



QDot™ X-ray Perovskite Films for Sensors

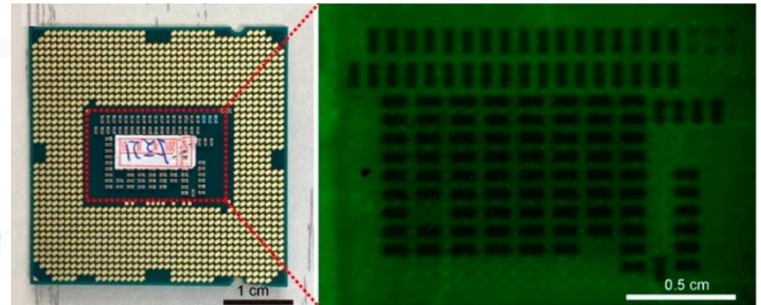
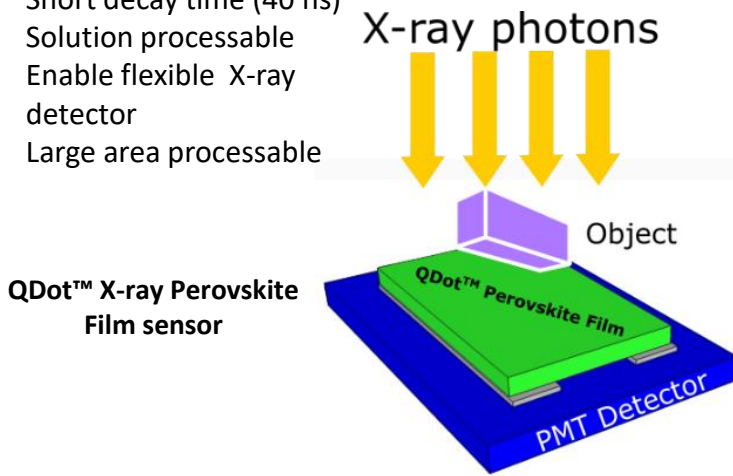
Scintillators, which are capable of converting ionising radiation into visible photons, are very important for such areas as: inspection, failure/cracks detection, security X-ray imaging, nuclear cameras, and computed tomography. QDot™ X-ray Perovskite Films can be used as efficient X-ray scintillation materials. They exhibit strong visible luminescence under X-rays, and this luminescence can be read by conventional silicon imaging cameras. The compelling combination of high light output and impressive resolution makes the material appealing for industrial applications.

BENEFITS:

- Highly sensitive materials for X-ray scintillation
- High light output
- High resolution
- Short decay time (40 ns)
- Solution processable
- Enable flexible X-ray detector
- Large area processable

DEVICE EXAMPLE:

QDot™ X-ray Perovskite Films are novel superior X-ray scintillator materials with exceptional sensitivity. QDot™ Perovskite QDs as an X-ray scintillator can convert X-ray photons to visible light, which can be easily detected by commercially available photodetectors (silicon camera or PMT detectors).



X-ray imaging of a microchip using QDot™ X-ray Perovskite Film and silicon camera

SENSOR PERFORMANCE:

Parameter	QDot™ X-ray Perovskite Film 520
Emission peak	520 nm
Light output at 70 kV (% CsI:Tl)	> 5%

The fast response of the film < 50 ns to X-ray photons is critical, especially in medical radiography and industrial inspection. Solution processability (printing or roll-to-roll film production) and high resolution make it appealing for commercial applications.

Products portfolio:

[QDot™ X-ray Perovskite Film](#)

