



Kennepohl Research Group Alumni

Name	Role	Dates	Photo
Charles Au	Undergrad	May 2007 - Sep 2007	
Melanie Backer	Undergrad	Sep 2015 - Apr 2016	
Shirin Behyan	PDF	May 2013 - Sep 2016	
Liheng Chen	Undergrad	May 2017 - May 2018	
<p>CV: B.Sc. (in progress), University of British Columbia, 2016 – present</p> <p>About Me: I completed my secondary education in New Westminster Secondary School, and started my journey of university at UBC in 2016. Science One program was where I chose to spend my first year with, and I found it highly integrated, challenging, but also rewarding. I am fairly interested in the spectroscopic measurements of chemical interactions, and also fond of science in general. I joined the Kennepohl Group in the summer of 2017, and I worked with Ruben on probing the halogen bonding between iodine and aromatic rings with Magnetic Circular Dichroism as well as UV-vis Spectroscopy. We hope to obtain a more comprehensive MCD picture on the halogen bonding of iodine.</p> <p>Besides academic life, I love a variety of music and sports. I am a soccer fan and badminton player, and am also very decent at performing bamboo flute, a traditional musical instrument in east Asia. In addition, I love the beautiful summer in Vancouver!</p>			
Jay Chi	Undergrad	Jan 2013 - Sep 2013	
Eric Choi	Undergrad	May 2005 - Sep 2005	
Danielle Covelli, PhD	PhD student	Sep 2007 - Oct 2011	
Mario Ulises Delgado Jaime, PhD	PhD student	Sep 2003 - Feb 2009	
Maxime Ferrer	Visiting Scholar	Mar 2018 - Jul 2018	
Rosy Fournier	RISE Scholar	May 2011 - Aug 2011	
Kendra Getty, MSc	MSc student	Sep 2005 - Apr 2008	
Stavroula Giannaris	RISE Scholar	May 2010 - Sep 2010	
Robert Godin	RISE Scholar	May 2008 - Sep 2008	
Hugo Guillou	Visiting Scholar	Jun 2019 - Sep 2019	

Name	Role	Dates	Photo
Mathusan Gunabalasingam	RISE Scholar	May 2016 - Sep 2016	
Alan Hung	Undergrad	May 2014 - Sep 2014	
Usman Jamshed	RISE Scholar	May 2018 - Aug 2018	
Trent Jeffery	Undergrad	May 2014 - Sep 2014	
Poljanka Johnson	Undergrad	May 2014 - Sep 2014	
Caroline Jung	Undergrad	May 2010 - Dec 2010	
Timur Karimov	RISE Scholar	May 2014 - Sep 2014	
Anusha Karunakaran-Datt, PhD	PhD student	Sep 2003 - Dec 2009	
Daniel Kim	Undergrad	May 2015 - Aug 2017	
Jessica Klocke	Visiting Scholar	Sep 2014 - Dec 2014	
Kunal Kureja	Visiting Scholar	May 2014 - Sep 2014	
Viola Kustario	Undergrad	Jan 2019 - May 2019	
Florian Lagarde	Visiting Scholar	Jul 2014 - Oct 2014	
Gautier Lascoumettes	Visiting Scholar	Jul 2017 - Sep 2017	
Jamie Lee	Undergrad	May 2003 - Sep 2003	
Sam Leutheusser	Undergrad	May 2013 - Dec 2013	
Jessica Li	Undergrad	Oct 2017 - Apr 2018	
Alison Yueh Li	Undergrad	Sep 2005 - May 2006	
Gerald Li	Undergrad	May 2004 - Sep 2004	
Chia-Hsun Anthony Lin	Undergrad	May 2003 - Sep 2003	
Max Boyang Liu	Undergrad	May 2007 - Sep 2007	
Stephanie Liu	Undergrad	May 2004 - Sep 2007	Stephanie worked in the lab for three consecutive summers.
Hudson Lynn	Undergrad	May 2014 - May 2015	

Name	Role	Dates	Photo
Shuchita Mahey	Undergrad	May 2016 - Sep 2016	
Anita Mahinpei	Undergrad	May 2016 - Sep 2016	
Vlad Martin-Diaconescu, PhD	PhD student	Sep 2003 - Aug 2009	
Craig Mewis	Undergrad	May 2007 - May 2009	
Ruben Mirzoyan	RISE Scholar	May 2017 - Sep 2017	
Peter Morris	Visiting Scholar	Jul 2018 - Aug 2018	
Chantal Mustoe, PhD	PhD student	May 2013 - Sep 2018	

CV: Ph.D. student (Chemistry), University of British Columbia (Pierre Kennepohl and Suzana Straus) 2013

Research Scientist, Environmental Measurement Group at the National Physical Laboratory (London, UK) 2011-2013

B.Sc. (Chemistry, minor in English), California Institute of Technology (Douglas Rees and Harry B. Gray) 2007-2011



About Me: My two inanimate loves in life are science and travelling. During my undergraduate studies, I worked on the CCI Solar Project in Dr. Harry Gray's lab during the year, while my summers were spent at MIT in Dr. Jonas Peters' lab and the University of Edinburgh with Dr. Polly Arnold. I also spent some additional time in Edinburgh during a study abroad program. My time in the UK convinced me to move to London after graduation, and I found work just outside London in the quiet suburb of Teddington at the UK's National Physical Laboratory. London is such a vibrant city of endless exploration and scrumptious food, and my time at NPL was instructional and exciting. However, just a year and a half into my job and I was itching to return to university, and in 2013 I moved across the transatlantic ocean for the 6th time to do my PhD in the beautiful city of Vancouver. Vancouver has brought out the ever-present nature lover in me and I spend my free time hiking, camping, dancing salsa, swimming in the ocean and learning how to fall down a mountain with skis strapped to my feet.


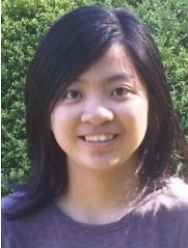
Research Interests: Since starting grad school, my research interests have switched from organometallic to biophysical chemistry, but ask anyone in my lab about my research interests and they will tell you rather emphatically, "she loves NMR!" My interest of NMR (Nuclear Magnetic Resonance spectroscopy) began in early my undergraduate when each spectrum posed a puzzle just waiting to be solved. For me, NMR captures the imagination in all its forms (1H, 3D, heteronuclear). The information extracted from simply observing the interactions between the magnetic moments of different nuclei is simply mind-boggling. However, I must confess that X-ray Absorption Spectroscopy (XAS) is also creeping its way into my affections as another technique which extracts a multitude of information from a seemingly simple physical phenomenon. My research projects combine protein NMR, XAS, and other techniques to characterise the aggregation of TDP-43, a protein whose aggregation plays a role in many neurodegenerative disorders. This use of physical chemistry to study biological molecules with the hopes of future medical applications has inspired me to undertake a PhD in the unexpectedly endearing city of Vancouver.

- Mustoe, C. L., Gunabalasingam, M., Yu, D., Patrick, B. O. & Kennepohl, P. Probing covalency in halogen bonds through donor K-edge X-ray absorption spectroscopy: polyhalides as coordination complexes. *Faraday Discuss.* 203, 79–91 (2017).
- Aakeröy, C. B. et al. The halogen bond in solution: general discussion. *Faraday Discuss.* 203, 347–370 (2017).
- Parlane, F. et al. Spectroscopic Detection of Halogen Bonding Resolves Dye Regeneration in the Dye-Sensitized Solar Cell. *Nature Comm.* accepted, (2017).
- Robinson, S. W. et al. Evidence for Halogen Bond Covalency in Acyclic and Interlocked Halogen-Bonding Receptor Anion Recognition. *J. Am. Chem. Soc.* 137, 499–507 (2015).
- Brown, Richard JC, and Chantal L. Mustoe. "Demonstration of a standard dilution technique for standard addition calibration." *Talanta* 122 (2014): 97-100.



Name	Role	Dates	Photo
Aaron Ngai	Undergrad	May 2015 - Aug 2017	
Tulin Okbinoglu, PhD	PhD student	Sep 2009 - Sep 2014	
<p>CV: Ph,D, student (Chemistry), University of British Columbia (Pierre Kennepohl and Keng C. Chou) 2007-- B.Sc. (Biochemistry, minors in Chemistry and Physics), University of Washington (David C. Dale) 2000--2003</p> <p>About me: After receiving my BSc at UW, I continued working in the laboratory of Dr. David C. Dale, where I did my undergraduate research. I subsequently moved on to the Fred Hutchinson Cancer Research Center to do work in gene therapy with Dr. Hans-Peter Kiem. I made a huge move from Seattle to Vancouver and worked with Dr. Lynn Raymond using my molecular biology skills within her neuroscience lab. Now in grad school I've somewhat left behind my biological background to pursue research in more basic chemistry, where really, my interests have been all along! Other than science, my interests lie in music and art; I sing in the Vancouver Bach Choir and have my sights set on working in art conservation.</p> <p>Research Interests: My current research centers on using Sulfur K-edge XAS and vibrational spectroscopy to probe the electronic nature of sulfonamides and N-Hydroxysulfonamides. These are very interesting molecules whose reactivity is not quite yet fully understood. Previous work in the lab showed that the sulfur-nitrogen bond in s-nitrosothiols have pi character and that sterics play an important role in the bond strength between the two atoms. My work, an extension, is based on sulfonamide molecules, which can release NO in vivo to preform a myriad of control functions. I have also been working with the Museum of Vancouver on the degradation of modern artistic materials. Plastics, from the mid-20th century onwards have started to warp, change color, weep and disfigure in many museums and private collections. I've been using Raman and FTIR to identify what the decayed artifacts are made of and this aids in decisions for storage and conservation.</p> <p>Publications:</p> <ul style="list-style-type: none"> • Fluorine Transfer to Alkyl Radicals. Montserrat Rueda-Becerril, Claire Chatalova Sazepin, Joe Leung, Tulin Okbinoglu, Pierre Kennepohl, Jean-Francois Paquin, Glenn Sammis. <i>Journal of the American Chemical Society</i> (2012) 134:9, 4026--4029. doi:10.1021/ja211679v • Comparison of HIV-derived Lentiviral and MLV-based Gammaretroviral Vector Integration Sites in Primate Repopulating Cells. Beard, Brian C. and Dickerson, David and Beebe, Kate and Gooch, Christina and Fletcher, James and Okbinoglu, Tulin and Miller, Daniel G. and Jacobs, Michael A. and Kaul, Rajinder and Kiem, Hans-Peter and Trobridge, Grant D. <i>Molecular Therapy</i> (2007) 15:7, 1356–1365. doi:10.1038/sj.mt.6300159 			
Alex Pi	Undergrad	May 2017 - Apr 2018	
Paytan Robinson	RISE Scholar	May 2019 - Aug 2019	
Zaida Romero	Undergrad	Jan 2016 - Apr 2016	
Hootan Roshandel	Undergrad	May 2017 - Sep 2017 Jun 2018 - Aug 2018	
Joey Sheff	RISE Scholar	May 2009 - Sep 2009	
Christopher Shon	RISE Scholar	May 2007 - Sep 2007	

Name	Role	Dates	Photo
Thamayanthy Sriskandakumar, PhD	PhD student PDF	Sep 2007 - Jun 2013 Jul 2013 - Dec 2014	
<p>About Me: I received my bachelor's degree in chemistry from the University of Peradeniya, Sri Lanka in 2001. Having completion of my bachelor's degree I worked as a Teaching Assistant in the Department of Chemistry at the University of Peradeniya as well as at The Open University of Sri Lanka. I obtained my master's degree in chemistry from the Department of Chemistry, the University of Connecticut, Storrs, USA in 2007. My master's thesis topic was 'Selective Catalytic Reactions using Octahedral Molecular Sieves Manganese Oxide (OMS-2) catalysts', and my thesis supervisor was Dr.S.L.Suib . During my master's I learnt more about inorganic chemistry and the crucial role of inorganic catalysts in biological applications. Currently I am doing my PhD under the supervision of Dr. P. Kennepohl in the Department of Chemistry, the University of British Columbia, Canada.</p> <p>Research Interests: The goal of my research project is investigating the Metabolism and Bioavailability of Ruthenium(II) Arene Sulfenato Anticancer Drugs using Sulfur X-ray absorption spectroscopy (XAS) as a powerful probe of metal-ligand bonding. Peter Sadler and coworkers have recently reported that the Ru(II) arene thiolato complex has shown interesting and potent biological activity although its mode of action is not well understood. The cancer cells are highly oxidative and acidic that favors the oxidation of the thiolato ligand to sulfenato and/or sulfinato ligands followed by protonation. Recent studies have revealed unexpected structural characteristics, especially pertaining to the Ru-S bonds, which may suggest novel electronic characteristics of importance in their biological activity. Our aim is to explore the effect of sulfur oxidation on the nature of the Ru-S bond and to correlate these observations with their novel properties. Sulfar XAS is a direct approach to the study of metal-ligand covalency. The near-edge region of the spectrum (also known as the X-ray Absorption Near Edge Structure or XANES) is of particular interest since it can provide direct evidence on the degree of covalency and allows correlation between the electronic structure of the species and their reactivities. The effect of the sulfur-containing ligands on the electronic properties of the metal centre can be investigated through the use of Ru K- and L-edge XAS.</p>			
Mari Takeda, BSc	Undergrad	Sep 2007 - Apr 2008	
Brian Tam	Undergrad	May 2014 - May 2015	
Chris Tan	Undergrad	May 2008 - Oct 2008	
Connie Tang	RISE Scholar	May 2015 - Aug 2015	
Phillip Taylor	MSc student	Jan 2011 - Dec 2013	
Mary Wang	Undergrad	May 2014 - Sep 2014	
Andrew Wang	Undergrad	May 2015 - Aug 2017	
John Wheler	Undergrad	May 2013 - Aug 2013	
<p>About Me: I'm two years into my BSc in Honours Chemistry here at UBC, so I am just getting my feet wet in chemistry research this summer. I grew up in Calgary, and am of course an avid Flames fan (tough times, I know). Beyond that I play hockey myself, along with some volleyball and a fair share of ultimate. My research centres on oxa- and azametallacyclobutanes, and I am most focused on the oxa- species with rhodium (rhodaoxetanes). Though I do a fair bit of experimental work, the real point of interest is studying the structures and electronics of different rhodaoxetanes and their precursors computationally. We hope to gain a deeper understanding of the properties of rhodaoxetanes, and also better explain the experimental trends that have emerged in producing these species, all of which works towards the development of these species into effective catalysts.</p>			

Name	Role	Dates	Photo
Chelsea Woo, BSc	Undergrad	Sep 2006 - May 2007	
Uma Wu	Undergrad	May 2016 - Sep 2016	
Wei Xue	PhD student	Jan 2009 - Jun 2015	
Cynthia Yang	Undergrad	May 2013 - Dec 2013	
<p>About Me: I am a current undergraduate student at UBC studying Honours Chemistry. As a recent alumni of the first year program Science One, I have had the opportunity to work in Dr. Pierre Kennepohl's research lab.</p> <p>All my work this summer has been computational, and is closely related to Thamayanthy Sriskandakumar's doctoral work. I have been studying the nature of metal-sulphur bonds in metal-based anticancer agents, I have focused specifically on ruthenium and osmium, running density functional calculations using ORCA. Then, I gathered information about bond lengths as well as molecular orbitals, in order to compare the properties of the Sulphur pro-ligands to those of the Sulphur ligands in the metal complexes.</p>			
Hans Yang	Undergrad	Sep 2014 - Aug 2015	
Wendy Yip	Undergrad	May 2004 - Sep 2004	
Insun Yu	PDF	Jan 2013 - Dec 2013	
Darren Yu	Undergrad	Jan 2016 - Apr 2016	
Youchang Zhang	Visiting Scholar	Jul 2018 - Oct 2018	