

Curriculum Vitae

Assistant Professor,
Ryerson University
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Bryan D. Koivisto

Citizenship: Canadian
Date of Birth: September 24, 1976
email: bryan.koivisto@ryerson.ca

Education

- 2000 – 2005 – Ph.D. University of Victoria – Victoria, BC**
- Ph.D. thesis project entitled ‘*Synthesis and Characterization of Verdazyl Containing Molecules and Metal-Verdazyl Complexes.*’ Supervisor: Robin G. Hicks.
- 1995 – 2000 – B.Sc. University of Waterloo (Co-op) – Waterloo, ON**
- Honors B.Sc. thesis project entitled ‘*Noble-Metallореceptors for Benzoquinone Recognition.*’ Supervisor: Garry S. Hanan.

Related Work Experience

- 2008 – 2011 – University of Calgary – Calgary, AB. Post Doctoral Fellowship**
- investigation of water oxidation catalysts and dye design for dye-sensitized solar cells.
Supervisor: Curtis P. Berlinguette.
- 2006 – 2008 – University of Edinburgh – Edinburgh, United Kingdom. NSERC Post Doctoral Fellowship**
- investigating electronic and magnetic communication between molecules and metal ions using [2]Rotaxanes.
Supervisor: David A. Leigh.
- 2006 – 2006 – University of Victoria – Victoria, BC. Post Doctoral Fellowship**
- investigating the effect of guanidinium π -stacking on hydration and binding.
Supervisor: Fraser Hof.
- 1999 – 1999 – 3M Canada – London, ON. Research Associate**
- investigation of functionalized dendrimers as polymer processing additives.
- 1998 – 1998 – NRCan (CANMET) – Ottawa, ON. Research Associate**
- the design of semiconducting solid-state carbon monoxide combustion gas sensors.

Awards and Recognitions

- 2009** – University Technologies International Fellowship in Science (Calgary)
2006 – NSERC Post Doctoral Fellowship (2006-2008) (Edinburgh)
2004 – Dr Julius Schleicher Graduate Scholarship (Victoria)
2004 – Annual CIC (Vancouver Island Division) Student Symposium – Second Place (Victoria)
2003 – Charles S. Humphrey Graduate Student Award (Victoria)
2003 – Presidents Scholarship (Victoria)
2002 – Sally McAuley Graduate Scholarship in Inorganic Chemistry (Victoria)
2002 – Presidents Scholarship (Victoria)
2002 – NSERC Postgraduate Scholarship B (2002-2004) (Victoria)
2002 – Annual CIC (Vancouver Island Division) Student Symposium – First Place (Victoria)
2002 – Andy Farquharson Award for Excellence in Graduate Student Teaching (Victoria)
2001 – The Dr. E. and Mrs. M. Von Rudloff Award (Victoria)
2000 – Southwestern Ontario Undergrad Student Chemistry Conference. Best Talk (Waterloo)

- 20) **Cyclometalated Dye Complexes and Their Use in Dye-Sensitized Solar Cells**
Berlinguette, C.P.; Koivisto, B.D.; Robson, K.C.D., **2011**, Pub. No.: WO/2011/032269
International Application No.: PCT/CA2010/001430.
- 19) **Towards Broad Spectral Sensitization Through the Hybridization of Organic and Inorganic Dye Design Elements**
Robson, K.C.D.; Spornova, B.; Koivisto, B.D.; Berlinguette, C.P., *Polym. Prepr.*, **2011**, 52, 881-882.
- 18) **Systematic Modulation of a Bichromic Cyclometalated Ruthenium(II) Scaffold Bearing a Redox-Active Triphenylamine Constituent**
Robson, K.C.D.; Spornova, B.; Koivisto, B.D.; Schott, E.; Brown, D.G.; Berlinguette, C.P., *Inorg. Chem.*, **2011**, 50, 6019-6028.
- 17) **Design and Development of Functionalized Cyclometalated Ruthenium Chromophores for Light-Harvesting Applications**
Robson, K.C.D.; Koivisto, B.D.; Yella, A.; Spornova, B.; Nazeeruddin, Md. K.; Baumgartner, T.; Grätzel, M.; Berlinguette, C.P., *Inorg. Chem.*, **2011**, 50, 5494-5508.
- 16) **Electronic Modification of the $[Ru^{II}(tpy)(bpy)(OH_2)]^{2+}$ Scaffold: Effects on Catalytic Water Oxidation**
Wasylenko, D.J.; Ganesamoorthy, C.; Henderson, M.A.; Koivisto, B.D.; Berlinguette, C.P., *J. Am. Chem. Soc.*, **2010**, 132, 16094-16106.
- 15) **Triphenylamine-Modified Ruthenium(II) Terpyridine Complexes: Enhancement of Light Absorption by Conjugated Bridging Motifs**
Robson, K.C.D.; Koivisto, B.D.; Gordon, T.J.; Baumgartner, T.; Berlinguette, C.P., *Inorg. Chem.*, **2010**, 49, 5335-5337.
- 14) **Examination of Water Oxidation by Catalysts Containing Cofacial Metal Sites**
Wasylenko, D.J.; Ganesamoorthy, C.; Koivisto, B.D.; Berlinguette, C.P., *Eur. J. Inorg. Chem.*, **2010**, 3135-3142.
- 13) **Cyclometalated Ru Complexes of Type $[Ru^{II}(NN)_2(CN)]^z$: Physicochemical Response to Substituents Installed on the Anionic Ligand**
Bomben, P.G.; Koivisto, B.D.; Berlinguette, C.P., *Inorg. Chem.*, **2010**, 49, 4960-4971.
- 12) **Insight into Water Oxidation by Mononuclear Polypyridyl Ru Catalysts**
Wasylenko, D.J.; Ganesamoorthy, C.; Koivisto, B.D.; Henderson, M.A.; Berlinguette, C.P., *Inorg. Chem.*, **2010**, 49, 2202-2209.
- 11) **Systematic Manipulation of the Light-Harvesting Properties for Tridentate Cyclometalated Ruthenium(II) Complexes**
Koivisto, B.D.; Robson, K.C.D.; Berlinguette, C.P., *Inorg. Chem.*, **2009**, 48, 9644-9652.

- 10) **Tuning magnetic properties using targeted structural distortion: new additions to a family of Mn₆ single-molecule magnets**
Jones, L.F.; Cochrane, M.E.; Koivisto, B.D.; Leigh, D.A.; Perlepes, S.P.; Wernsdorfer, W.; Brechin, E.K., *Inorg. Chim. Acta*, **2008**, 361, 3420-3426.
- 9) **A Terphenyl Scaffold for p-Stacked Guanidinium Recognition Elements**
Wang, C.; Sarytcheva, O.V.; Koivisto, B.D.; McKie, A.; Hof, F., *Org. Lett.*, **2008**, 10, 297-300.
- 8) **Electrochemical Studies on Verdazyl Radicals**
Gilroy, J.B.; McKinnon, S.D.J.; Koivisto, B.D.; Hicks, R.G. *Org. Lett.*, **2007**, 9, 4837-4840.
- 7) **A Metal-Complex-Tolerant CuAAC 'Click' Protocol Exemplified Through the Preparation of Homo- and Mixed-Metal-Coordinated [2] Rotaxanes**
Gonzalez-Cabrera, D.; Koivisto, B.D.; Leigh, D.A., *Chem. Commun.*, **2007**, 4218-4220.
- 6) **Magnetostructural Studies of Copper(II)-Verdazyl Radical Complexes**
Gilroy, J.B.; Koivisto, B.D.; McDonald, R.; Ferguson, M.J.; Hicks, R.G., *J. Mat. Chem.*, **2006**, 16, 2618-2624.
- 5) **Intramolecular π -Dimerization in a 1,1'-Bis(verdazyl)ferrocene diradical**
Koivisto, B.D.; Ichimura, A.S.; McDonald, R.; Lemaire, M.T.; Thompson, L.K.; Hicks, R.G., *J. Am. Chem. Soc.*, **2006**, 128, 690-691.
- 4) **Synthesis and Characterization of Verdazyl Containing Molecules and Metal- Verdazyl Complexes**
Koivisto, B.D. *Ph.D. Thesis: University of Victoria*, **2005**.
- 3) **The Magnetochemistry of Verdazyl Radical-based Materials**
Koivisto, B.D.; Hicks, R.G., *Coord. Chem. Rev.*, **2005**, 249, 2612-2630.
- 2) **Synthesis of Multitopic Verdazyl Radical Ligands. Paramagnetic Supramolecular Synthons**
Hicks, R.G.; Koivisto, B.D.; Lemaire, M.T., *Org. Lett.*, **2004**, 6, 1887-1890.
- 1) **Dynamic Behaviour in Diplatinum Metalloreceptors**
Baer, A.J.; Koivisto, B.D.; Côté, A. P.; Taylor, N.J.; Hanan, G.S.; Nierengarten, H.; Van Dorsselaer, A., *Inorg. Chem.*, **2002**, 41, 4987-4989.

Selected Presentations

Bryan D. Koivisto, Kiyoshi C. D. Robson, Barbora Sporinova, Curtis P. Berlinguette*, **Hybrid Organic-Inorganic Chromophores for Light-harvesting Applications: Triphenylamine-modified Cyclometalated Ru Complexes**, Pacificchem – December 2010 – Honolulu, USA

Bryan D. Koivisto, Kiyoshi C. D. Robson, Curtis P. Berlinguette*, **Hybrid Organic-Inorganic Chromophores for Light Harvesting Applications**, 93rd Conference of the Canadian Society for Chemistry – May 2010 - Toronto, ON

Bryan D. Koivisto, Robin G. Hicks*, **Ferrocenyl Verdazyls: Examining metal-radical interactions in verdazyl-substituted ferrocenes**, Pacificchem – December 2005 – Honolulu, USA

Bryan D. Koivisto, Robin G. Hicks*, **Verdazyls. Paramagnetic Synthons for Metallosupramolecular Architectures**, 87th Conference of the Canadian Society for Chemistry – June 2004 - London, ON

Bryan D. Koivisto, Robin G. Hicks*, **Metallosupramolecular Approaches to Multi-dimensional Verdazyl-Based Molecular Magnets**, 39th IUPAC Congress and 86th Conference of the Canadian Society for Chemistry – August 2003 - Ottawa, ON

Bryan D. Koivisto, Robin G. Hicks*, **Polypyridyl-based Verdazyl Analogues in Designer Molecular Magnets**, 85th Conference of the Canadian Society for Chemistry - June 2002 - Vancouver, BC

Bryan D. Koivisto, Robin G. Hicks*, Marty T. Lemaire, **Polypyridyl-based Verdazyl Analogues in Designer Molecular Magnets**, 84th Conference of the Canadian Society for Chemistry - May 2001 - Montreal, QC

Departmental and University Service

2009 – 2011 – Mustache March Fundraiser for the Alberta Cancer Foundation – *Organizing Committee*
2007 – June – Young Giants of Chemistry: Conference in honor of Sir J. Fraser Stoddart – *Organizing Committee*.
2005 – May – Western Canadian Undergraduate Chemistry Conference – *Secretary/treasurer*.
2005 – March – Science Building Funding Announcement – *Invited student speaker*
2001 – 2005 – Graduate Student Representative to the UVic Department of Chemistry
2003 – May – UVic Chemistry Reunion/Conference – *organizing committee*
2003 – May – UVic Science Open House – *Chair/Organizer of the Seminar programs*.
2003 – February – UVic Alumni Association Award for Excellence in Teaching - *Selection committee*
1999 – 2000 – University of Waterloo ChemClub President
1998 – 1999 – University of Waterloo ChemClub Secretary
1998 – 2000 – University of Waterloo Housing - *Residence Assistant and Don*

Supervision and Teaching

2011 – Devin Machin – Honors Thesis Student (Ryerson)
2011 – Holly Severin and Stacy Muise – NSERC Summer Students (Calgary)
2010 – Barbora Sporinova – NSERC Summer Student (Calgary)
2008 – Chem 222: Introduction to Inorganic Chemistry – Summer Sessional lecturer (Victoria)
2007 – Sophie Sharp, Amy Frank, Kirsten Strain, Matt Wilson, Angela Davidson (Edinburgh)
– British fourth year project students
2007 – Sarah K. Boys – British MChem Thesis student (Edinburgh)
2006 – Matthijs Panman – Dutch ERASMUS student (Edinburgh)
2000 – 2006 – Teaching Assistant, University of Victoria (Victoria)
2004 – Chem 300: Medicinal Chemistry - Guest lecturer on Psychedelic and anti-psychotic drugs (Victoria)
2004 – David R. Stuart – NSERC Summer Student (Victoria)
2002 – Chem 353: Structure and Bonding - presented a guest lecture on Aromaticity (Victoria)
1998 – 2000 – Teaching Assistant, University of Waterloo (Waterloo)