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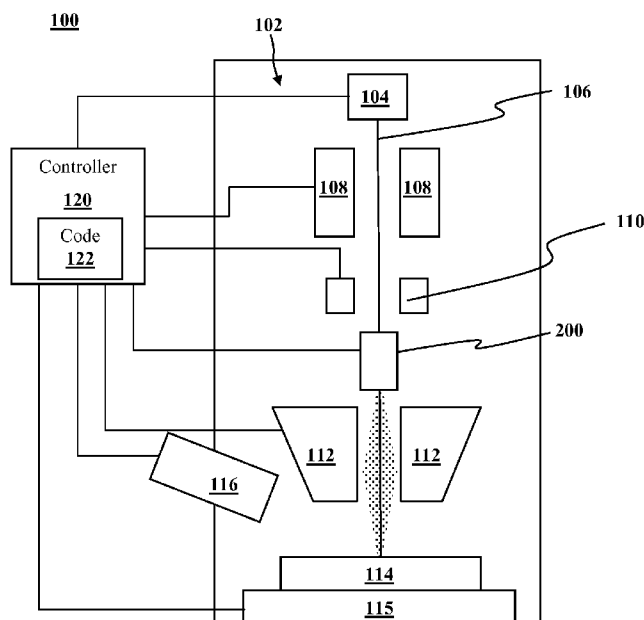


FIG. 1

(57) Abstract: Embodiments of the present disclosure are directed to an electron beam imaging/inspection apparatus having an electron source device to direct flood electrons on a sample immediately before image acquisition or inspection. The apparatus comprises a first device configured to charge a sample in a first mode, wherein the first device includes an electron source configured to provide a flood beam of charged particles to a first area of the sample. The apparatus also comprises a second device configured to generate a primary beam of electrons and characterize an interaction between the primary beam and a second area of the sample within the first area in a second mode. The apparatus is configured to switch from the first mode to the second mode less than 1 second.



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