

ABSTRACT

PLASMA GENERATOR

A plasma generator capable of performing intermittent operation of repeating a sequence operation including start, sustaining, and stop of a cathode arc plasma for a long time. The plasma generator for forming a thin film comprises a cathode (4) for supplying constituent particles of an arc plasma and a trigger-and-anode (6) for starting and sustaining the arc plasma. The cathode surface (4a) of the cathode (4) is flat or finely irregular, and the anode surface (6c) of the trigger-and-anode (6) brought into contact with the cathode surface (4a) is flat. The anode surface (6c) is so arranged as to be brought into contact with the whole cathode surface (4a) when a plasma is started. The contact point between a fine projection end (4b) of the cathode surface (4a) and the anode surface (6c) is made a plasma emission point. When the projection is consumed by plasma emission, another projection end which can be brought into contact with the anode surface (6c) is used as another plasma emission point, thus enabling intermittent operation of persistently repeating the sequence operation. Consequently, a stable plasma can be produced for a long time.