

Development of superconducting tunnel junction array detectors with three-dimensional structure to exceed 1000-pixel array

Go Fujii^{*}, Masahiro Ukibe, Shigetomo Shiki,
and Masataka Ohkubo

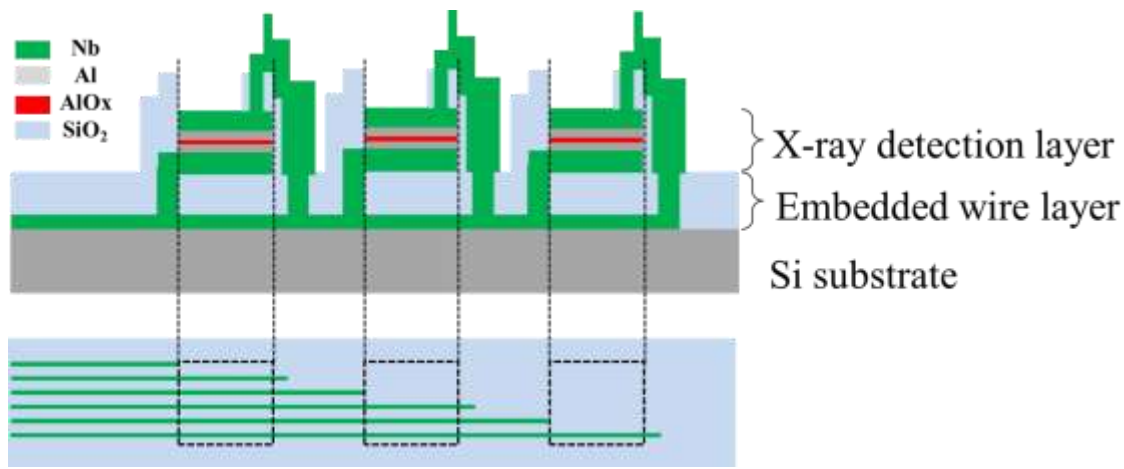
National Institute of Advanced Industrial Science and
Technology (AIST)

* E-mail: go-fujii@aist.go.jp

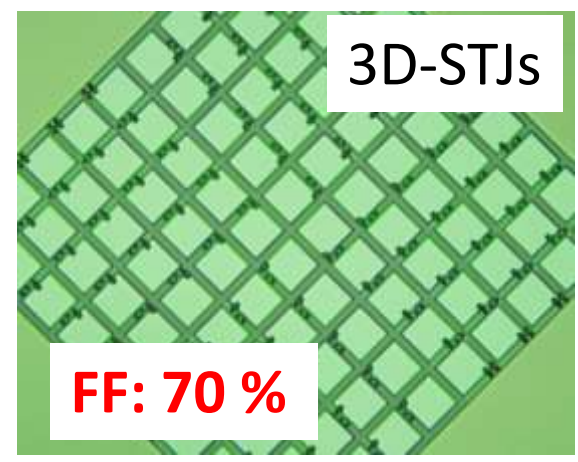
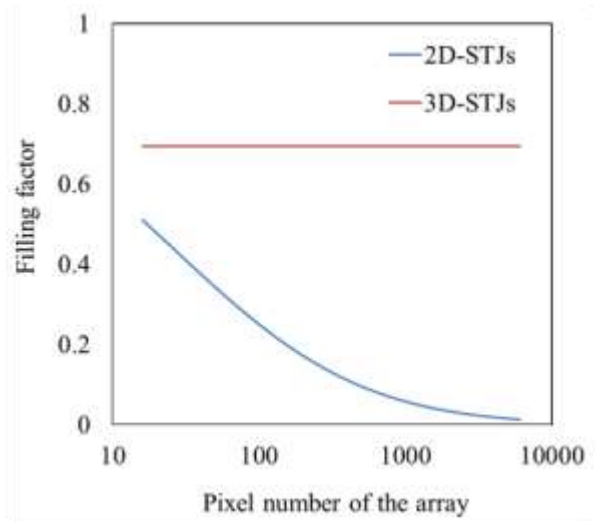
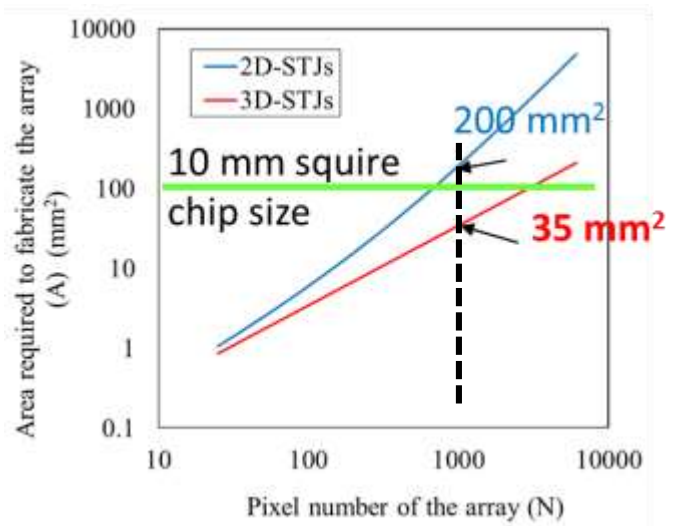
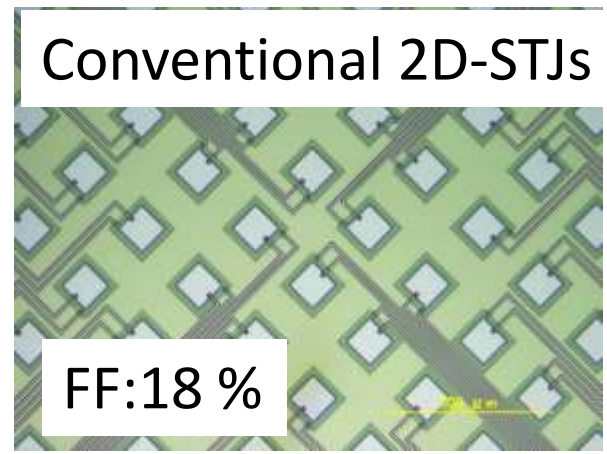
The STJs were fabricated in the clean room for analog-digital
superconductivity (CRAVITY) at AIST.



STJ with three-dimensional structure (3D-STJ)

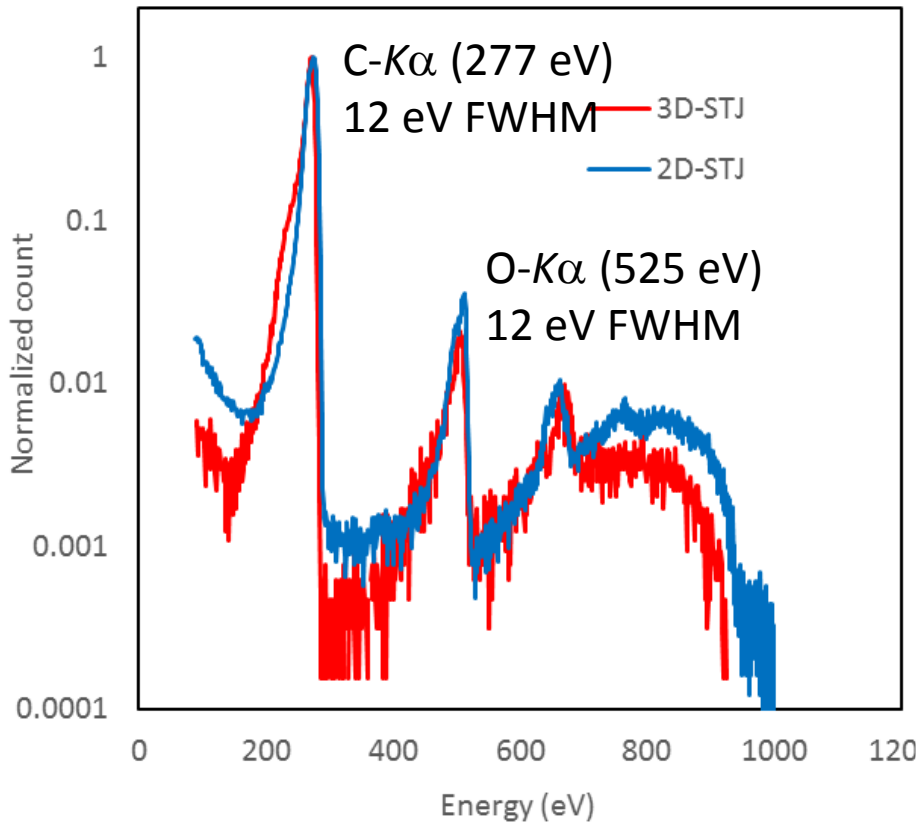


100-pixel array

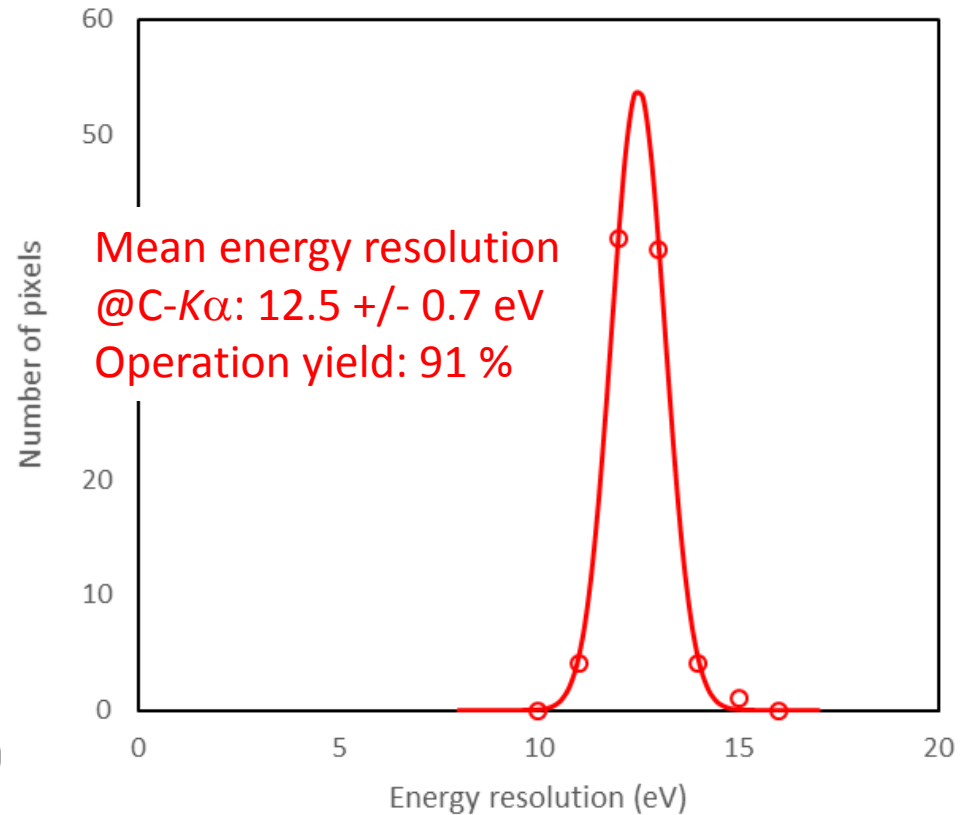


Detection performances of the 3D-STJ

Energy spectrum
2D vs. 3D



Histogram of energy resolution
of 100-pixel 3D-STJ array



Same soft X-ray detection performances