

Title (en)  
X-RAY SOURCES USING LINEAR ACCUMULATION

Title (de)  
RÖNTGENQUELLEN MIT LINEARER AKKUMULATION

Title (fr)  
SOURCES DE RAYONS X UTILISANT L'ACCUMULATION LINÉAIRE

Publication  
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Application  
**EP 16200793 A 20140919**

Priority

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Abstract (en)

This application discloses a compact source for high brightness x-ray generation. Higher brightness is achieved through electron beam bombardment of multiple regions aligned with each other to achieve a linear accumulation of x-rays. This is achieved by aligning discrete x-ray emitters, or through use of novel x-ray targets comprising a number of microstructures of x-ray generating materials fabricated in close thermal contact with a substrate with high thermal conductivity. This allows heat to be more efficiently drawn out of the x-ray generating material, and allows bombardment of this material with higher electron density and/or higher energy electrons, leading to greater x-ray brightness. The orientation of the microstructures allows the use of an on-axis collection angle, allowing accumulation of x-rays from several microstructures to be aligned, appearing to have a single origin, also known as "zero-angle" x-ray emission.

IPC 8 full level  
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