

To: CHEM, IPPH and MCMP Graduate Students

From: John Harwood (jharwood@purdue.edu)

Date: March 31, 2008



Subject: Available Graduate Staff Position in the Interdepartmental NMR Facility

There will be one 20-hr (2 Q) position available on the NMR Facility graduate staff, starting in Summer 2008. The following paragraphs briefly describe the position and prerequisites. If you feel that you are interested in and qualified for this position, please submit a typed, short (one page maximum) resume by noon, Monday, April 21st, to Donna Bertram (Room 361 WTHR). The resume should include:

- All NMR instruments for which you are an approved operator;
- Any of your coursework and experience related to NMR spectroscopy;
- The signature of your major professor indicating his/her knowledge and approval of your intentions and the expected time commitment. If he/she is out of town, please submit your application unsigned.

This appointment is a position in lieu of a teaching or research assistantship. It is a position of significant responsibility and is an excellent opportunity to develop NMR expertise. Some or all of the following activities will be expected:

Primary Duties:

- ⇒ Acquire expert-level proficiency on the assigned NMR system(s) such as pulse sequence testing and development;
- ⇒ Train operators in operational aspects of intermediate and advanced techniques (VT, 2D, etc.);
- ⇒ Attend a staff meeting every week;
- ⇒ Perform weekly maintenance, specific to each system;
- ⇒ Assist with various other activities when needed (fix spinner problems, recover system from power outages, help characterize spectrometer problems, etc.);
- ⇒ Assist in lab NMR courses

Secondary Duties (Some of these have been transferred to full-time staff, but student workers will provide backup):

- ⇒ Monitor and refill cryogenics, transporting liquid-N₂ dewars as needed;
- ⇒ Perform Instrument shimming and performance testing;
- ⇒ Stock supplies;
- ⇒ Perform certain instrument reconfigurations (probe changes, VT configurations, etc.)

Unlike a conventional teaching appointment, the weekly time commitment varies substantially. Certain responsibilities (weekly maintenance) are necessarily rigidly scheduled. Many other activities, however, can be scheduled at the mutual convenience of those involved (i.e. training). On the average, the actual hours worked are comparable to that of an equivalent teaching appointment. However, the nature of the job requires some flexibility: a few weeks may exceed 10 hr per "Q"; others may fall significantly short.

A willingness and desire to learn, coupled with a reliable and responsible nature, are essential prerequisites. Good communication skills are mandatory. It is desired that applicants have passed their oral preliminary exam. Preference will be given to candidates with relevant prior experience in NMR, although all qualified candidates will be considered.

The importance and cost of the equipment demand careful training for many of the duties (cryogen support, operator training, probe changes). It usually takes several months for a new person to master all that is required and become a fully functional staff member of the NMR Facility. **Therefore, it is essential that both the student and his/her major professor agree to a continuous and minimum commitment of eighteen months, including the intervening summers.**

cc: CHEM Faculty
IPPH Faculty
MCMP Faculty

D. McMillin
D. Raftery
H. Mo

R. Wild
B. Bailey
A. Wilson