

综述评论

阵列场发射电子源的新进展

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摘要

阵列场发射阴极与真空微电子学是当前国际电子学领域的研究热点之一, 发展迅速, 某些先进电子物理装置内的真空不加热电子源也有相应发展。根据这一趋势, 按真空电子发射学科的特点, 抓住其中研究与报道相对集中的阴极类型, 进行了扼要的总结、归纳与评价; 对近年来信息显示学科领域内已发展为实用的阵列等离子体电子源也进行了简单的介绍。

关键词 [阵列场发射阴极](#) [规则阵列场发射体](#) [随机阵列场发射体](#) [阵列等离子体电子源](#)

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NEW DEVELOPMENT OF FIELD EMISSION ARRAY

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Abstract

Some hot-spots of research in the field of the field emission array (FEA) and the vacuum microelectronics (VME) have been developed abroad in the last phase of 1990s. The expand speed of the FEA subject is very fast, and the non-heated electron emission sources inside some advanced electron-physics equipments have also got a relevant development during this period. Considering those trends in the fields of basic science-FEA and VME abroad, according to the particularity of the vacuum electron emission, to seize the centralized relatively cathodes in the research or the report, a brief summary, review or comparison has been made, a more important type of the field emission array-the plasma electron source array which has already been developed into practical use recently in the information display has also been introduced simply.

Key words [Field emission array \(FEA\)](#) [Regular FEA](#) [Random FEA](#) [Plasma electron source array](#)

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