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SPUTTER TARGET/BACKING PLATE ASSEMBLY AND METHOD OF MAKING SAME

ABSTRACT

This invention is directed to improve bonded sputter target/backing plate assembly (9) and method of making same. The assembly includes sputter target (10) having side (14) and bottom (12) bonding surfaces bonded within a recess (18) in an underlying backing plate (16), the recess (18) having top (20) and side (22) bonding surfaces. The assembly method includes treating the bonding surfaces of either the target (10) or backing plate recess (18) by roughening at least a portion thereof to a surface roughness (R_a) of at least about 120 micro-inches. The method further includes orienting target (10) within backing plate recess (18) to form one assembly having a parallel interface defined by top (20) and bottom (12) bonding surfaces and a side interface defined by side bonding surfaces (14/22), and subjecting the assembly to heat and pressure in a controlled atmosphere, thereby bonding the bonding surfaces.



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