

# Pittcon Review

The 64th annual Pittcon exhibition closed their doors in March with the figures for the show indicating a “vibrant story about the industry’s trajectory these days” according to organisers. This was the first Pittcon to be hosted in Philadelphia and the figures reflect this with more than 18,000 attendees, 40% of whom were first time attendees. To find out about what went on during Pittcon and some of the main news to come out of the exhibition read through our Pittcon review which will bring you right up to date.

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This year’s Pittcon was truly international playing host to over a thousand companies exhibiting from 28 countries and 28% of the people attending, travelling from outside the USA. Canada, China, UK, Japan, Mexico and Brazil were listed as the top countries by attendance. Attendees to the exhibition included lab managers, scientists, chemists, researchers and professors, from industrial, academic, and government labs.

Over 1,000 exhibitors chose to exhibit their products in Philadelphia filling almost 2,000 booths. All the latest instruments and technology used in laboratory science was displayed including the Pittcon 2013 Editors Award winning product from Senova. There was a huge amount of competition for the Editors Award, which has been created to help recognise and celebrate the best new products to be launched at Pittcon each year.

As with all Pittcon events the local region plays an important and integral role in Pittcon’s conference structure and educational events aimed at bringing science and knowledge into the communities. One of the region’s biggest economical projects centres on the extraction of natural gas from the Marcellus and Utica Shale beds in the Appalachian Basin, which has potential as a huge supply for the Eastern United States. This was a major topic of discussion at Pittcon as part of a focused environmental analysis theme which appeared to have a stronger element at this year’s show:

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We did offer a Conferee Networking session, “The Future of Marcellus Shale”, which was very well attended. It was facilitated by the Secretary of the Department of Environmental Protection,

Michael Krancer, Marian Nardozi, Senior Marketing Communications Specialist for the Pittsburgh Conference, said.

“Life science sessions continue to be a significant portion of the technical program accounting for approximately 40% of the technical presentations. As for other disciplines, these are about the same as they have been in previous years. There was a bit more emphasis on food science and nanotechnology this year as well. Conferees seemed pleased with the expo and the conference in general,” she added.

Senova Systems won the Pittcon 2013 Editors award for their pHHit pH sensor, introduced at the show during their press conference. The pHHit sensor is the world’s first calibration free pH meter. The sensors entirely new and unique technology platform incorporates an advanced sensor and electronics into a novel product design, eliminating glass electrodes and significantly enhancing usability compared to traditional pH meters.



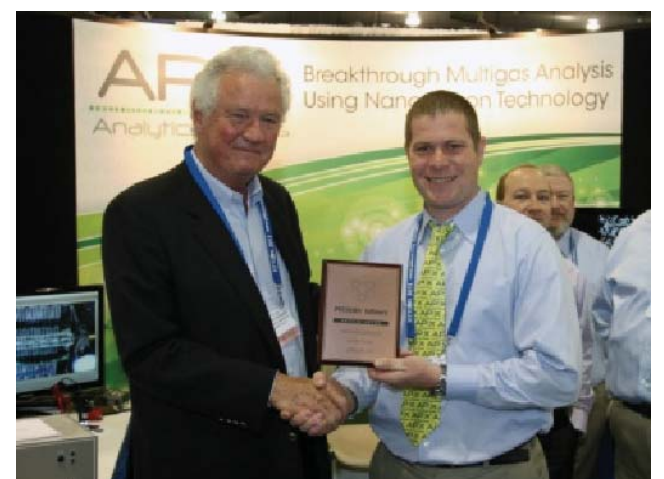
Senova Systems pHHit Sensor



Gold Winner: Senova for pHHit pH Sensor



Silver Winner: Opto Fluidics for a Nanotweezer



Bronze Winner: Apix for Multigas Analyser

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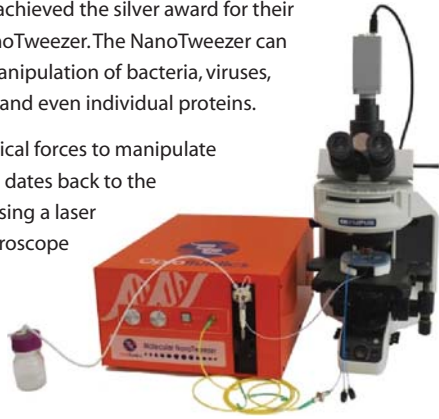




"Senova System's pHit sensor platform represents the most significant technology breakthrough in pH measurement for over 70 years," commented Lee Leonard, CEO of Senova Systems. "With its strong usability and cost-of-ownership advantages, the pHit Scanner resolves many longstanding problems and we expect that it will be a 'game-changer' in pH measurement."

Opto Fluidics achieved the silver award for their Molecular NanoTweezer. The NanoTweezer can enable true manipulation of bacteria, viruses, nanoparticles and even individual proteins.

The use of optical forces to manipulate microparticles dates back to the 1970s. By focusing a laser through a microscope objective, one could create a well into which particles and cells could be trapped.



Opto Fluidics Molecular NanoTweezer

Unfortunately the physics of this type of "free-space" trapping limits the size and type of things that can be trapped. The reason for this is that the force that light can apply to a particle is proportional to the intensity of the light and how sharply it is focused. Traditional optics are limited in both these respects by a combination of diffraction and the amount of power that can be safely applied to the trapped object.

Because light in the evanescent field decays exponentially and the resonators make it very bright the amount of force that can be applied is much higher. This combination is what enables the NanoTweezer technology to get around this classic limitation and enables users to trap a whole new class of previously inaccessible biological and non-biological particles like cells, viruses and molecules.

Apix launched their Multigas Analyser, the GCAP, at Pittcon, which won the bronze editors award. The GCAP is the next generation for gas



APIX Technology's GCAP

chromatographers using miniaturised nano-scale silicon components. Compact and portable, easy to use and inexpensive the GCAP is perfectly developed for the research, biomedical, environmental and petrochemical markets. The GCAP can go sub ppb levels of detection with a pre concentrator for VOC's.

## Press Conferences

Exhibitions provide the perfect opportunity for companies to showcase their new products and company directions through press conferences. With a packed out schedule Pittcon 2013 was no different opening with the traditional breakfast conference hosted by Waters on the first day. Waters opened the product launches with their ACQUITY Advanced Polymer Chromatography System, with James Waters (founder of Waters) attending the launch. The ACQUITY system offers improved molecular weight information about polymeric species up to 20 times faster than traditional gel permeation chromatography and was developed in cooperation with the Dow Chemical Company.



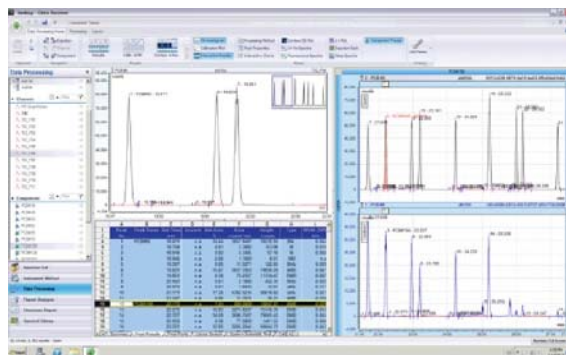
ACQUITY System from Waters

Another traditional press conference on the Pittcon calendar has to be the Bruker lunch event. 2013 did not disappoint with Bruker showcasing their latest products including the EVOQ range of LC Mass Spectrometers. With these instruments Bruker have focused more on the robustness and ease of use of their products. The EVOQ systems include the industry's first vacuum-insulated probe heated electrospray to ionise thermally fragile molecules, enhanced robustness with a robust orifice vacuum and a Dual Funnel Quadrupole to maximise sensitivity.



EVOQ Qube and Elite from Bruker

Thermo Fisher hosted another lunch time press conference, which was very much focused on their Chromeleon 7.2 software. This software is designed to support mass spectrometry along with front-end separation techniques combining them into the same easy to use software package. Jakob Gudbrand explained "with the Chromeleon 7.2 software, Thermo Fisher is the only company to be able to provide such an integrated solution".



Screen shot of Chromeleon 7.2 software

AB Sciex opened their press conference by talking about the products they had launched throughout 2012 which means they can now offer a wide variety of LC/MS/MS systems across a variety of different industries. AB Sciex also managed to achieve ISO 13485:2003 certification, which is an ISO standard that represents the requirements for a comprehensive quality management system for the design and manufacture of medical devices. In addition to this at Pittcon they launched their API 3200MDT and 3200MD QTRAP LC/MS/MS systems, two devices that can be used to analyse trace levels of multiple compounds in human samples for diagnostic purposes.



API 3200MD from AB Sciex

"Clinical diagnostics is the new frontier for mass spectrometry," said Rainer Blair, President of AB SCIEX. "The introduction of the 3200MD series is a major milestone for AB SCIEX itself in response to the demand in clinical settings for mass spectrometers as medical devices that meet regulatory requirements."

The 3200MD series is the first of a family of in vitro diagnostic devices that AB SCIEX plans to roll out around the world in the future. The intended use of these devices is to identify inorganic or organic compounds in human specimens for clinical use.

Phenomenex hosted their press conference and focused on their achievements throughout 2012 along with some of the products they have launched recently. Their 1.3 Micron UHPLC columns are the smallest diameter columns in the Kintex family. This now means Phenomenex can offer four particle sizes ranging from 1.3 to 5 microns.

Another area of focus for Phenomenex was their partnership with AB Sciex and Peak Scientific.



Busy Environmental Technology Publications stand at Pittcon

## Pittcon Exhibition Hall

The Pittcon exhibition hall was a buzz of activity throughout the week with the Environmental Technology Publications stand (combined with the International Labmate stand) busy with new customers and old interested to pick up the latest edition of our International Environmental Technology, Asian Environmental Technology and Petro Industry News.

There were many other new products to be found outside of the press conference rooms too.

Postnova were one company looking to attract customers to their stand with their CF2000 Centrifugal Particle Separator. Award winner, the CF2000 allows high resolution particle separation and sizing all at the same time offering greater flexibility, increased robustness and excellence in performance. The range of separation sizes is wide too, ranging from smaller species like proteins and polymers to larger particles all in one run. The CF2000 series was developed to become the first professional modular Centrifugal FFF system available.



CF2000 Centrifugal FFF from Postnova

Horizon Technology launched their new XcelVap automated benchtop Evaporation/Concentration system at Pittcon. "Laboratories in all industries routinely evaporate/concentrate sample extracts to provide the best analytical sensitivity in the chromatography step" says Bob Johnson, CTO and Founder. The XcelVap Evaporation/Concentration System provides a number of features such as pressure ramping, user-changeable nozzles to facilitate high up-time, internal feedback monitors, an intuitive Touch Screen, and more.



XcelVap benchtop Evaporation/Concentration system from Horizon Technology

"As important as the sample preparation steps are to the quality of the overall analytical process, laboratories want them to run smoothly and quickly to reduce costs and yield the most accurate and precise data. The XcelVap System will help laboratories achieve those objectives," says Dr. Peter Brown, CEO.

## Pittcon 2014

After this year's success Pittcon 2014 promises to be a huge event in the Laboratory calendar. Next year's exhibition is due to be held in Chicago, "The Windy City". Being the third most populated city in the USA there will be a lot to do in the city alongside the Pittcon exhibition. Pittcon is situated in North America in the state of Illinois next to Lake Michigan. A lot of the nightlife bars and restaurants can be found along the city's waterfront. Chicago is also a centre for some American sports, with NFL, NHL, NBA, MLB teams along with lots of other abbreviated leagues found in Chicago. The city also offers Broadway style entertainment if visitors would like to soak up some American culture too.

The Environmental Technology Publications team look forward to seeing you at next year's exhibition.