, S.; Leznoff, D.B. "Factors Affecting the Solid-State Structure and Dimensionality of Mercury Cyanide/Chloride Double Salts, and NMR Characterization of Coordination Geometries" *Inorg. Chem.*, **2004**, *43*, 6557-6567.
34. Lefebvre, J.; Batchelor, R.J.; Leznoff, D.B. "Cu[Au(CN)₂]₂(DMSO)₂: Golden Polymorphs that Exhibit Vapochromic Behaviour" *J. Am. Chem. Soc.*, **2004**, *126*, 16117-16125.
35. Leznoff, D.B. and Lefebvre, J. "Coordination Polymers with Cyanoaurate Building Blocks: Potential New Industrial Applications for Gold", *Gold Bulletin*, **2005**, *38*, 47-54.
36. Haftbaradaran, F.; Mund, G.; Batchelor, R.J.; Britten, J.F.; Leznoff, D.B. "Synthesis of mixed-donor amido/amino/siloxo ligands from symmetrical diamidosilylether ligands via a retro-Brook rearrangement and their chromium(II) complexes" *Dalton Trans.*, **2005**, 2343-2345.
37. Jantunen, K.C.; Haftbaradaran, F.; Katz, M.J.; Batchelor, R.J.; Schatte, G.; Leznoff, D.B. "Synthesis and Structure of Diamido Ether Uranium(IV) and Thorium(IV) Halide "Ate" Complexes and their Conversion to Salt-Free Bis-Alkyl Complexes", *Dalton Trans.*, **2005**, 3083-3091.
38. Draper, N.D.; Katz, M.J.; Batchelor, R.J.; Leznoff, D.B. "Structural Pitstops and Turnoffs on the Way to the Birefringent 2-D Layer Structure {M(tmeda)[Hg(CN)₂]₂}[HgCl₄]", *J. Inorg. Organomet. Poly. Mat.*, accepted. (Special issue in honour of R.J. Puddephatt).

39. Katz, M.J.; Shorrock, C.J.; Batchelor, R.J.; Leznoff, D.B. "[Au(CN)₄]⁻ as both an intramolecular and intermolecular bidentate ligand with {(tmeda)Cu(μ-OH)}₂ dimers: From Antiferro- to Ferromagnetic coupling in Polymorphs", *Inorg. Chem.*, accepted.
40. Ouyang, L.; Aguiar, P.M.; Batchelor, R.J.; Kroeker, S.; Leznoff, D.B. "A Paramagnetic Cu^I/Cu^{II}/Zn^{II} Coordination Polymer with Multiple CN-Binding Modes and its Solid-State NMR Characterization", *Chem. Commun.*, accepted.
41. Wong, E.; Das, A.K; Katz, M.J.; Nishimura, Y.; Onishi, M.; Batchelor, R.J.; Leznoff, D.B. "Diamidoether complexes of Yttrium(III) and Chromium(III): Synthetic challenges and surprises" *Inorg. Chim. Acta*, accepted. (Special Issue in honour of B.R. James)

Refereed Conference Proceedings

1. Leznoff, D.B.; Fryzuk, M.D.; Thompson, R.C. "Paramagnetic Organometallic Cobalt Complexes and their Reactions with Alkyl Halides" *Coordination Chemistry at the Turn of the Century*, Smolenice (Slovakia), **1999**, 165-170.
2. **(SFU Publication)** Leznoff, D.B.; Mund, G.; Jantunen, K.C.; Bhatia, P.; Gabert, A.J.; Batchelor, R.J. "Diamidoether Complexes of Uranium and Transition-Metals." ACTINIDES 2001 (Hayama, Japan) Conference Proceedings. *J. Nucl. Sci. Tech.*, Supplement 3, **Nov. 2002**, 406-409.

Patents

1. Lefebvre, J.; Leznoff, D.B. "Novel Coordination Polymers", US provisional patent application #60/618,573, filed October 15, 2004.
2. Lefebvre, J.; Katz, M.J.; Leznoff D.B. "Vapochromic Coordination Polymers for use in Analyte Detection", PCT patent application, filed October 17, 2005.

Invited Reviews/Chapters

1. Leznoff, D.B. and Mund, G. "Paramagnetic Organometallic Complexes", In *Encyclopedia of Inorganic Chemistry, 2nd Ed.*, Wiley. **2005**, in press.
2. Lefebvre, J. and Leznoff, D.B. "Structural Diversity, Physical Properties and Applications of Cyanometallate Coordination Polymers", In *Metal and Metalloid-containing Polymers*, Vol. 5, Wiley. **2005**, p. 155-208.

Non-Refereed Conference Proceedings

1. "Coordination Polymers with Cyanoaurate Building Blocks: Structures, Physical Properties and Applications" Daniel B. Leznoff, Carolyn J. Shorrock, Julie Lefebvre, Raymond J. Batchelor. Proceedings of the International GOLD 2003 Conference, Vancouver, Sept. 28 - Oct. 1, 2003.

Media Reports etc.

1. Feature Interview by German National Radio on Gold-containing Coordination Polymers, Sept. 30, 2003.
2. Article describing an exchange student's (Yoshimasa Nishimura) experience in the Leznoff lab, and a synopsis of my diamidoether research, Organometallic Chemistry News, Japan National Chem. Society magazine (in Japanese), June, 2004.
3. Article describing collaborative actinide chemistry research at LANL and featuring Kim Jantunen (Leznoff Ph.D. student), C & E News, October, 2004.
4. Cu[Au(CN)₂]₂ vapochromism research (JACS 2004 article) featured in "Canadian Chemical Highlights", ACCN Feb 2005.

Theses

1. Leznoff, D.B "Gated Glyoximes: Conformationally Flexible Dioximatoboratoiron Complexes". B.Sc., Honours Thesis, York University, **1992**.
2. Leznoff, D.B "Paramagnetic Organometallic Complexes of Chromium, Iron and Cobalt". Ph.D. Thesis, University of British Columbia, **1997**.