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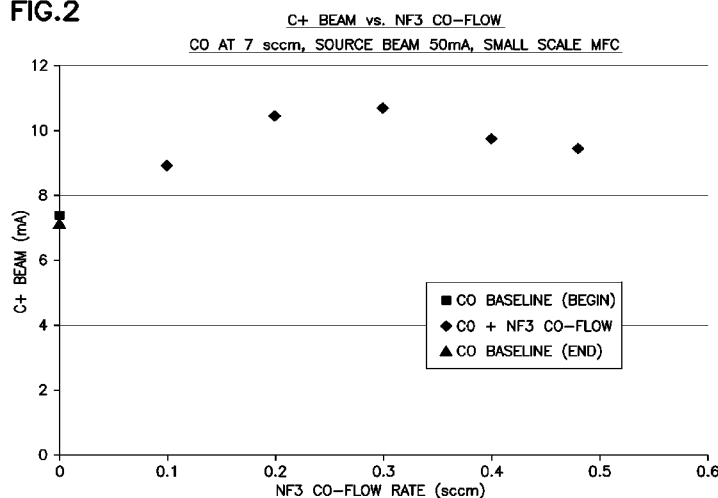
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(54) Title: CARBON DOPANT GAS AND CO-FLOW FOR IMPLANT BEAM AND SOURCE LIFE PERFORMANCE IMPROVEMENT

FIG.2



(57) Abstract: Ion implantation processes and systems are described, in which carbon dopant source materials are utilized to effect carbon doping. Various gas mixtures are described, including a carbon dopant source material, as well as co-flow combinations of gases for such carbon doping. Provision of in situ cleaning agents in the carbon dopant source material is described, as well as specific combinations of carbon dopant source gases, hydride gases, fluoride gases, noble gases, oxide gases and other gases.