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Understanding field emission from carbon nanotubes

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Carbon nanotubes have been investigated as a promising cold cathode field emission material and are identified as one of nanomaterials that will find applications in near future. An intensive investigation has been carried out to characterize the properties and the processes of field emission from carbon nanotubes and also to find their applications. However, the following key questions remain to be addressed: (i) the mechanism responsible for low field emission, (ii) the mechanism responsible for limiting emission current density, and (iii) the intrinsic field emission property of an ideal carbon nanotube. We shall present our current understanding to these problems[1-3].

References

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