

Automated Data Collection at the IMCA-CAT Advanced Photon Source User Facility

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The Industrial Macromolecular Crystallography Association Collaborative Access Team operates a data collection facility for protein crystallography at the Advanced Photon Source. The IMCA-CAT insertion device beam line is the only facility for protein crystallography at APS currently offering fully functional robotics for routine use. A Rigaku/MSD ACTOR robot provides automated mounting, centering and retrieval of protein samples. Integrated with user-friendly software, robotics enables high-throughput sample screening and unattended data acquisition according to user-programmed schedules, thus significantly reducing both the time necessary for crystal screening and the need for direct operator interaction.

While targeting the needs of drug discovery research for IMCA member pharmaceutical companies, the automation capabilities at IMCA-CAT are also ideally suited for structural genomics and other research efforts requiring high-throughput experiments. IMCA-CAT facilities are available to interested researchers through the APS General User Program.

Keywords: synchrotron beamline, automation, robotics