

# The SAS Spectrum Newsletter

The Newsletter of the Society for Applied Spectroscopy



## September 2013



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## Mike Doyle to Receive the Williams-Wright Award



The Coblenz Society is pleased to introduce the recipient of the 2014 Williams-Wright Award, Dr. Mike Doyle. Mike Doyle is the President of Axiom Analytical, Inc., a manufacturer of sample interfacing equipment and systems for molecular spectroscopy. He is also President of Symbion Systems, which provides standardized process analytical software. Before founding Axiom, he was the President of Laser Precision Corp. and the founder of its Analect Instruments Division, the first manufacturer of robust, process-compatible, FTIR spectrometers.

Mike received his Ph.D. in Physics from the University of California at Berkeley where he started his spectroscopy career with a thesis on magnetic resonance spectroscopy. After receiving his Ph.D., Mike entered the new field of laser development, first at Hughes Aircraft Company, where he was in charge of gas laser development. In this capacity, he developed the first mercury laser and performed fundamental work which led to the development of the first ion laser. He then moved on to Philco-Ford Corporation (later Ford Aerospace), where he carried out extensive R & D in the development of lasers and solid-state optical devices, including management of several government contracts. He was the co-inventor of a number of patents in the areas of laser communication, metrology, and frequency stabilization. His publications included several important papers in the area of laser theory including the first comprehensive theory of gas laser operation.

After seven years in corporate R&D, Mike decided to become an entrepreneur. He co-founded Laser Precision Corporation and was initially the Executive Vice President and Director of Product Development. In this capacity, he planned and managed the establishment of the Analect Instrument Division. He also managed several government subcontracts including the development of the scanning spectroradiometric arrays for the Pioneer Venus and Galileo Jupiter programs. Mike's many contributions to the Company's technical estate included the invention of the "Transept" Refractively Scanned Interferometer, the basis for the first commercial FTIR spectrometer sufficiently robust to function reliably in an industrial manufacturing setting. He subsequently became the President of Laser Precision and managed the company's growth at a compound rate of over 40% per year to a sales level of over \$ 25 million/year.



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After leaving Laser Precision in 1988, Mike and Norm Jennings founded Axiom Analytical, which has become a leading manufacturer of sample interfacing equipment for process spectroscopy. Its major products include in-line probes, flow cells, and fiber-optic multiplexers. The spectroscopic techniques served include mid-infrared, near-infrared, UV-visible, and Raman. Mike is the inventor of more than twenty-five patents held by the Company. In 2004, Mike and Norm formed Symbion Systems, Inc. to provide standardized instrument control, connectivity, and process monitoring software for the same markets served by Axiom's hardware products.

Mike has authored numerous papers published in refereed scientific journals ranging from *Physical Review Letters* to *Applied Spectroscopy*. He was honored at the 1998 Eastern Analytical Symposium as one of ten living "Pioneers of FT-IR Spectroscopy". He is the inventor of over fifty patents, including the patents underlying many of the more significant products of Analect Instruments and Axiom Analytical, Inc. His patents in the area of spectroscopy encompass interferometer design, highly efficient optical sources, thin film measurement, the fundamental patents underlying ATR probes, FTIR microscopes, ATR flow cells, specular reflectance sampling devices, gas cells, diffuse reflectance probes, optical beam transfer apparatus, fiber-optic multiplexers, sparging-IR systems, and Raman probes.

Mike's personal interests range from singing and playing guitar to hiking, biking, and traveling with his 15 year old son James Patrick. His extensive travels include eleven extended trips to central and southern Africa where he spent much of the time hiking and camping in the bush, canoeing on the Zambezi River, and experiencing numerous close calls with all manner of beasts.

The formal presentation of the Williams-Wright Award will take place at a special symposium at Pittcon 2014.

The Coblenz Society's Williams-Wright Award is presented annually to an industrial spectroscopist who has made significant contributions to vibrational spectroscopy while working in industry. The work may include infrared and/or Raman spectroscopy, instrumental development as well as theory, and applications of vibrational spectroscopy. Government labs are not considered industry in this definition. No restrictions are placed on the selection of the Awardee because of age, sex, or nationality, but the Awardee must still be working at the time the award is presented. The award consists of a frame certificate and an honorarium. In order to ensure that the award is based on an independent evaluation of the candidate's achievements, the selection is made by a committee chosen by the Coblenz Society.

## **SAS UK Third Annual Technical Meeting Features SAS Tour Speaker from China**

The UK Regional Section of SAS is pleased to announce its third annual technical meeting. This meeting, entitled *Graphene Spectroscopy*, will be held on 29<sup>th</sup> October 2013 at Trinity Hall, University of Cambridge, UK. As a consequence of generous sponsorship and assistance from Horiba Jobin Yvon SAS in France and Horiba in the UK, the meeting is able to feature a presentation from Professor Ping-Heng Tan from the Chinese Academy of Sciences, Beijing, P.R. China. Professor Tan will be featured as an SAS Tour Speaker and his talk will be "*Application of ultra-low frequency Raman spectroscopy in two-dimensional layered materials.*" In addition to this speaker from China, through additional kind sponsorship of the meeting by Renishaw plc, NT-MDT Europe BV, and the UK Regional Section by Acal BFI Ltd, this meeting is also able to feature speakers from Italy and The Netherlands.

The full set of presentations for this exciting meeting is:

Prof. Ping-Heng Tan, Chinese Academy of Sciences, Beijing, P.R. China, "*Application of ultra-low frequency Raman spectroscopy in two-dimensional layered materials.*"

Prof. Andrea Ferrari, Cambridge Graphene Centre, UK, "*Title to be announced.*"

Dr. Duhee Yoon Cambridge Graphene Centre, UK, "*Raman spectroscopy for characterization of strained graphene.*"

Prof. Günter Hoffmann, Eindhoven University of Technology, The Netherlands, "*Tip-enhanced Raman Spectroscopy (TERS) and Mapping (TERM) of graphene and related materials*".

Dr. Cinzia Casiraghi, University of Manchester, UK, "*Raman spectroscopy of defective graphene: Effect of the excitation energy, type, amount of defects and applied gate voltage.*"

Dr. Michael Johnston, University of Oxford, UK, "*Terahertz spectroscopy of graphene.*"

Prof. Giulio Cerullo, Politecnico di Milano, Italy, "*Ultrafast electron-electron scattering in graphene.*"

Prof. Euan Hendry, University of Exeter, UK, "*Ultrafast optical measurements of graphene.*"

Dr. Rahul Raveendran-Nair, University of Manchester, UK, "*Characterisation of graphene and its chemical derivatives by different spectroscopic techniques.*"

For further details of this meeting, please visit the SAS UK Regional Section web-site at: <https://sites.google.com/site/sasukregion> or email John Chalmers at: [vibspeconsult@aol.com](mailto:vibspeconsult@aol.com).

## Call for Nominations for the Lippincott Award

The Ellis R. Lippincott Award is presented annually to an outstanding vibrational spectroscopist. It is co-sponsored by the Coblenz Society, the [Society for Applied Spectroscopy](#), and the [Optical Society of America](#). The award is presented in memory of Professor Ellis R. Lippincott to scientists who have made significant contributions to vibrational spectroscopy as judged by their influence on other scientists.

This award was established in 1975 by OSA, the Coblenz Society, and the Society for Applied Spectroscopy to honor the unique contributions of Ellis R. Lippincott to the field of vibrational spectroscopy. The purpose of the Ellis R. Lippincott Award is to honor Dr. Lippincott's memory by the recognition of significant contributions and notable achievements in the field of vibrational spectroscopy. The medal is sponsored jointly by the Coblenz Society, the Optical Society of America and the Society for Applied Spectroscopy.

Details on the nomination process and timeline are available at [the OSA web site](#) and through the Lippincott Award Coordinator. Nominations for the **2014 Award** will be accepted until **October 1, 2013**.

[Lippincott Award Coordinator](#)  
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