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Anode fireball of the reversed polarity DC planar magnetron and its application SAMIRSINH CHAUHAN[1], KU Leuven, Belgium, MUKESH RANJAN, Institute for Plasma Research, India — The sheath is ubiquitous in laboratory plasmas contained in a vessel. It controls the flux of the particles across the plasma solid interface. Overwhelming experiments have to deal with the ion sheath. This is most common to occur, due to large mobility of the electrons which are often restrained by negative potential of the wall. This self-sustaining process gives rise to ion sheath at most floating electrode/wall. Though, if one can set boundry conditions right, so as to extract sufficient electrons to account for its enormous flux, one can achieve an electron rich sheath. This kind of sheaths have attracted its fare share of attention[2,3]. We developed a method around this concept to make dual use of the sputter magnetron setup. The electrons sheath is known to give rise to fireball[4,5], which is used for plasma immersion nanopatterning on GaSb substrate.

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