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(54) **METHOD AND APPARATUS FOR RAPID
STERILIZATION OF A ROOM**

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(58) **Field of Classification Search**

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See application file for complete search history.

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(57) **ABSTRACT**

Methods and systems for sterilizing a room are disclosed, including using a laser positioned within a housing to generate a pulsed laser beam; and intercepting the pulsed laser beam with a scattering optical element to substantially isotropically scatter the radiation of the pulsed laser beam outside the housing to sterilize the room. The scattering optical element comprises a hollow fused silica bulb filled with solid fused silica spheres or a fiber optic bundle and in some embodiments the scattering optical element is rotated. The pulsed laser beam comprises a wavelength ranging between about 200 nm to about 320 nm and in some embodiments comprises nanosecond or picosecond light pulses. Other embodiments are described and claimed.

20 Claims, 3 Drawing Sheets

