



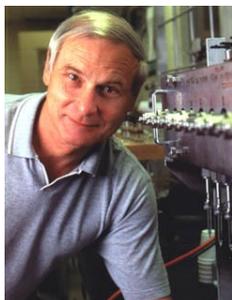
Isomass Scientific is proudly celebrating our 35 Anniversary this June, 2016



INTRODUCTION - MESSAGE FROM PETER STOW

In this edition of our newsletter, I'm going to let a few of our long time customers do the talking. It's our 35th anniversary this year and we have invited people who've worked with us over that time period explain what Isomass has meant to them and their laboratories. We would like to thank everyone who has worked with Isomass over the years and express our gratitude for the solid relationships we have been able to forge with all of you.

UNIVERSITY OF OTTAWA



My research in Earth System Science has, at its roots, a need for abundant and precise measurements of stable isotopes. It was during my early days of research here at the University of Ottawa, building up a modest IRMS laboratory with two dual inlet mass spectrometers, when in 1983 I started an enduring relationship with Nik Binder, President and sole technician of Isomass. It was Nik and his skill in making these old mass spectrometers hum that allowed my students to run the thousands of samples needed for our research on 600 million years of Earth history and climate. Over the years, our laboratory gained attention and attracted new researchers, new students, and new demands for high quality isotope analyses. Throughout this growth, our relationship with Isomass, now under the leadership of Peter Stow, grew into a partnership. Isomass made sure that we had the latest instruments and technologies, and we used these facilities to train students and technologists from all over the world.

In 1997, it was time to upgrade. The isotope laboratory (Hatch), under the management of Gilles St-Jean, received the newest isotope ratio instrument (Delta Plus) from Isomass for FREE until we could find a way to purchase it. Luckily, it was purchased within one year thanks to an NSERC grant. With this offer, Nik was very generous and took a calculated risk with us. We were able to start thinking differently with the new wonderful development, continuous flow. Later, in 2001, under the management of Paul Middlestead, the laboratory was able to completely upgrade the isotope mass spectrometer fleet through a CFI grant with a line of XP instruments. With this, numerous new techniques were added to the laboratory enabling my research to include dissolved oxygen, organic and inorganic carbon in waters, etc.

This 33-year-old relationship has been very positive for both me and Isomass, and is still alive through active collaboration between Isomass and the Hatch (and other, such as the Noble Gas and Geochemistry) Laboratories here at the University of Ottawa. Nik retired a few years ago, and Peter Stow has been in charge at Isomass for a while with the same spirit.

In 2016, the laboratory now under the leadership of Ian Clark has seen multiple upgrades and advances. It has eight mass spectrometers and dozens of peripheral preparation systems. We are one of the leading stable isotope laboratories world-wide and known throughout the industry for innovation and research. In 2009, we used our remarkable success in isotope technologies to win a \$21,000,000 grant to expand our facilities into the field of accelerator mass spectrometry. Our growth, however, would not have happened without the support and leadership of Nik Binder, Peter Stow and Isomass.



Ján Veizer FRSC
Distinguished University Professor, Emeritus
Ottawa, Ontario

UNIVERSITY OF WESTERN ONTARIO



The Laboratory for Stable Isotope Science (LSIS) at the University of Western Ontario has been working with Isomass since LSIS was first established in 1987. We have continued to do so as the laboratory expanded, and expanded, and expanded again.

First contact was with Nik Binder, who rolled into Western three days after I arrived from Alberta in 1987. Nik was there to diagnose the state of my inheritance – a SIRA-9 mass spectrometer that had been chiming in dulcet and not so dulcet tones every 15 seconds, desperately, in the dark, for more than 14 months – right next to the departmental offices. Nik immediately became a folk hero amongst the office staff for turning off the ‘there is no oil in the diffusion pump’ alarm. During his visit, Nik also recommended a young scallywag then at the University of Ottawa to come and help us start to build a lab. And we did. We acquired an Optima + MultiPrep and Prism II in 1990-91, but not after being soundly rebuked by yet another scallywagish vendor who noted that our selections “could only have been motivated by acquiring most number of pounds of instruments per dollar” when compared to the qualities of other instrumentation not selected!

With the progress of time (2001), we entered the lotus land of continuous flow, adding two more instruments (Delta Plus’) and a full range of peripherals (EA, TC/EA, Gas Benches, GC, Trace Gas, etc.). In 2010, through the efforts of new colleagues interested in adding clumped isotopes and Si-isotopes to the LSIS repertoire, we acquired a MAT 253 and a Delta V Plus. In 2014, a GC-IsoLink arrived to feed my new penchant for analyzing very dead things (megafauna). Our most recent acquisitions took place in 2015-16, with completion of the LSIS-AFAR Bird Wing addition in support of another new group of welcomed colleagues. The Bird Wing (catchy name, eh?) is devoted to light stable isotopic studies of our feathery friends, and is equipped with two additional Delta V Plus’ and a range of new peripherals (TC/EA, EA, etc.).

We call ourselves the Laboratory for Stable Isotope Science because our work transects most disciplines in which light stable isotopes can answer fundamental and applied science questions. Our group of ~50 Anthropologists, Biologists, Chemists, Ecologists, Engineers, Geographers, Geologists and Medical Scientists rub shoulders in LSIS, sharing ideas, methods and instrumentation on a daily basis, and analyzing all manner of solids, gases and liquids (don’t even ask about the liquids...).

All eight mass spectrometers and all peripherals acquired by LSIS from Isomass since 1987 are still running, and cranking out excellent data. This happy situation is thanks to our current group of dedicated staff and to sustained support from Isomass.

Of course, I do think Isomass should give us free stuff after 30 years of loyalty (I love free stuff) – I have my list at the ready!!

Fred J Longstaffe
Director, Laboratory for Stable Isotope Science
London, Ontario
May 12, 2016



NEWSLETTER - Back issues

Please visit our website: www.isomass.com/newsletter-archives/ for back issue of our newsletters. If you have suggestions for articles or feedback of any kind, do not hesitate to contact me at peter.stow@isomass.com. Now please read on for more of our early history.

UNIVERSITY OF TORONTO

The Stable Isotope Laboratory at the University of Toronto is delighted to wish Isomass congratulations on their 35th anniversary. In 1992 not only did I arrive in Toronto to start my first job and first lab, but we were installing one of the first continuous flow carbon isotope Finnigan MAT 252 systems in Canada. Days after I arrived in a lab that still consisted of just four bare walls I found the Isomass logo and Peter Stow's business card slipped under the door – the beginning of a scientific and personal collaboration that has been a joy from the first. Through Peter, Nik and the ever larger team (and family) of Isomass representatives and engineers, we have expanded our instrumentation, and through our Stable Isotope Laboratory graduates (now over 75 people) have contributed to the mini-industry of new stable isotope geochemists now developing and installing their own instruments with Isomass at their side.

Seems only yesterday Peter, that you and I rolled up our sleeves and both dug in and repaired our first Finnigan MAT source! But our grey hairs witness the truth – here's to many more years together of scientific discovery supported by superb technical partners.

Barbara Sherwood Lollar, F.R.S.C.
University Professor, Department of Earth Sciences
Toronto Ontario
Past President, Geochemical Society (2014-2015)
Director, Stable Isotope Laboratory
Canada Research Chair in Isotopes of the Earth and Environment



ISOMASS - The beginning

A little more of the beginnings of Isomass; Nik was working as an operator of mass spectrometers at the University of Saskatchewan in the Soil Science Department. The two instruments in his care were a Varian GD-150 stable isotope mass spectrometer and an AEI MS-5 organic mass spec. The department then went on to buy a VG 602 stable isotope instrument.

At that time service from any of the manufacturers was limited and usually only available from Europe. Nik found that he had the skills necessary to maintain the instruments and repair them as needed. These skills were soon in demand from other users across Canada and so Isomass Consulting Inc. was born.

In 1981 Nik took the bold step of leaving the University and, with wife Joanne fulfilling the administration and accounting roles, started the next step in the journey to where we are today.

QUEENS UNIVERSITY

Canada is a wonderful country for enthusiastic and energetic young scientists starting their careers because of the funding opportunities afforded by the government (much of the time, anyway). Several decades ago, there was a bright, young technical expert in mass spectrometers, Nik Binder at the University of Saskatchewan who realized that isotopes and the instruments required to measure them were rapidly growing in demand, driven in part by these funding opportunities. He recognized that his experience and skill in mass spectroscopy could be applied to supporting the growing number of isotope labs emerging in Canada, including two labs built by our own research group. He eventually grew this business into Isomass by forging relationships with the mass spectrometer designers and manufacturers VG and then Finnigan MAT, as well with influential experts like Chuck Douthitt. From these companies he recruited talent such as Peter Stow, a superb field engineer whose meticulous personality was reflected in his penchant for wearing ties even while installing and repairing mass spectrometers and searching out pubs that serve Guinness once the job was completed (or nearly completed—he does tend to remove his tie when consuming a pint) and who now leads Isomass. Their technical expertise resident in their field engineers, like Hugo Cornejo among others, is without peer, and they are always there to help.

Throughout this process, our research group has benefitted greatly from Isomass and the talent it harbors. Our passion, like all isotope labs in Canada, is the application of isotopes in research, and it could have never had been realized over the past 35 years without Isomass to supply the instruments, parts, repairs and sage advice that kept us and our colleagues going. They founded the first users group in Canada with the annual Canadian CONFLO meeting, which has subsequently expanded to become more global and isotopically inclusive as the annual ASITA (Advances in Stable Isotope Techniques and Application) meeting. In growing their own business, they have grown our own research capabilities and interests and facilitated better communication among all isotope labs in Canada and elsewhere. Our research group has purchased 15 mass spectrometers through the help of Isomass, and although we suggested that every tenth one should be free, they could not convince their partners that this should be case, although they did try. Our isotope research group and the additional groups that have evolved there from, could never had made it without Isomass. We anticipate that this tradition will continue, at least for another 35 years.

Kurt Kyser FRSC
Department of Geological Science & Geological Engineering
Kingston, Ontario



CONFERENCES - Come visit us at the following conferences;

ASITA

June 20-22, Philadelphia

Canadian Mineral Analysts

September 12-15, Sudbury, Ontario

Dioxin

August 28 - September 3, Florence, Italy
Thermo Booth

GSA

Booth 307
September 25-28, Denver, Colorado

The conferences we attend are listed on our website, www.isomass.com.