Chemistry Notices

For the Week of February 6 to February 10, 2012

VISITING SPEAKERS & SEMINARS

DEPARTMENT OF CHEMISTRY, UNIVERSITY OF ALBERTA

Inorganic Chemistry
Visiting Speaker

Dr. Michael Gerken

Department of Chemistry and Biochemistry
University of Lethbridge

Western University Exchange
Speakers Program (WUESP)

will speak on

"Recent Progress in SF_4 Chemistry"

Besides, SF6, sulfurtetrafluoride is the most important binary sulfur fluoride. In organic chemistry, SF4 has played an important role in replacing oxygen with fluorine.
Towards strong Lewis acids such as SbF5, SF4 acts as a fluoride-ion donor forming [SF3][SbF6]. The characterization of three different phases of [SF3][SbF6] will be presented and the Lewis acid properties of the SF3+ cation were studied towards bases such as pyridine and acetonitrile. For the first time, SF4 itself was conclusively shown to acts as a Lewis acid towards a range of nitrogen bases.

DATE: ***Thursday, 9 February 2012***
TIME: ***11:00 a.m.***
PLACE: ***E3-25 Gunning/Lemieux Chemistry Centre***

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Department of Chemistry / University of Alberta

CHEMISTRY EDUCATION SPEAKER

Natalie Gerum
Faculty of Education, Lakehead University

will workshop on

"There's Got To Be Chemistry! Why Chemists Make Great Teachers"

For teaching and learning to be effective, there's got to be chemistry - between professors, lab TAs, and students, that is. Chemistry has much to teach us about what makes classrooms and labs into places that can change the world. In this interactive workshop, we will explore how the skills developed through the study and practice of chemistry are transferable to creative teaching and learning. Chemists know how to blow things up, including the confining conventions too often found in post-secondary teaching. So, bring your bunsen burners because it's time to set your students on fire . . . with passion for making this world a better place.

Date: **Friday, February 10, 2012**
Time: **10:00 a.m.**
Place: **E3-25 Chemistry Building**

Biography-Natalie Gerum is earning her M. Ed. at Lakehead University, considering the role of universities in responding to social and ecological injustices. She has coordinated the Pearson Seminar on Youth Leadership and has developed experiential education curriculum for Mount Allison University and Renaissance College at the University of New Brunswick. Natalie is the Student Board Member-At-Large for STLHE. She has delivered addresses on teaching and learning to the 3M National Teaching Fellows and the AUCC, and is a coordinator for the 3M National Student Fellowship program.

Sponsored by the Vargo Teaching Chair
Refreshments provided

Di Wu

502 Seminar

will speak on

"Top Notch Design for Fiber-Loop Cavity Ring-Down Spectroscopy[1]"

Wednesday, February 8, 2011
11:00 a.m. in E3-25

[1] Rushworth, C. M.; James D., Lee, J. W. L., Vallance, C. Anal. Chem. 2011, 83, 8492.

Challenges and Opportunities in Biomedical Surface Analysis: Nanoparticles to 3D Imaging of Cells

Thursday, February 9, 2012

All lectures take place in ETLC 1-001, unless otherwise noted.
Refreshments begin at 3 p.m.
Lectures begin at 3:30 p.m.

Professor David G. Castner
National ESCA and Surface Analysis Center for Biomedical Problems
Departments of Bioengineering and Chemical Engineering
University of Washington
Seattle, WA, 98195-1750 USA
http://depts.washington.edu/bioe/people/core/castner.html

Biomedical surface analysis has undergone significant and numerous advances in the past 30 years in terms of improved instrumentation, introduction of new techniques, development of sophisticated data analysis methods, and the increasing complexity of samples analyzed. Comprehensive analysis of surfaces and surface immobilized biomolecules (peptides, proteins, DNA, etc.) with modern surface analysis instrumentation provides an unprecedented level of detail about the immobilization process and the structure of the immobilized biomolecules. Results from x-ray photoelectron spectroscopy (XPS or ESCA), time-of-flight secondary ion mass spectrometry (ToF-SIMS), near edge x-ray absorption fine structure (NEXAFS), surface plasmon resonance (SPR) biosensing, atomic force microscopy, and sum frequency generation (SFG) vibrational spectroscopy provide important information about the attachment, orientation, conformation, etc. of biomolecules. However, even with the advances that have been achieved with these powerful surface analysis techniques, there still remains many significant challenges for biomedical surface analysis. These include characterizing the surface chemistry and structure of nanoparticles, determining the structure of protein bound to surfaces, 3D imaging of cells and tissue sections, and maintaining biomolecules and materials in a biological relevant state when using ultra-high vacuum based analysis techniques.

This talk will discuss the current challenges in biomedical surface analysis and what is being done to address them. Also discussed will be the role of well-defined standards to develop new biomedical surface analysis methods for characterizing more complex, biological relevant sam**ples.**

David G. Castner, is Director of the National ESCA and Surface Analysis Center for Biomedical Problems (NESAC/BIO) and Professor of Bioengineering and Chemical Engineering at the University of Washington. He is also Associate Dean for Infrastructure in the College of Engineering at the University of Washington. He received a Ph.D. in Physical Chemistry from University of California at Berkeley in 1979. After seven years as a Research Chemist at the Chevron Research Company, he moved to the University of Washington in 1986 and became Director of NESAC/BIO in 1996, He was also the Director of the Center for Nanotechnology at the University of Washington in 2004-2005. He has an active research program in the areas of surface analysis, surface modification, biomaterials and organic thin films, co-authoring more than 200 refereed publications. He is a Fellow of the American Vacuum Society and of Biomaterials Science and Engineering. Prof. Castner received the 2004 Clemson Award for Basic Research from the Society of Biomaterials and the 2003 Excellence in Surface Science Award from the Surfaces in Biomaterials Foundation. He was President of the American Vacuum Society in 2010.

http://www.industrymailout.com/Industry/View.aspx?id=317083&q=412273540&qz=bbc621

EMPLOYMENT OPPORTUNITIES

Job Description

Posted January 30, 2012

Company: Botaneco Corp.
Position Tile: QC Chemist/Analyst
Department: Quality Control
Reports To: QC Manager
Employment Type: 1 year contract, with possibility of renewal
Location: Calgary, Alberta
Deadline to Apply: February 17, 2012
Apply to: brothersk@botaneco.ca

Botaneco Corp, which includes subsidiary Botaneco Specialty Ingredients Inc., Natunola Health Biosciences Inc., and Advitech Inc. provides quality ingredients to the personal care, food and nutraceutical markets. We are a health sciences and technology company that develops, manufactures and markets proprietary natural ingredients.

Position Description

The QC Chemist/Analyst will provide analytical support for process development and manufacturing activities. The QC Chemist/Analyst will help maintain the QC capability within Botaneco Corp. through the development and continuous improvement of appropriate documentation, methodologies, instrumentation, and equipment necessary to carry out the day to day operations consistent with Botaneco Corp. and external (industry) standards for such products.

This position is also responsible for advancing Botaneco's oleosome based technology into the Personal Care/ OTC Marketplace by assisting in the development of the Features/Benefits/Application profile for all new products. Duties include supporting the new technology introduction from product concept, to claim substantiation, to finished formulations, to working with lead customers in the development of marketable finished products.

Responsibilities

1. Work with the QC Manager and others (Director of Operations, Production Supervisor, R&D staff, sales and marketing) as appropriate to maintain and continuously improve the QC analytical capability for Botaneco Corp.
    a. Understand, implement and maintain QC competencies required to meet industry standards for the products under consideration.
    b. Maintain and continuously improve the laboratory procedures, validation and records to ensure product quality, and meet approval and release by the QC Manager.
2. Analytical Support to Process Development and Manufacturing Operations.
    a. Coordinate with Production Supervisor and Director of Operations to define the analytical testing required to support process development and manufacturing activities and meet strategic imperatives set by Management.
    b. Perform qualitative and quantitative analysis of raw materials, starting materials, in-process and finished products employing physico-chemical, biochemical, microbiological and related methods.
    c. Develop new methods, SOP's and systems as required to support manufacturing, validation and technology development targets.
    d. Perform data review, data analysis and/or trend analysis, and prepare written reports or presentations.
3. Identify and substantiate product key benefit claims needed to support Botaneco Corp's sales/marketing efforts and potential customer product claims.
4. Develop prototype formulations which highlight the substantiated benefits.
5. Develop specific formulations for lead Botaneco Corp customers.

BOTANECO

Job Description

Posted January 30, 2012

6. Maintain detailed knowledge of new cosmetic ingredients and their potential impact on future formula and oil body development.
7. Ensure diligent compliance with Botaneco Corp. and industry process or regulatory standards for quality, accuracy, consistency, and reliability with regard to techniques, methodologies, documentation, and work processes.
8. Work cooperatively with peers to support manufacturing, validation, and technology development and commercialization targets.
9. Maintenance of laboratory work areas, equipment, and instrumentation.
    a. Ensure that the work areas are well maintained, organized and suitable for performing analytical evaluations without compromising the integrity of the sample or the method.
    b. Ensure that all the laboratory equipment and instruments are in good working order and within their specified calibration criteria.
10. Maintain the inventory for laboratory Chemical, Reagent, Reference Standards, and Hold-back Samples.
11. Comply with and participate in the continuous improvement of Botaneco Corp. Quality Systems.
12. Comply with and participate in the continuous improvement of Botaneco Corp. Health and Safety programs.
13. Other responsibilities and duties may be assigned from time to time that are consistent with the position of QC Chemist/Analyst.

Qualifications

Education:
- MS degree in chemistry, biology, cosmetic chemistry or equivalent;

Experience:
- Analytical laboratory experience;
- Familiarity with instrumentation/equipment commonly found in a cosmetics laboratory (i.e. pH meters, viscometers, and stability ovens);

Other:
- Strong analytical and problem solving skills; adaptability and creativity; demonstrated ability to work independently; strong interpersonal and communication skills with the ability to communicate across technical and business issues and results oriented.

All interested applicants should email their resume and cover letter in MS Word, rich text format or PDF to the attention of **Karen Brothers** at **brothersk@botaneco.ca.** We thank all candidates for responding. Only those candidates chosen by the client for an interview will be contacted. All other resumes will be retained for future consideration.

EMPLOYMENT OPPORTUNITIES, *continued*

FLYNN
LIFE SCIENCES GROUP

Project Manager/ Research Investigator for a pharma in MA. The Scientist will be responsible for establishing and maintaining relationships with contract manufacturers (CMOs) and overseeing the isolation and purification of botanical natural products at metric ton scale. It is roughly 70% managing outsourcing and 30% bench work. For immediate consideration please contact Leslie @ 508-532-1128 or email leslie@flynnlsg.com