

NMR Spectroscopist Job Position – Preliminary Announcement

Center for Materials and Molecular Analysis (MMA)

Analytical Resources Core (ARC)

Office of the Vice President for Research

Colorado State University

The Center for Materials and Molecular Analysis (MMA) of the Analytical Resources Core (ARC) at Colorado State University expects to begin searching for an NMR spectroscopist to oversee the operations of the ARC-MMA NMR facility. We hope to have permission to begin this search soon. Primary responsibilities will include providing advanced research services, training and supervision of users, educational activities, and routine maintenance and repair of the MMA's NMR spectrometers, including solution-state Varian (400, 500 and 600 MHz) and Bruker (3 x 400 MHz) instruments. The candidate will be involved in the development of operational plans, performance measures and the submission of instrumentation acquisition grants. Areas of emphasis will be in continuing support to synthetic chemistry research programs, and interest in the development of new directions. The ARC MMA laboratories are equipped with many other analytical tools and instruments for research support to user groups across campus and in the surrounding community. Additional responsibilities may include support in other MMA laboratories such as magnetics and physical properties analysis, EPR, mass spectrometry and/or general spectroscopy. Professional development opportunities will be made available including attendance and presentations at discipline-specific meetings including the ENC, SMASH, etc., as well as participation in enrichment trainings and workshops.

Description of Work Unit: The Analytical Resources Core (ARC) is an Institutional Core in the Office of the Vice President for Research at CSU. The mission of the ARC is to enable cutting-edge STEM research and development programs at Colorado State University by providing access to analytical research instrumentation, expert guidance, services and education to CSU and the broader community.

Required Job Qualifications: Terminal degree (PhD) in chemistry, physics, or related discipline is required. Two or more years hands-on experience with operations and maintenance of high-resolution NMR spectroscopy is required.

Preferred Job Qualifications:

- Computer programming and electronics experience desired
- Demonstration of good written and verbal communication skills
- Proposal writing experience, especially for shared high-end equipment
- Training and supervision of students, preferably in a lab setting

- Personal and professional commitment to diversity and inclusion as demonstrated by involvement in teaching, research, creative activity, service to the profession and/or diversity/inclusion activities.

Essential Job Duties and Expected Effort

Job Duty Category: NMR operations and services

Duty/Responsibility: Provide NMR services, routine maintenance, troubleshooting and repairs on Bruker and Varian/Agilent NMR systems in the MMA. Responsibilities on all instruments will include consulting and assisting users with development and optimization of one and multi-dimensional and variable temperature NMR experiments, operations, interpretation of data, and recommending new equipment as necessary. Duties include oversight and management of work in this area, “growing” the facility user base and analytical capabilities, basic record keeping, logging and accounting in the laboratory, basic maintenance, stocking of necessary supplies to operate and maintain the laboratory. Record keeping is essential both for demonstrating use to funding agencies, and for billing purposes.

Percentage of Time: 50

Job Duty Category: Teaching and training

Duty/Responsibility: Participate, design and lead educational and outreach activities provided by ARC-MMA. These include predominantly training of students on the open-access NMRs but will also consist of occasional teaching and lab demonstrations in academic courses and ARC-MMA led workshops, symposia and short courses, as well as assistance in new curriculum development.

Percentage of Time: 15

Job Duty Category: Supervising and staff training

Duty/Responsibility: This position supervises Graduate Teaching and Research Assistants that are assigned each semester, or over the summer. This position also supervises undergraduate interns and will develop a more formal student training program in the NMR lab.

Percentage of Time: 15

Job Duty Category: Research

Duty/Responsibility: Independent and collaborative research is encouraged with colleagues, ARC staff scientists (including those in other ARC Centers), faculty and other principal investigators to

solve challenging problems in science and engineering fields. These efforts are expected to advance CSU's primary research, education and service mission. The candidate's experience, knowledge and abilities in the use of NMR spectroscopy will enhance efforts to solve challenging problems in science and engineering.

Percentage of Time: 10

***Job Duty Category:* Support in other MMA labs**

Duty/Responsibility: Assist in other areas of the MMA. These may include magnetics, physical properties measurements, EPR, mass spectrometry and/or general spectroscopy.

Percentage of Time: 10

For more information:

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