

Title (en)  
DEVICE AND METHOD FOR PLASMA TREATMENT OF ELECTRONIC MATERIALS

Title (de)  
VORRICHTUNG UND VERFAHREN ZUR PLASMABEHANDLUNG VON ELEKTRONISCHEN MATERIALIEN

Title (fr)  
PROCÉDÉ ET DISPOSITIF DE TRAITEMENT PAR PLASMA DE DISPOSITIFS ÉLECTRONIQUES

Publication  
**EP 3847301 A4 20220504 (EN)**

Application  
**EP 19883888 A 20190904**

Priority  
• US 201862726905 P 20180904  
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Abstract (en)  
[origin: WO2020101793A2] Plasma applications are disclosed that operate with argon and other molecular gases at atmospheric pressure, and at low temperatures, and with high concentrations of reactive species. The plasma apparatus and the enclosure that contains the plasma apparatus and the substrate are substantially free of particles, so that the substrate does not become contaminated with particles during processing. The plasma is developed through capacitive discharge without streamers or micro-arcs. The techniques can be employed to remove organic materials from a substrate, thereby cleaning the substrate; to activate the surfaces of materials, thereby enhancing bonding between the material and a second material; to etch thin films of materials from a substrate; and to deposit thin films and coatings onto a substrate; all of which processes are carried out without contaminating the surface of the substrate with substantial numbers of particles.

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Citation (search report)  
• [Y] US 10032609 B1 20180724 - CHENG SIU FAI [US], et al  
• [Y] WO 02060828 A2 20020808 - RAPT IND INC [US]  
• [Y] JP 2009127981 A 20090611 - SEMICONDUCTOR ENERGY LAB  
• See references of WO 2020101793A2

Designated contracting state (EPC)  
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**US 2019049556 W 20190904**; CN 201980057606 A 20190904; EP 19883888 A 20190904; JP 2021536680 A 20190904; KR 20217009192 A 20190904; TW 108131918 A 20190904; US 202217939744 A 20220907