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(71) Applicant: **ENTEGRIS, INC.** [US/US]; 129 Concord Road, Billerica, Massachusetts 01821 (US).

(72) Inventors: **IRANI, Maryam**; 8 Independence Way Apt. 205, Franklin, Massachusetts 02038 (US). **GAUDREAU, John**; 435 Evans Rd., Chepachet, Rhode Island 02814 (US).

SRIVASTAVA, Reena; 7 Independence Way, Apt. 312, Franklin, Massachusetts 02038 (US).

(74) Agent: **NIELSON, Eric D.**; ENTEGRIS, INC., 129 Concord Road, Billerica, Massachusetts 01821 (US).

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(54) Title: PHOTOCATALYTIC AIRBORNE MOLECULAR CONTAMINATION REMOVAL SYSTEM ENHANCED WITH PASSIVE ADSORPTION

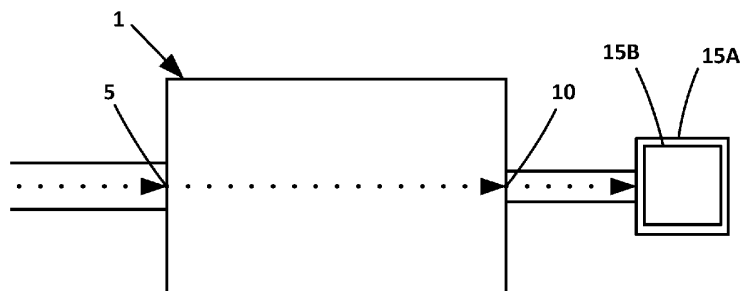


Figure 1

(57) Abstract: An air filtration system includes a photocatalytic reactor and a first air filter upstream of the photocatalytic reactor. The photocatalytic reactor includes a photocatalyst composition and a lamp configured to irradiate the photocatalyst composition. The photocatalyst composition is configured to decompose one or more volatile organic compounds in the air. The first air filter configured to filter one or more deactivating compounds from the air. A method of filtering air in an air filtration system includes passing air through a photocatalytic reactor and passing the air through a first filter prior to the passing of the air through the photocatalytic reactor. The passing of the air through the photocatalytic reactor includes a photocatalyst composition decomposing one or more volatile organic compounds in the air.

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