

Glow discharge characteristics in transverse supersonic air flow

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Abstract

© Published under licence by IOP Publishing Ltd. A low pressure glow discharge in a transverse supersonic gas flow of air at pressures of the order 1 torr has been experimentally studied for the case where the flow only partially fills the inter electrode gap. It is shown that the space region with supersonic gas flow has a higher concentration of gas particles and, therefore, works as a charged particle generator. The near electrode regions of glow discharge are concentrated specifically in this region. This structure of glow discharge is promising for plasma deposition of coatings under ultralow pressures

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