X-RAY IMAGING & RADIATION THERAPY METHODS AT THE SYNCHROTRON



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Tomasz W. Wysokinski, Canadian Light Source Inc. Senate Chamber, Room E3-262 Engineering Building, Fort Garry Campus



The Biological and Life Sciences Department at the Canadian Light Source (CLS) encompasses four sets of beamlines devoted to biological studies, ranging in scope from the atomic scale to cells, tissues and whole organisms. The Canadian Macromolecular Crystallography Facility (CMCF) is devoted primarily to crystallographic studies of proteins and other macromolecules. The Mid-Infrared Spectromicroscopy (Mid-IR) beamline focusses on using infrared energy to obtain biochemical, structural and dynamical information about biological systems. The Bio-Medical Imaging and Therapy (BMIT) facility is devoted to advanced imaging and X-ray therapy techniques.

The Biological X-ray Absorption Spectroscopy (BioXAS) facility is being commissioned and will be devoted to X-ray absorption spectroscopy and multi-mode X-ray fluorescence imaging. Together, these beamlines provide CLS Users with a powerful array of techniques to study today's most pressing biological questions. We describe these beamlines along with their current powerful features and envisioned future capabilities.

