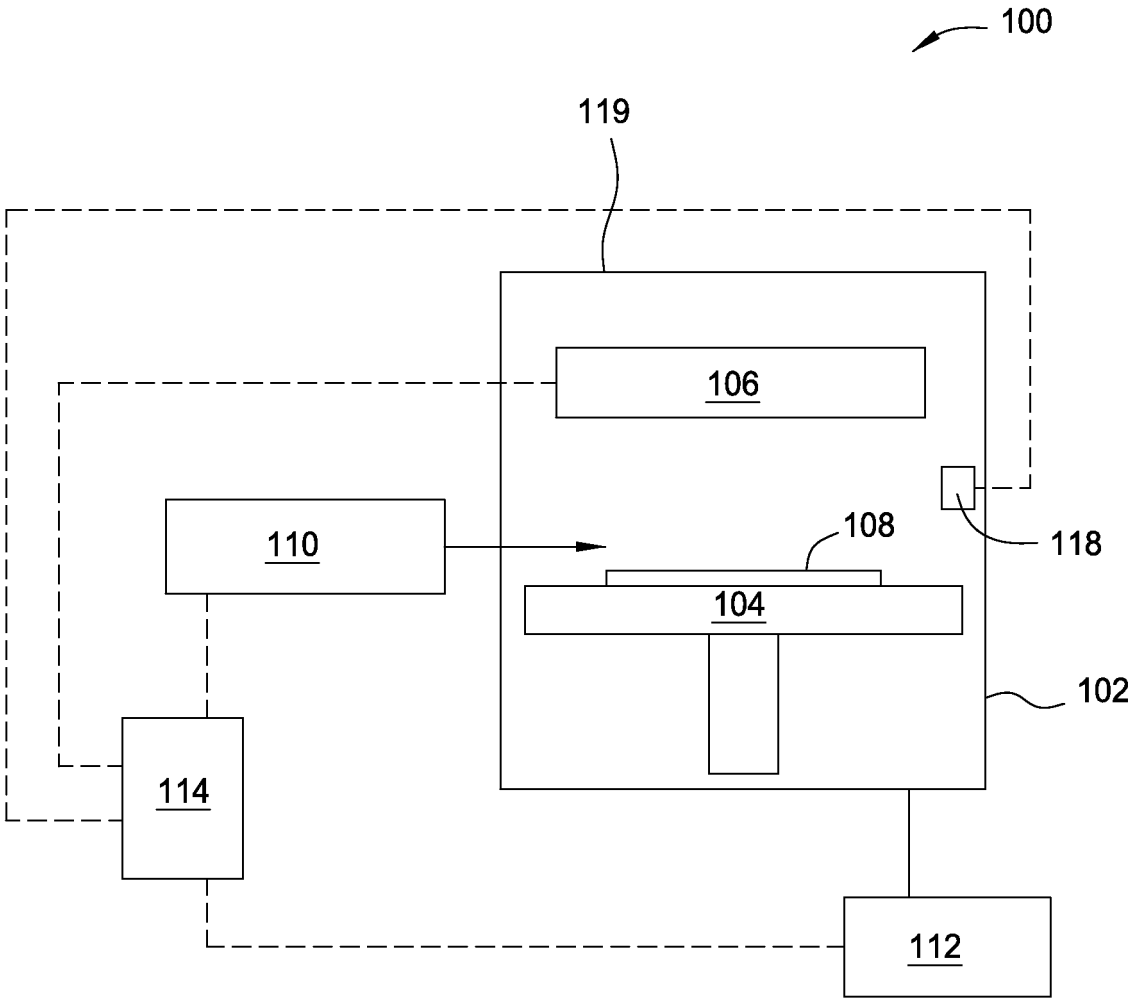


FIG. 1

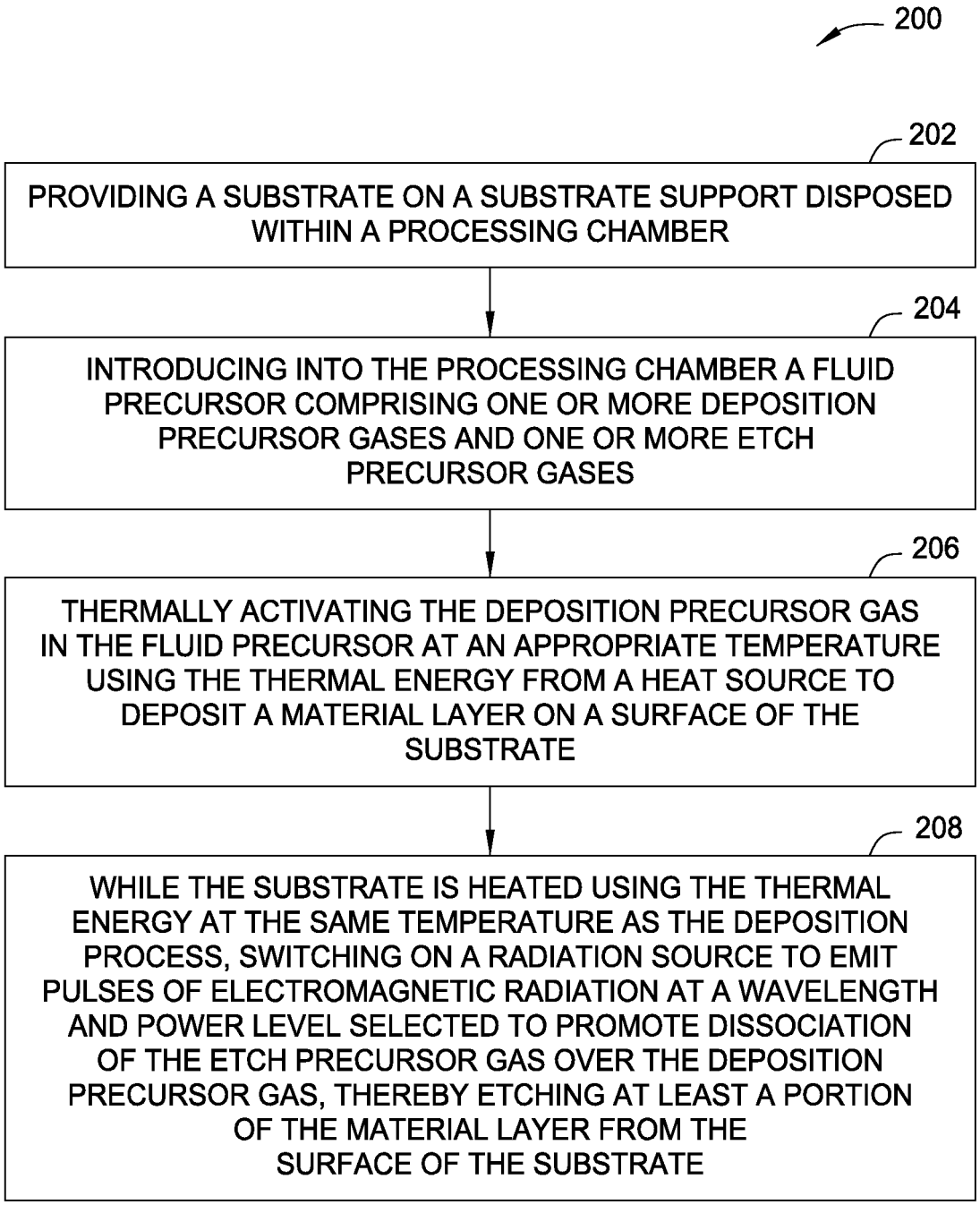

200
202
PROVIDING A SUBSTRATE ON A SUBSTRATE SUPPORT DISPOSED WITHIN A PROCESSING CHAMBER
204
INTRODUCING INTO THE PROCESSING CHAMBER A FLUID PRECURSOR COMPRISING ONE OR MORE DEPOSITION PRECURSOR GASES AND ONE OR MORE ETCH PRECURSOR GASES
206
THERMALLY ACTIVATING THE DEPOSITION PRECURSOR GAS IN THE FLUID PRECURSOR AT AN APPROPRIATE TEMPERATURE USING THE THERMAL ENERGY FROM A HEAT SOURCE TO DEPOSIT A MATERIAL LAYER ON A SURFACE OF THE SUBSTRATE
208
WHILE THE SUBSTRATE IS HEATED USING THE THERMAL ENERGY AT THE SAME TEMPERATURE AS THE DEPOSITION PROCESS, SWITCHING ON A RADIATION SOURCE TO EMIT PULSES OF ELECTROMAGNETIC RADIATION AT A WAVELENGTH AND POWER LEVEL SELECTED TO PROMOTE DISSOCIATION OF THE ETCH PRECURSOR GAS OVER THE DEPOSITION PRECURSOR GAS, THEREBY ETCHING AT LEAST A PORTION OF THE MATERIAL LAYER FROM THE SURFACE OF THE SUBSTRATE

FIG. 2