

# Integrated database for structural biology experiments at the Photon Factory

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Structural Biology Research Center in the Photon Factory, Japan, develops instruments for synchrotron-based structural biology experiments such as beamlines of macromolecular crystallography and solution scattering of a bio-molecule, and large-scale protein crystallization screening [1], and provides them to academic and industrial users. Due to the enhancements of these instruments, a large number of experimental data are produced, and database system to manage these data are important for efficient use of each instruments. Furthermore, nowadays it is often seen that all of these instruments are used within a particular user's project, integration of these database system is anticipated.

For macromolecular crystallography (MX) beamlines, experimental data management system, PReMo, has been developed [2]. This implementation was done by using a commercial middleware which consists of a controller, database, and web servers. All experimental information produced from MX beamlines are stored to the database. PReMo also functions as a platform of automated data processing and analysis, and data processing results are stored to the database. Users can retrieve these information via a web interface.

Recently, data management system for protein crystallization screening system, PXS-PReMo, has been developed. For this implementation, the same middleware is employed, and integration of PReMo and PXS-PReMo is performed easily. This is important for cooperative understanding of crystallization and diffraction of a target sample.

## References

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