



Ongoing Developments at ALS

Peter Denes

Lawrence Berkeley National Laboratory

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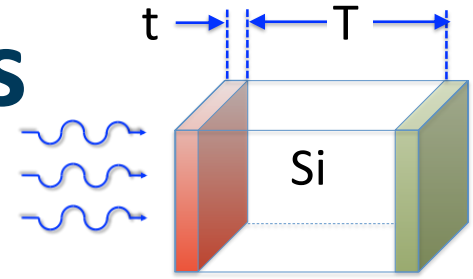


U.S. DEPARTMENT OF
ENERGY

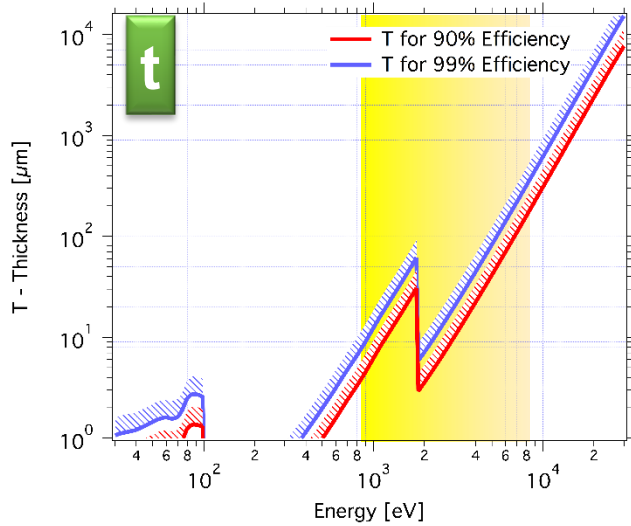
Office of
Science



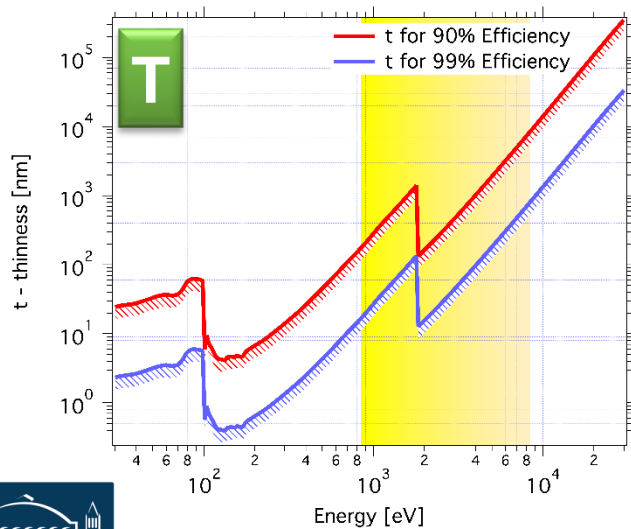
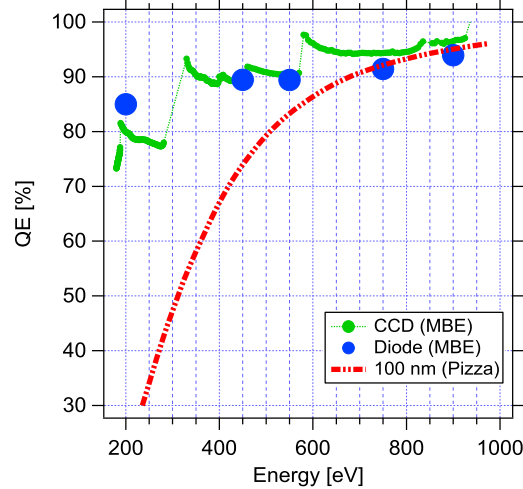
ALS Emphasizes Soft X-rays



- Thin contacts
- Silicon thinning



Measured at ALS 6.3.2



1D & 2D RIXS Spectrographs

SpectroCCD

QERLIN (CMOS)

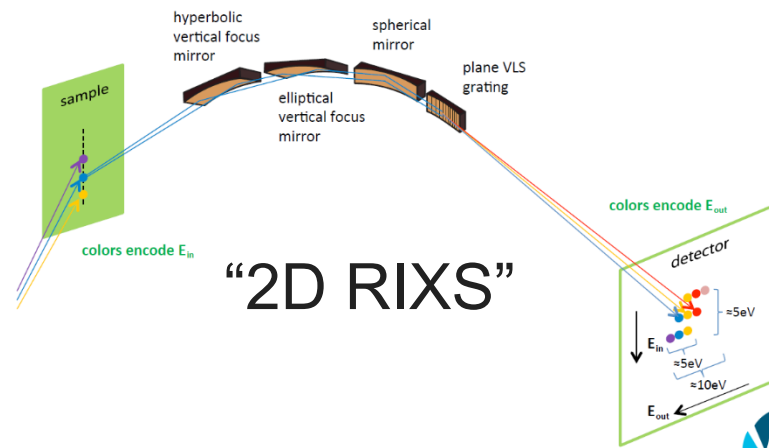
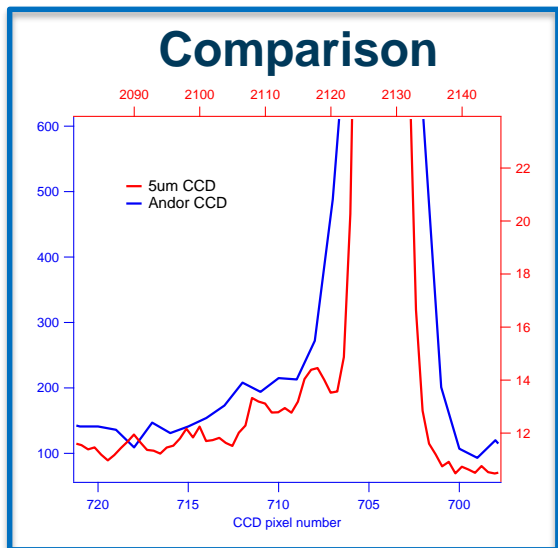
1250 x 45 μm x 2500 x 5 μm

2k x 5 μm x 4k x 5 μm



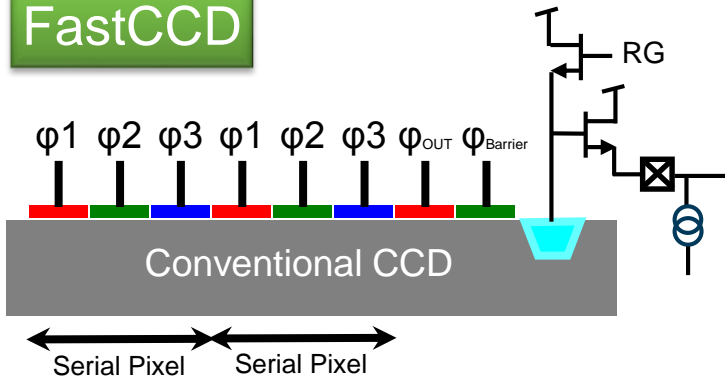
HOPG@285 eV

Comparison

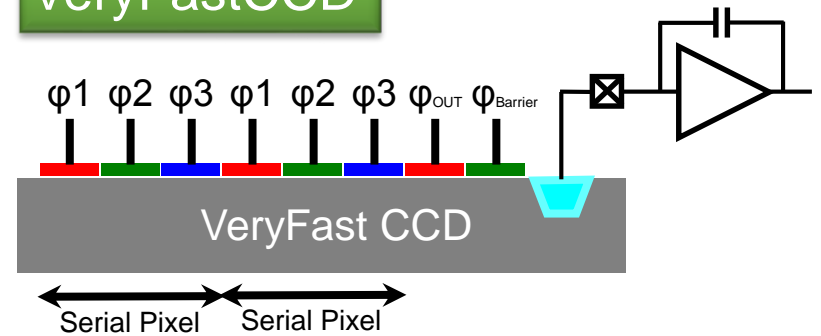


Column-Parallel Direct Detection CCD

FastCCD



VeryFastCCD



200 Mpix/s

- CCD
- FE chip w/ADC

5,000 Mpix/s

- CCD
- FE chip
- TI ADC
- Fiber optic R.O.

Collaboration with SLAC
LCLS-II "t=0" SXR detector
On ALS 7.0.1 in few months

