Advances in Macromolecular Structure Determination

Wayne A. Hendrickson
Columbia University , New York, New York, USA, and the Howard Hughes Medical Institute

The determination of atomic structures by x-ray crystallography dominates among the applications of synchrotron radiation in biology, if not in all of science. Increasingly complex structures are being determined in ever increasing numbers. Advances that fuel this progress include cryopreservation, MAD phasing, selenomethionyl proteins, CCD detectors, and undulator sources. These developments reinforce one another and have greatest power when brought together in concert. As this is now happening, one can expect a further surge in macromolecular crystallography at synchrotrons and perhaps new-found applications such as in structural genomics.