



THE UNIVERSITY OF
WINNIPEG

Department of Chemistry Seminar Series

Crystallography in Curriculum and Research

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Wilfrid Laurier University



WED, SEPT 29, 2021 12:30–1:20 PM

<https://us06web.zoom.us/j/82851944603>

Meeting ID: 828 5194 4603

Passcode: 070230

All are welcome. Q&A discussion with the speaker to follow.

Crystallography in Curriculum and Research

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Project scaffolding, as a tool to achieve learning outcomes, supports the immediate construction of knowledge by the learner, provides the basis for future independent learning, and enables learners to reach otherwise unattainable goals. The 2014 International Year of Crystallography provided an opportunity for the redesign of a required third year Honours course on Chemical Literature and Scientific Communication at Wilfrid Laurier University. While course outcomes were based on recommendations for information literacy, a scaffolded approach to student projects, thematically based on the exploration of crystallography, was employed.¹ In addition to providing an overview of project scaffolding practices, recent examples, including those from the remote academic 2020/21 academic year, for the integration of small molecule crystallography into first year general chemistry, second year inorganic, and senior undergraduate capstone courses will be discussed, as well as the research outcomes that have been produced.²⁻⁴

- (1) Gražulis, S.; Sarjeant, A. A.; Moeck, P.; Stone-Sundberg, J.; Snyder, T. J.; Kaminsky, W.; Oliver, A. G.; Stern, C. L.; Dawe, L. N.; Rychkov, D. A.; et al. Crystallographic Education in the 21st Century. *J. Appl. Crystallogr.* **2015**, *48*, 1964-1975.
- (2) Hiscock, L. K.; Joekar, D.; Balonova, B.; Tomas Piqueras, M.; Schroeder, Z. W.; Jarvis, V.; Maly, K. E.; Blight, B. A.; Dawe, L. N. Structures, Phase Behavior, and Fluorescent Properties of 3-Phenyl-1-(pyridin-2-yl)-1H-pyrazol-5-amine and Its ZnCl₂ Complex. *Inorg. Chem.* **2019**, *58* (24), 16317–16321.
- (3) Moyaert, T.; Schroeder, Z. W.; Dawe, L. N. Synthesis, Coordination Chemistry and Anion Binding by a Cyanophenyl-Substituted 2-Pyridinylurea. *Eur. J. Inorg. Chem.* **2018**, 167–172.
- (4) Schroeder, Z. W.; Hiscock, L. K.; Dawe, L. N. Copper(II)- and Gold(III)-Mediated Cyclization of a Thiourea to a Substituted 2-Aminobenzothiazole. *Acta Cryst. C* **2017**, *73* (11), 905–910.