

The University of Western Ontario
Chemistry 9582, Winter 2024

Course Title: Basics Solid-state NMR Spectroscopy II

Instructor:

N

Enrollment:

No limit

Description:

Solid-state NMR spectroscopy is one of the most powerful and widely used techniques for materials characterization, providing both structural and dynamic information complementary to that obtained from X-ray diffraction based methods.

This course is constructed to incorporate and expand upon the foundation established in the existing course, 9581 (Basic Solid-State NMR Spectroscopy). It aims to provide a more comprehensive description of nuclear spin interactions that are important to solid-state NMR, facilitating a deeper understanding of these topics. Several advanced solid-state NMR experiments for high-resolution and wide-line solid-state NMR for both spin-1/2 and quadrupolar nuclei will be introduced with relevant physical background discussed. These techniques are then explored for their diverse applications in Chemistry

Prior completion of course 9581 is not mandatory for enrollment in this course as the pertinent materials from 9581 will be succinctly revisited, and students will have the opportunity to swiftly grasp the content through assigned readings. This allows students at any stage of their graduate study to take the course.

Topics:

Basic principles and practices of solid-state NMR spectroscopy

Resources:

Solid-State NMR: Basic Principles and Practice

By David C. Apperley, Paul Hodgkinson, and R. K Harris

Lectures / seminars:

Day/s: TBA

Time/s: TBA

Mode of instruction: In person

Evaluation

Presentation 50%

Essay 50%

Course attendance and missed/late assignments

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the accommodation has been approved and the instructor has been informed.

Notes on Academic Honesty

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

Health and Wellness

As part of a successful graduate student experience at Western, we encourage students to make their health and wellness a priority. Western provides several on campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your graduate degree. For example, to support physical activity, all students, as part of their registration, receive membership in Western's Campus Recreation Centre.

Numerous cultural events are offered throughout the year. For example, please check out the Faculty of Music web page <http://www.music.uwo.ca/>, and our own McIntosh Gallery <http://www.mcintoshgallery.ca/>. Information regarding health- and wellness-related services available to students may be found at <http://www.health.uwo.ca/>. Students seeking help regarding mental health concerns are advised to speak to someone they feel comfortable confiding in, such as their faculty supervisor, their program director (graduate chair), or other relevant

administrators in their unit. Campus mental health resources may be found at http://www.health.uwo.ca/mental_health/resources.html.