

Rudi's Weekly Report.

Kia ora koutou

Hope you had a great week.

We had a number of exciting events in the School this past week, starting with the Hororata Night Glow festival.

Graeme, Laura, Rodrigo, Dangqi and Sean put on an amazing science display explaining the physics behind hot air balloons. The leaf-blower powered hovercraft was a particular success with both kids and their parents! Images to come. Well done everyone!

We also learnt the fate of the MBIE programme grants, and Professor Simon Brown has made it to the second round.

Please join me in congratulating Simon on this achievement.

Continuing with achievements, Professor Ian Shaw has been appointed as a special advisor to the Environment Court of New Zealand. Congratulations Ian!

This week we also had a number of exciting lectures from Peter Saunders from the Measurements Standard Laboratory of New Zealand, and from Dr. Clare Worley from the University of Cambridge.

We would also like to welcome Professor Jim Bolender into the School. Jim is a Professor at the University of San Diego, and has research interests in the circularly-polarized lumines-

cence of lanthanide complexes.

Finally, but definitively not least, please check out our staff profile page on Dr. Matt Polson. Matt is our compliance officer, oversees the Xray equipment, and is one of the nicest people you could ever meet.

Nga mihi nui



Welcome Prof. Jim Bolender - Mike Reid

Professor Jim Bolender arrived on Monday and is here until Thursday of next week. He was a Chemistry PhD student at University of Virginia a few years after I was a postdoc and worked on circularly-polarized luminescence of lanthanide complexes.

Next week he will give the Wednesday Seminar:

Water Quality, Public Health, and the Developing World: A Chemists View of Water Issues in Uganda

<https://www.canterbury.ac.nz/science/schools-and-departments/>

phys-chem/chemistry-seminars/bolender-james20190529.html

Please make him welcome. He's be sharing the office on the 7th floor with Gregg. bolender@san Diego.edu

SPCS Te Kura Matū Seminar Series

Time/Date	Speaker	Talk Title	Location
Wed, 22 May 2019 12:00:00 NZST	Christian G. Hartinger University of Auckland, Auckland, New Zealand	Novel Structural Motifs and Biophysical Investigations to Delineate Biomolecule Interactions in the Quest for Organometallic Anticancer Agents	Room 701, Level 7, West Building University of Canterbury
Fri, 24 May 2019 11:00:00 NZST	Dr Mark Reeves Visiting Erskine Fellow in the Department of Mechanical Engineering from MRA Technology Limited, UK	Some laser, optical and imaging techniques applied to engineering and medicine	Room 701, Level 7, West Building University of Canterbury
Wed, 29 May 2019 12:00:00 NZST	Associate Professor James Bolender Department of Chemistry and Biochemistry, University of San Diego	Water Quality, Public Health, and the Developing World: A Chemists View of Water Issues in Uganda	Room 701, Level 7, West Building University of Canterbury

SPCS Staff Profile - Dr Matt Polson

Born and raised in Timaru, I started studying Geology at the University of Otago in the nineteen ninety something.

I realised the answer to too many of the questions in Geology was “it’s a rock” and switched to Chemistry.

I stayed for a total of eight and a half years, getting my PhD with two supervisors Allan Blackman and Keith Gordon for which the tag line was “Chaos: A synthetic chemist’s adventures in spectroscopyland”.

From there I went to Waterloo, Canada to work with Garry Hanan for two years before moving his lab to Montreal where I stayed for a further three months. This fellowship was connected to a European research collaboration (which included Paul Kruger, in Dublin) so I had many enjoyable trips to continue learning about ruthenium polypyridyl complexes, European food and jetlag.

At the end of that, I sent my CV out into the wild, and got a job I didn’t apply for when my CV got handed around in Italy.

Franco Scandola was an ultra-fast time resolved spectroscopist that wanted a synthetic chemist for some work with iridium, so I moved to Ferrara, Italy for two years.

I loved my time in Italy despite failing to learn the language, but it is no coincidence Kafka wrote his stories of impenetrable bureaucracy and mysterious employers after he worked for Italians for a couple of years.

To return to New Zealand, I applied



Dr Matt Polson, Instrument and compliance technician for School of Physical and Chemical Sciences @ UC.

for and got one of the last ForST post-docs to work with Peter Steel (my PhD examiner) and learn X-ray diffraction for three years working again on ruthenium complexes. When this ended, I spent a year in the wilderness, doing random synthetic work in the department and trying secondary school teaching (not for me).

My job title in SPCS is something like “Instrument and compliance technician” which means I am here to help with all your health and safety questions, especially chemistry ones, and help with your X-ray needs,

GC research, and NMR if Amanda isn’t around. Or one of the multitude of random instruments around the department. I still publish, although it seems to be in journals with increasingly long titles.

Basically, you can come and ask me about anything; I may not know the answer but I might know who does.

Outside of chemistry I am a maker. I like making things, mostly things I can eat or make from wood. At the moment this means brewing beer and woodturning, but I give most things a go.

Publications

Shaw IC & King-Hudson R (2019)
Minimal risk of PFOS residues in eel to Maori consumers.
NZ Med. J. 132, 102-104

Ye H & Shaw IC (2019)
Food flavonoid ligand structure/estrogen receptor- α affinity relationships – toxicity or food functionality?
Food Chem. Tox. <https://doi.org/10.1016/j.fct.2019.04.008>

Harris PJ & Shaw IC (2019)
Solving New Zealand’s complementary & alternative medicine (CAM) product crisis: a risk-based proposal.
Canterbury Law Review 24, 35-60

Gordon E. Moore Medal for Outstanding Achievement in Solid State Science and Technology Award - Prof Rod Syme

Canterbury graduate David Lockwood is to receive a prestige award from [The Electrochemical Society at its Spring meeting in Dallas, Texas, May 26-30, 2019.](#)

This award was established in 1971 as the Solid State Science and Technology Award for distinguished contributions to the field of solid state science and technology and is awarded in odd-numbered years. In 2005, the award was renamed in honour of Gordon E. Moore (of Moore's law fame). The 2019 award is scheduled to be presented on Monday, May 27 when David will present a plenary talk:

“Silicon-Based Photonic Integrated Circuits: The Quest for Compatible Light Sources. By David Lockwood

[David J. Lockwood](#) obtained his PhD from Canterbury University, New Zealand, in 1969 and was awarded a DSc in 1978 from Edinburgh University, United Kingdom, for his work on the electronic, optical, and magnetic properties of solids.

He carried out postdoctoral work in physical chemistry at Waterloo University, Canada, (1970–1971) and was a research fellow at Edinburgh University (1972–1978) before joining the National Research Council of Canada in 1978, where he is presently a researcher emeritus. There, his research has centred on the optical properties of low-dimensional materials and has focused on Group IV and III-V semiconductor nanostructures.

Lockwood has published more than 600 scientific articles in journals and books, and has six U.S. patents. He is a fellow of the Royal Society of Canada, The Electrochemical Society, the American Physical Society, and



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the Institute of Physics, and has served on the editorial boards of six physics journals in addition to being the founding editor of the Nanostructure Science and Technology book series.

He has received six major awards from within Canada and abroad. Within ECS, he has co-organized numerous symposia, served on the board of directors, and chaired the Luminescence and Display Materials Division.”



