POSITION SUMMARY
QUEEN’S UNIVERSITY - GENERAL STAFF

POSITION TITLE: Surface Facility Instrumentation Manager
DEPARTMENT: Chemistry
POSITION NUMBER: 00503804
GRADE: 9      EFFECTIVE DATE: April 1, 2017

JOB SUMMARY:

Reporting to the Head of the Department, the Surface Facility Instrumentation Manager (SFIM) oversees the day-to-day operation of the Surface Analysis Facility in the Department of Chemistry. The SFIM provides leadership in the area of surface characterization within and beyond the department and supports the departmental and the external users by effectively managing all aspects of the operation of the surface analysis instrumentation and the facility. The SFIM is also responsible for supervising and advising on the maintenance and upgrading of the instrumentation for surface analysis, training and advising users in the use and applications of the surface characterization instruments including the Transmission Electron Microscope (TEM), and the Scanning Electron Microscope (SEM) and, on occasion, the X-Ray Photoelectron Spectrometer (XPS). The SFIM will also support other departmental instrumentation facilities and Instrumentation Managers, as required.

KEY RESPONSIBILITIES:

• The SFIM will ensure that all surface analysis equipment is in peak operating condition and that instrument malfunctions are either prevented or corrected as quickly as possible. Maintenance and repair will normally involve coordinated efforts with in-house personnel or service technicians outside the university.
• The SFIM will supervise the scheduling of the usage of the surface analysis instrumentation and develop sample preparation and handling methods to ensure efficient service. This will include development of maintenance schedules for minimizing down-time of the instruments. The SFIM will be expected to manage the surface analysis facility through all growth phases of the Department, including addition and upgrade of instrumentation and a changing user base, both, within and outside the Department.
• The SFIM will keep abreast of developments in surface science and materials science and be capable of modifying the equipment in order to provide new types of analysis to accommodate the research of the Department. The SFIM is also required to have or develop expertise in the interpretation of the surface analysis data. It is expected that the SFIM will actively assist in the preparation of equipment grant applications that will augment and update the capacities of the surface analysis facility.
• The SFIM will strive to create and maintain a nationally recognized state-of-the-art facility. The SFIM is responsible for ensuring that the facility meets the current and projected needs of the research community as well as the undergraduate program, and is, as such, responsible for both short and long term strategic planning for the facility. This includes cost recovery, needs assessment and personnel management.

• The SFIM will monitor and ensure that all relevant safety procedures are maintained as necessary for the facilities; ensure all users are trained and perform in a safe and efficient manner using the appropriate PPE when applicable; continually monitor user performance while working within the facility; promote proactive identification and elimination of hazards by correcting unsafe acts (or conditions) and ensuring health and safety policies are followed.

• The SFIM will maintain user records for surface analysis facility and be responsible for providing monthly statements of usage, including financial statements, to the Department Manager or his/her designate. An annual report on the operation, usage and needs is to be presented to the Technical Resource Committee at the end of the University’s fiscal year. Also assists in the preparation of reports for various granting agencies for grant-funded instrumentation.

• The SFIM actively interacts with Principal Investigators, researchers, and other personnel associated with research projects, using instrumentation in the facility.

• The SFIM will provide and organize training sessions for students and other users on a regular, or “as needed” basis.

• The SFIM will actively participate on the Infrastructure Committee or equivalent committee.

• The SFIM will present at departmental meetings and other meetings internal/external to the university, in addition to running lab meetings, as needed.

• Undertake other duties as assigned in support of the department.

REQUIRED QUALIFICATIONS:
• A Ph.D. in Chemistry or Physics with demonstrated expertise in surface characterization, preferably with hands-on experience on TEM, SEM and XPS.

• Proven ability in delivering technical seminars to targeted groups in the research community.

• Proven ability in providing innovative research solutions to a wide constituency of researchers.

• Demonstrated expertise in the operation and development of surface analysis instrumentation.

• Extensive knowledge of the use and modification of surface analysis instrumental software.

• WHMIS is a requirement.

• An equivalent combination of education and experience will be considered.

SPECIAL SKILLS:
• Technical and problem solving skills related to the use and the application of the facilities;

• Ability to participate meaningfully in collaborative research and solve research problems relating to the theory and/or practice of surface analysis.
• Analytical, interpretive, and problem-solving skills with the ability to solve unexpected problems as they arise.
• Strong computer skills
• Organizational and planning skills to coordinate the activities and various projects of the department.
• Attention to detail and ability to work to deadline and prioritize tasks.
• Excellent communication (oral and written) skills and able to deliver training lectures, seminars and tutorials.
• Strong interpersonal skills, including motivational and supervisory skills.
• Ability to work effectively and collaboratively in a team environment.
• Demonstrated knowledge of best practice in safety procedures, and experience maintaining safety equipment.

DECISION MAKING:
• Deciding of priorities in terms of routine vs. specialized and short-term vs. long-term usage of equipment.
• Ability to assign and prioritize routine and specialized experiments to the different available instruments and personnel in the facilities.
• Cost/benefit analyses of new vs old equipment that requires repair.
• Decisions concerned with the day-to-day matters arising during the operation of the facilities.
• Knowing when to bring to the Department Head or Head’s Delegate matters of concern or urgency.

RESEARCH ASSESSMENT QUESTIONS:
(must be completed)

1. Is this position technical in nature in a teaching or research lab or lab-related area? ☒ ☐
2. Does this position support a research project? ☒ ☐
   If yes, indicate name of the project:
3. Does this position report directly to a Principal Investigator (PI)? ☐ ☒
   If yes, indicate name of the PI:

SIGNATURES:

Incumbent

Manager

Date
Department Head/Director or Designate