SYDOR TECHNOLOGIES

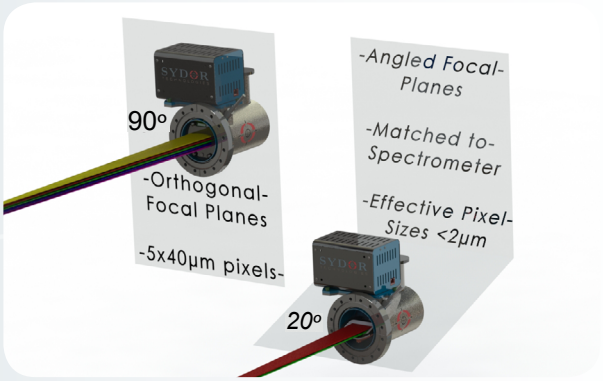
The Sydor Spectro CCD

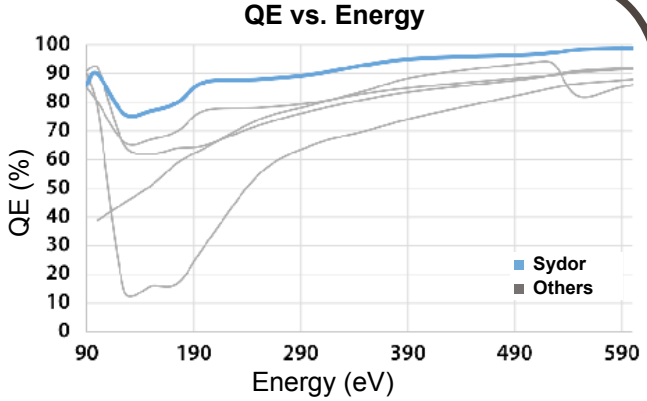
A Next Generation Detector ENGINEERED for RIXS

Now Available with *Tilted* Chip!

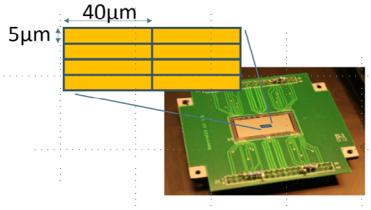
Why the Sydor Spectro CCD for RIXS beamlines?

- Small 5 x 40 µm pixels for the best resolution
- Tilted configurations for <2 µm effective pixel sizes
- Market leading QE from 100 ev – 8 KeV
- Ultra low noise electronics

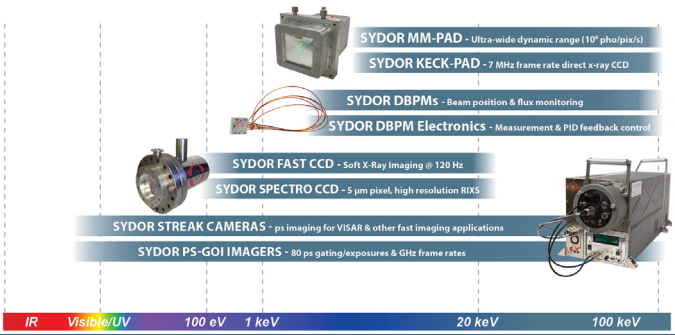




The highest QE for soft x-rays among similar detectors



5 µm x 40 µm pixels allow for maximum resolution



Click to enlarge an overview of our detectors!

In RIXS, it is critical that every photon capable of being detected, is detected with the highest spectral discrimination possible. Sydor offers the smallest resolution, provided by a 5 um pixel mated to the lowest noise and highest QE, for direct x-ray detection - even for the ultra soft x-ray regime.

In RIXS experiments the resolution of the different energies that can be resolved is directly related to how precisely the scattering angle can be calculated. Therefore, the precision of how well a photon strike on the detector can be resolved into a spatial location defines the precision of the experiment. The Sydor Spectro CCD solves this problem using a 5 um pixel size and pitch, which represents a three-fold improvement on other detectors currently implemented for RIXS.

For further resolution improvements, and to accommodate spectrometers already configured with a tilted focal plane at the detector, the Sydor Spectro CCD is now available with a tilted chip. This allows the detector to match the inclination of the spectrometer. Some tilt adjustment can also be made by tilting the flange mounting.

All configurations of the Sydor Spectro CCD incorporate the proprietary, ultra-thin, back contact that provides significantly better QE in all regimes over competitive solutions for the soft x- ray regime.

For new RIXS Spectrometer designs, the added resolution that the Sydor Spectro CCD offers can be leveraged to gain experimental capability and to reduce the overall length of the Spectrometer arm. Reducing the arm length can yield significant savings of dimensional stability and reduced build costs.

Sydor Technologies offers a complete line of direct x-ray detectors and diamond beam position monitors. These products join our popular family of ROSS Streak Cameras, Picosecond Gated Optical Imagers, Pulse-Dilation PMTs and more.

Request for more info about the Sydor Spectro CCD