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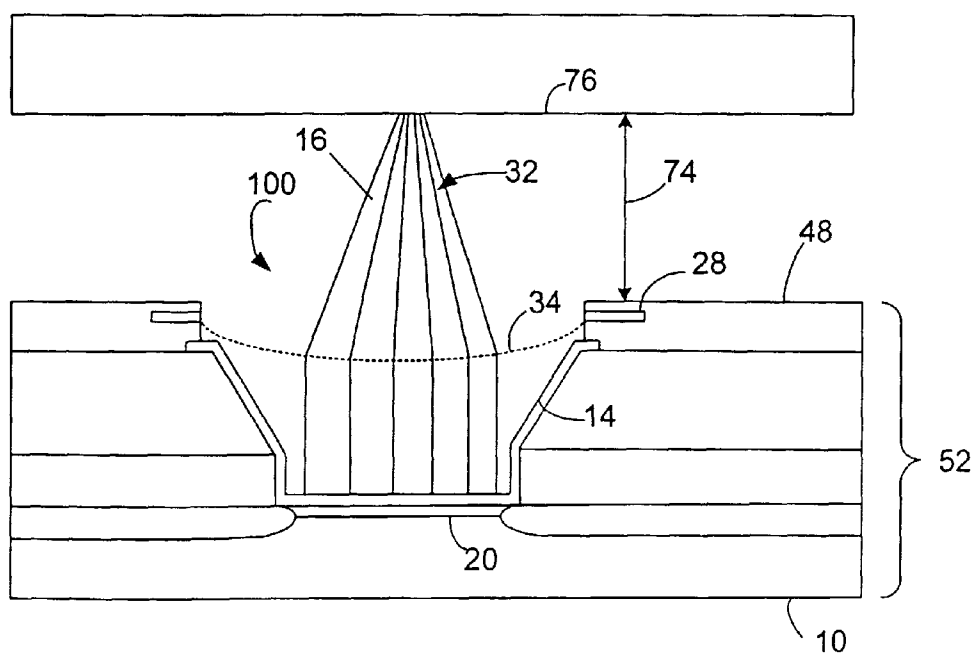
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(54) Title: TUNNELING EMITTER



(57) Abstract: An emitter (50,100) has an electron supply layer (10) and a tunneling layer (20) formed on the electron supply layer. Optionally, an insulator layer (78) is formed on the electron supply layer and has openings defined within in which the tunneling layer is formed. A cathode layer (14) is formed on the tunneling layer to provide a surface for energy emissions (22) of electrons (16) and/or photons (18). Preferably, the emitter is subjected to an annealing process (120,122) thereby increasing the supply of electrons tunneled from the electron supply layer to the cathode layer.



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