

X-Ray Facility Overview

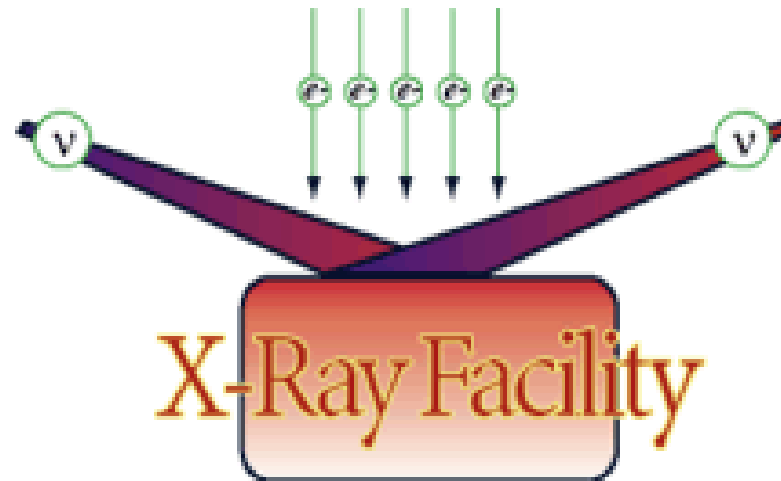
Institute of Molecular Biophysics

X-Ray Facility (XRF)

410-413 Kasha Laboratory

www.sb.fsu.edu/~xray

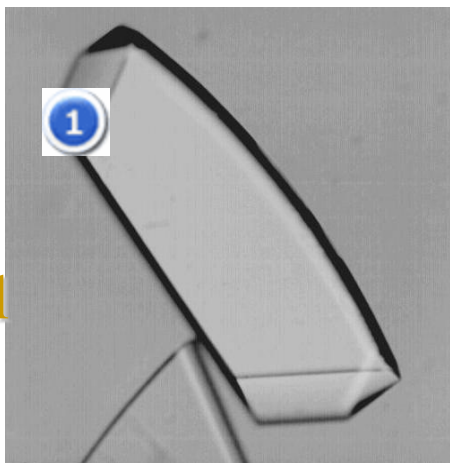
850-644-6448



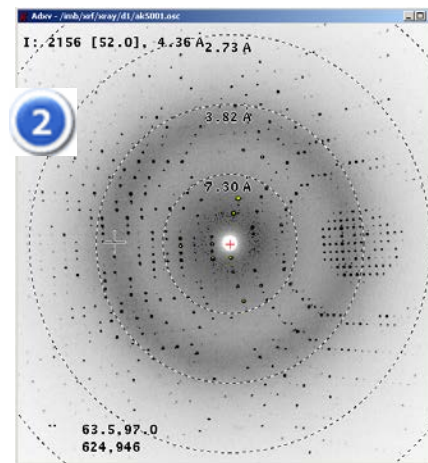
What XRF Can Do For You?

Images courtesy of Michael Chapman Lab

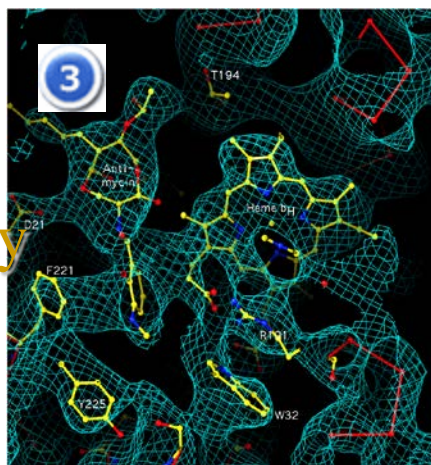
Crystal



Diffraction



E Density



Structure



XRF can help you in Steps



X-Ray Facility Overview

- XRF-Core
- XRF-Amenities
- XRF-Services
- XRF-Contact

X-Ray Generators

- Cu Rotating Anode
- Brilliant Beam
- Stable Beam
- Well Maintained
- *Rigaku RU-H2R*

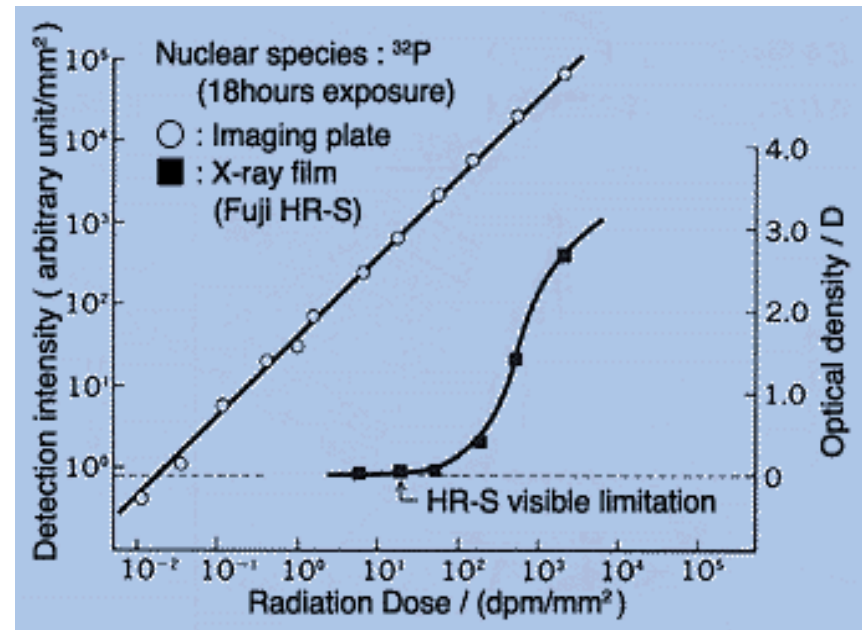


www.rigaku.com

Area Detector 1: Image Plate

IP Detector

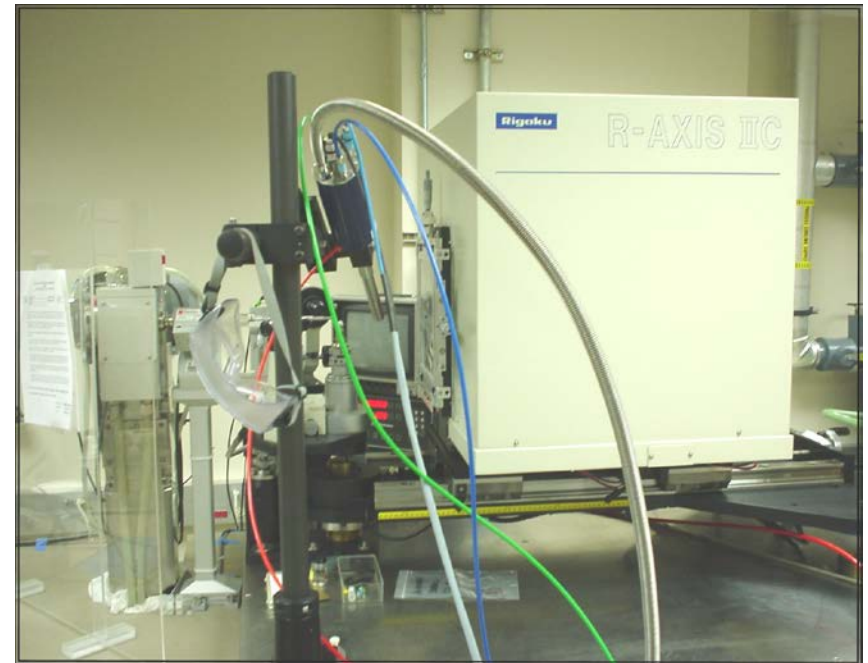
- Reusable “Film”
- Superior Linearity
- High Sensitivity
- Dynamic Range
- Digital Data



home.fujifilm.com

Rigaku Imaging Plate (IP)

- *Rigaku R-Axis IIc*
- Two 19cm² IPs
- 8 minute Read-out
- 0.1 mm Resolution
- Variable Distance
- Variable 2-Theta

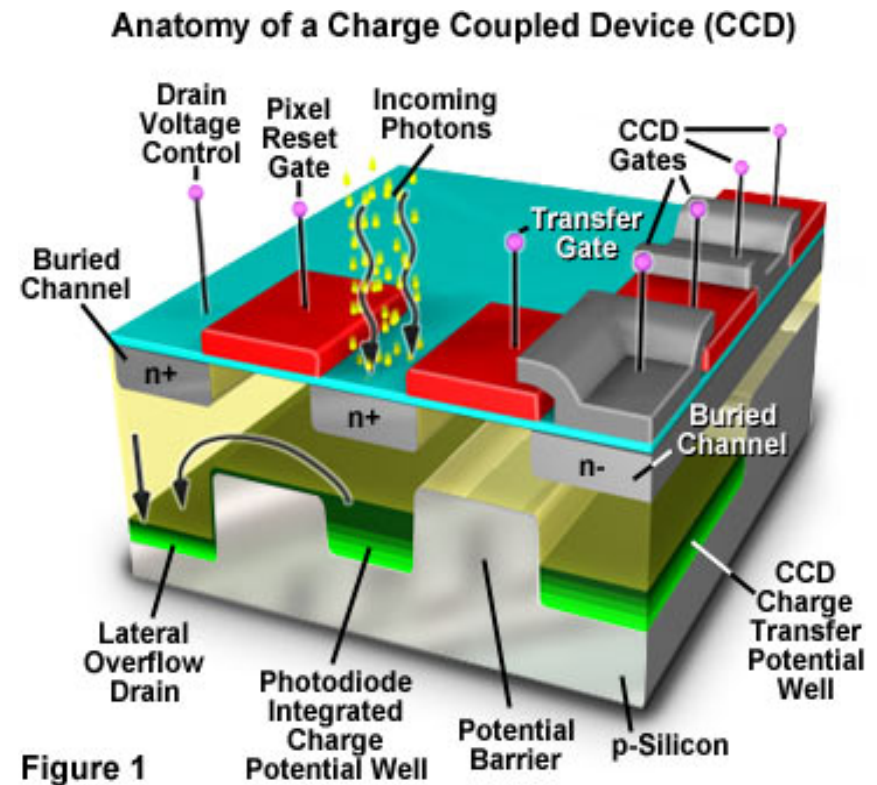


www.rigaku.com

Area Detector 2: CCD

CCD

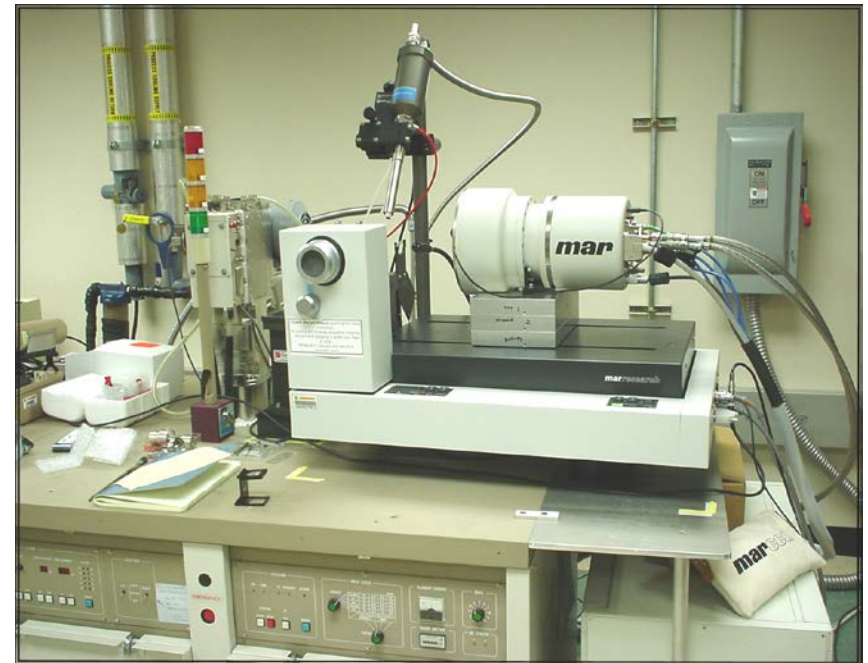
- Quick Read-out
- Higher Resolution
- Better S/N Ratio
- No Moving Parts



micro.magnet.fsu.edu

Mar USA CCD

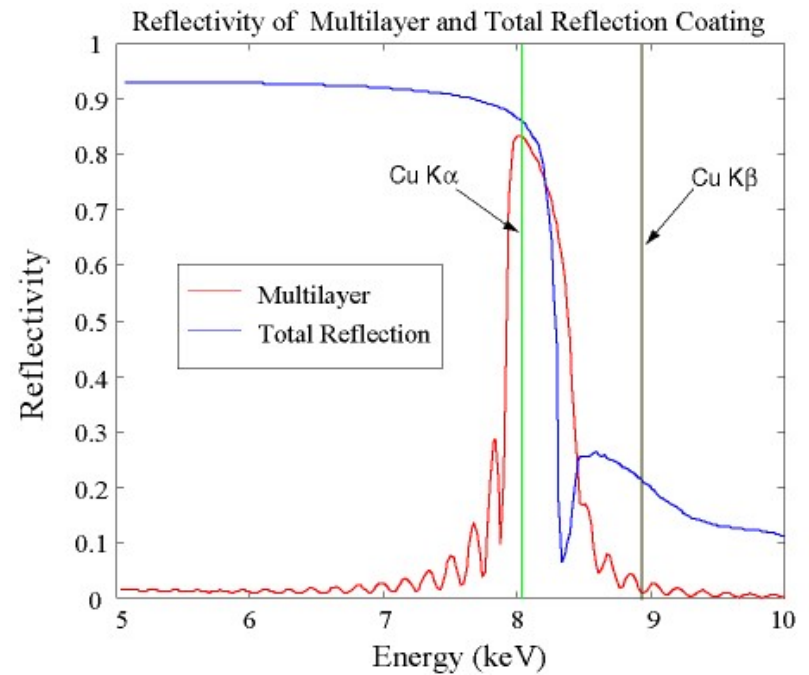
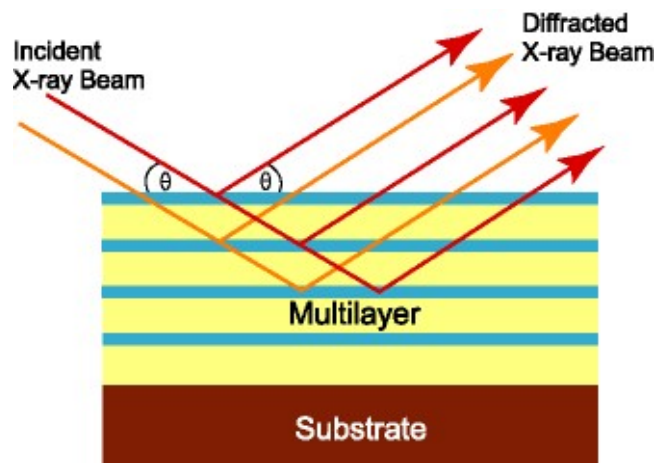
- *MarCCD165*
- Single CCD
- Variable Distance
- Limited Offset
- Quick Screening



Multilayer Mirrors

Mirrors

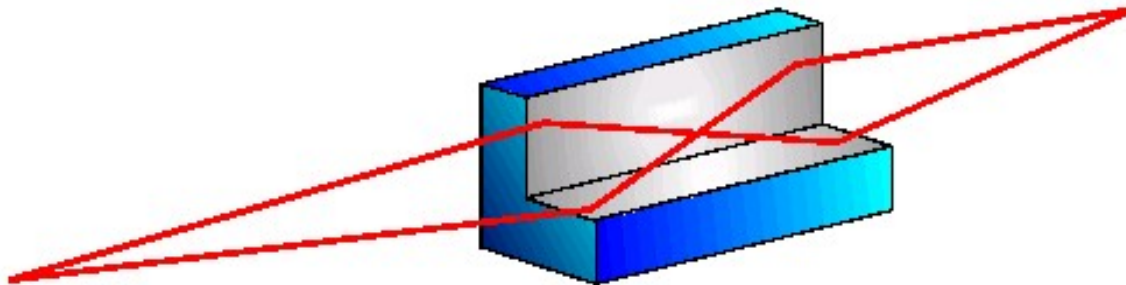
- Monochromatization
- Wavelength Purity
- High Flux



www.rigaku.com

Osmic Blue/Purple Mirrors

- Easy Alignment
- Symmetric Focus
- Coupled Mirrors
- Collection Angle



www.rigaku.com

Cryo Coolers

Coolers

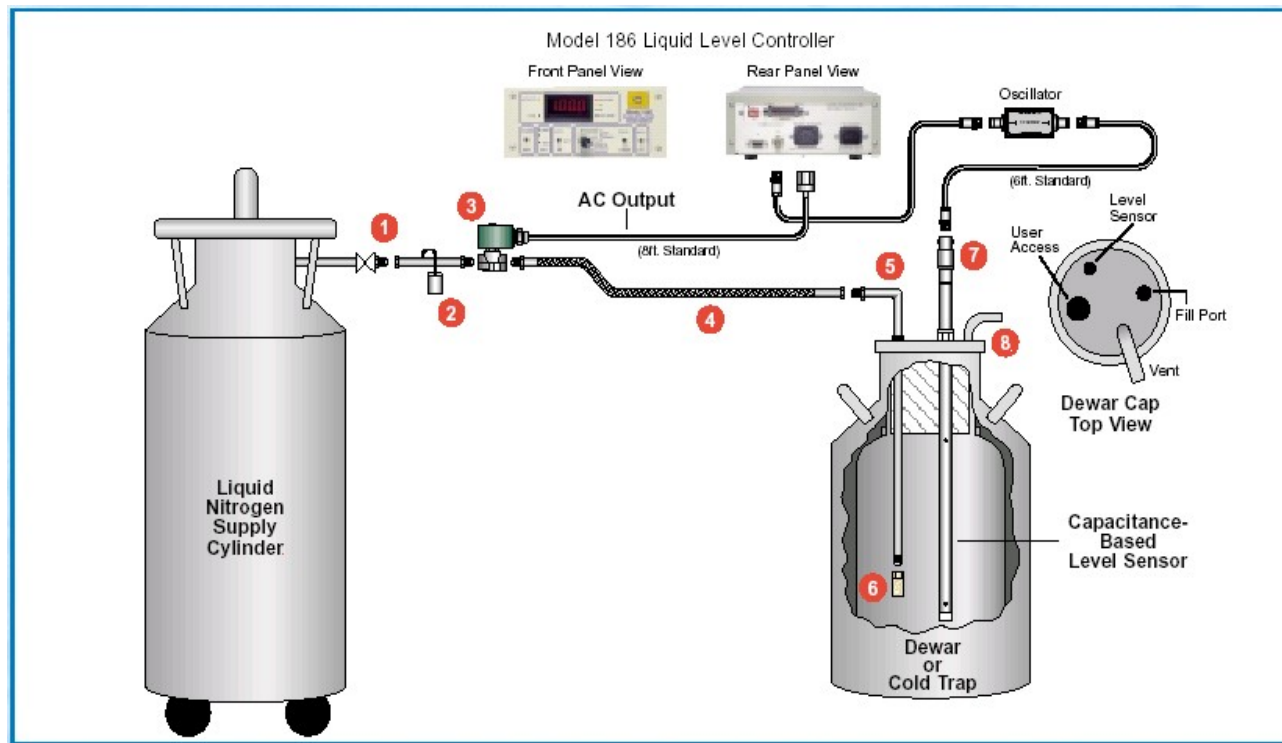
- *Oxford CryoSystem*
- Low LN₂ Usage
- 80 - 400 ± 0.1 K
- Programmable
- Laminar Flow
- Dry Air Shield



www.oxfordcryosystems.co.uk

LN₂ Auto-Refill System

- *American Magnetics*
- Continuous Operation



www.americanmagnetics.com

Accessories

Computers



Software



Scopes



Hardware



Amenities

- 270 ft² Crystal Room
- 170 ft² Cold Room
- T & RH control
- Synchrotron Time
- Member SER-CAT



Coldroom

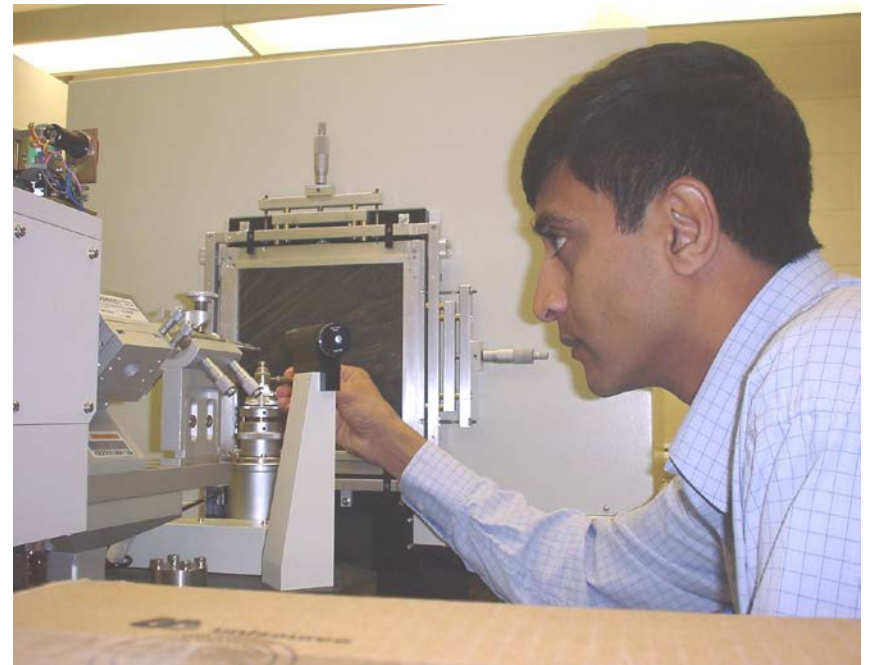
Amenities

- Cryo Storage
- Crystal Chamber
- Software Licenses
- 3D-Graphics
- Digital Imaging



Services

- Crystallization
- Data Collection
- Collection Strategy
- Data Processing
- Data Visualization



Services

- Data Storage
- Data Archives
- Crystal Storage
- Crystal Transport
- Synchrotron Run



XRF-Contact

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