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Titolo Certifying Central Facility Beamlines for Biological and Chemical

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Disciplina 549

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X-ray spectroscopy

Crystallography and Scattering Methods

X-Ray Spectroscopy

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Livello bibliografico Monografia

Nota di contenuto 1.A beginner's guide to synchrotron radiation and X-ray lasers -- 2.A

beginner's guide to neutron reactor and spallation sources and detectors -- 3.A beginner's guide to detectors in use at X-ray beamlines and their calibration -- 4.Introduction to X-ray beamlines for crystallography -- 5.Guidance in preparing the experiment at your home facility including sample preparation -- 6.Beamline scientist perspective -- 7.Beamline user perspective -- 8.Fixed wavelength high intensity beamline -- 9.Tuneable wavelength beamline -- 10.Laue diffraction beamline -- 11.Microfocus beamline -- 12.Serial

diffraction beamline -- 11.Microfocus beamline -- 12.Serial crystallography beamline: synchrotron -- 13.Serial crystallography beamline: X-ray laser -- 14.Time-resolved crystallography -- 15. Electron crystallography facility -- 16.Neutron crystallography instruments -- 17.Facility data archiving policy considerations -- 18. Facility publication authorship policies -- 19.Sample environment, cryostats and or containment, light sources for photo-initiation or mixing devices for reactions in a crystal -- 20.Electron biological imaging centres at the SR facilities: Diamond, ESRF, Soleil and

SSRL/SLAC as examples -- 21.NMR crystallography -- 22.Small and

Sommario/riassunto

Wide-Angle Scattering beamlines -- 23.X-ray absorption spectroscopy beamlines -- 24.Mass spectroscopy -- 25.UV/Vis and Infra-red spectroscopy -- 26.Data analysis and software -- 27.Safety Matters -- 28.Theoretical and Computational Sciences -- 29.Summary -- 30.So, to the Measuring Team briefing before the Experiment.

This book briefs beamline providers and users on what to look for when selecting experiments for a given type of facility and beamline so that beamtime usage and effectiveness can be maximized. It navigates facility publications, as well as data management and shares policies. Like this, the information presented helps avoid potential pitfalls between facility and user on these important post-experiment aspects.