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Abstract of Published Article

Optimizing the e-beam profile of a single car device for electric propulsion systems

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Abstract:

Preliminary studies on field emission (FE) arrays compact electron source for electric propulsion system show parameters for a carbon nanotube (CNT) field-emission were numerically simulated and optimized in order to e additional focus gate (FG) was integrated to the device beam. An axisymmetric finite element model was de distribution on the vacuum region and a modified Fowle evaluate the current density emission and the effective i was employed in order to calculate the trajectory of the e optical properties of the e-beam. The integration c computational intelligence techniques. The best p simulations presents a collimated e-beam profile that magnetic field detection and electron microscopy. The presented in this study strongly benefits the robust desig

for vacuum field emission applications, including electric
propulsion systems.

Keywords:

Electric propulsion, Carbon nanotube, Finite element analysis



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