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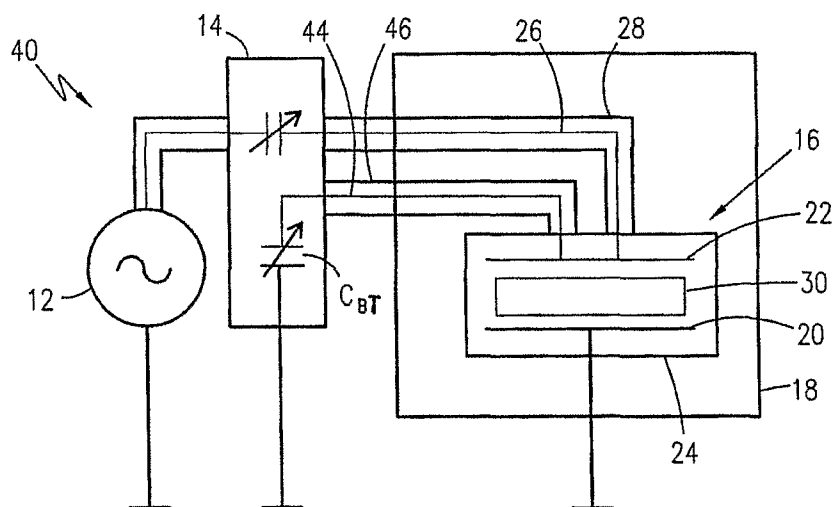
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(54) Title: IMPEDANCE MATCHING OF A CAPACITIVELY COUPLED RF PLASMA REACTOR SUITABLE FOR LARGE
AREA SUBSTRATES



(57) Abstract: An RF plasma reactor (40) is provided for depositing semi-conductive layers on to very large glass areas. The RF plasma reactor includes a vacuum chamber (18), a reactor chamber (24), RF power supply (12), a matching network (14), first (22) and second (20) metallic plates located inside the vacuum chamber and a plasma-discharge region (30) defined between the first and second metallic plates. The RF plasma reactor further includes a feed line (26) and an impedance-transformation circuit (42) both of which are electrically connected to the first metallic plate. The impedance-transformation

circuit further includes a blocking-tuneable capacitor (Car) that transforms an impedance of the reactor.