

Table S1. Sensitivity comparison of the reported X-ray detectors

X-ray absorbing material	Sensitivity ($\mu\text{C Gy}^{-1} \text{cm}^{-2}$)	Voltage/Electrical field ($\text{V/V } \mu\text{m}^{-1}$)	Ref.
α -Se	440	NA/10-40	16
MAPbI ₃ single crystal	6218	13/NA	14
MAPbI ₃ polycrystalline wafer	1.2×10^5	10/NA	12
MAPbI ₃ polycrystalline wafer	2527	NA/0.2	11
MAPbI ₃ polycrystalline wafer	9300	NA/0.17	13
MAPbBr ₃ single crystal	2.1×10^4	7/NA	19
FAPbI ₃ single crystal	1.5×10^5	60/NA	29
MAPbI ₃ polycrystalline wafer	3.1×10^5	5 /0.025	This work