

Jon Chui, PhD

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WORK

A3I Limited
Founder CEO CURRENT, FROM JAN 2022

Invented and engineered Visual Fonts: a technology for displaying complex, colored vector graphics in OpenType fonts.

Solved automating Cantonese romanization assignment, releasing two open source Elixir libraries in the process, and shipped Cantonese Visual Fonts v1 under an Open Font license.

Concurrently co-established a Tango & Gyrotonic studio in Causeway Bay. I handle general staffing, finance, IT, and marketing.

United World College of HK 2012 – 2022 (FT)
Teacher of Chemistry and Theory of Knowledge

Taught IB Diploma Chemistry (HL & SL) & Theory of Knowledge, supervised Extended Essays (chemistry, interdisciplinary), through face-to-face, online, blended, and hybrid modalities.

Project lead for Coral Monitoring, HK-101, and supervised various other activities.

Residence tutor.

International Baccalaureate Organization 2014 – 2020 (PT)
Content developer / workshop facilitator

I developed teacher-training workshops (both f2f and online) and facilitated them.

I also developed content in the Teacher Support Material for the new Diploma Chemistry syllabus, first teaching 2025; initiated and maintained the community-driven Teacher Resource Exchange.

International Baccalaureate Organization 2014 – 2020 (PT)
Senior Examiner

I examined scripts, moderated Internal Assessments, and managed a team of examiners.

EDUCATION

2004 – 2010 **Doctor of Philosophy**
Physical organic chemistry
University of Victoria (British Columbia)

1999 – 2004 **Bachelor of Science**
Chemistry, Mol. Biology & Biochem.
Simon Fraser University

AWARDS

2010 **UVic Blue & Gold Award**
University of Victoria
Outstanding scholarship
and community contribution.

2009 **Teaching Excellence Award**
UVic Department of Chemistry

COMPUTING

EXPERT	Elixir/OTP, \LaTeX Adobe Illustrator font engineering
INTERMEDIATE	Python, Javascript GIS, Tableau Multimedia production

LANGUAGES

NATIVE	English, Cantonese
INTERMEDIATE	Spanish, Italian, Mandarin

DOCTORAL RESEARCH

“A New Paradigm for Synthetic Ion Channels”

My research, under the mentorship of Prof T M Fyles, began as synthesis and characterization of *de novo* small-molecule ion channels. We ended up with two families of synthetic channels with contrasting activities; observing and developed mathematical tools for then-unknown fractal behaviour; invented a method for visualizing voltage-clamp data; and applied this invention to re-evaluate 30+ years of literature, a *magnum opus* now considered a classic in the field.

PUBLICATIONS

Jon Chui, Tom Fyles. (2014). Cyclodextrin Ion Channels. *Organic & Biomolecular Chemistry*, 12(22), 3622–3634.

Jon Chui, Tom Fyles. (2012). Ionic conductance of synthetic channels: analysis, lessons, and recommendations. *Chemical Society Reviews*, 41(1), 148–175.

Jon Chui, Horace Luong, Tom Fyles. (2011). Planar-bilayer activities of linear oligoester bolaamphiphiles. *Beilstein Journal of Organic Chemistry*, 7(1), 1562–1569.

Jon Chui, Tom Fyles. (2010). Apparent fractal distribution of open durations in cyclodextrin-based ion channels. *Chemical Communications*, 46(23), 4169–4171.

Caleb Bromba, Philippa Carrie, **Jon Chui**, Tom Fyles (2009). Phenyl boronic acid complexes of diols and hydroxyacids. *Supramolecular Chemistry*, 21(1–2): 81–88.

Jon Chui, Tom Fyles. (2008). Mini-review: artificial catecholamine receptors in aqueous media. *Supramolecular Chemistry*, 20(4), 397–405.

Jon Chui, T Ramnial, Jason Clyburne. (2003). N-heterocyclic carbenes: exotic molecules as precursors to unusual hydrogen bonds. *Comments on Inorganic Chemistry*, 24(5–6), 165–187.

Publications by DOI

- 2014 [doi:10.1039/C4OB00480A](https://doi.org/10.1039/C4OB00480A)
2012 [doi:10.1039/C1CS15099E](https://doi.org/10.1039/C1CS15099E)
2011 [doi:10.3762/bjoc.7.184](https://doi.org/10.3762/bjoc.7.184)
2010 [doi:10.1039/CoCC00366B](https://doi.org/10.1039/CoCC00366B)
2009 [doi:10.1080/10610270802527044](https://doi.org/10.1080/10610270802527044)
2008 [doi:10.1080/10610270701278269](https://doi.org/10.1080/10610270701278269)
2003 [doi:10.1080/02603590390281480](https://doi.org/10.1080/02603590390281480)

First author publications in **bold**