应用光学 2004 25 (5): 22-24 ISSN: 1002-2082 CN: 61-1171/O4

微光技术

扩口微通道板对电流增益和噪声因子关系的影响

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收稿日期 修回日期 网络版发布日期 2007-1-27 接受日期

摘要
介绍了MCP产生光子散射和电子散射的机理．提出对微通道板输入表面采用扩口技术提高微通道板的开口面积比，从而降低微通道板噪声的方法。建立了漏斗型MCP的数学模型，
给出了降低MCP的噪声因子及提高电流增益的理论依据，为低噪声MCP进一步的工艺研究打下了基础。

关键词 微通道板 扩口MCP 电流增益 操声因子 开口面积比
分类号 TN152-34 TH223

A Research into the Effect of Funnel MCP on the Relationship Between Current Gain and Noise Figure

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Abstract
The principle of photon scatter and electron scatter of MCP is describad.The method of improving the open arearatio and reducing the noise of MCP from enlarging the input end of the channel is presented.A mathematic model of funnel MCP is built.The theoretical evidence of reducting noise figure and improving the current gain is given.It will provide a theory foundation for further craft research.

Key words microchannel plate funnel MCP current gain noise figure open area ratio

DOI:

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