UV-Clean | Autonomous UV-C Sanitation Robot

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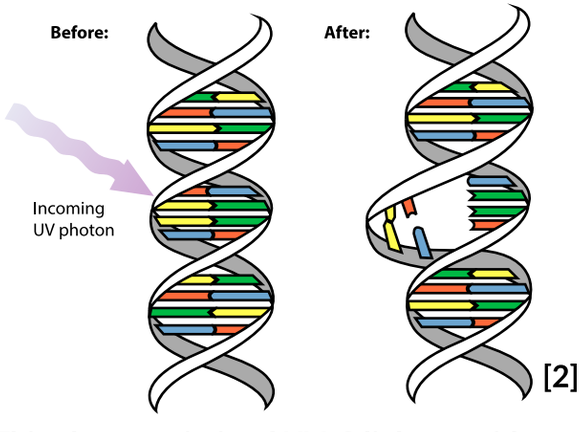
Current Sanitation Methods are Ineffective Against the Spread of COVID-19

- Waste hours of manual labor
- Use harsh chemicals
- Are not effective due to user error

4.48M COVID-19 cases worldwide illustrate a need for better sanitation methods [1]

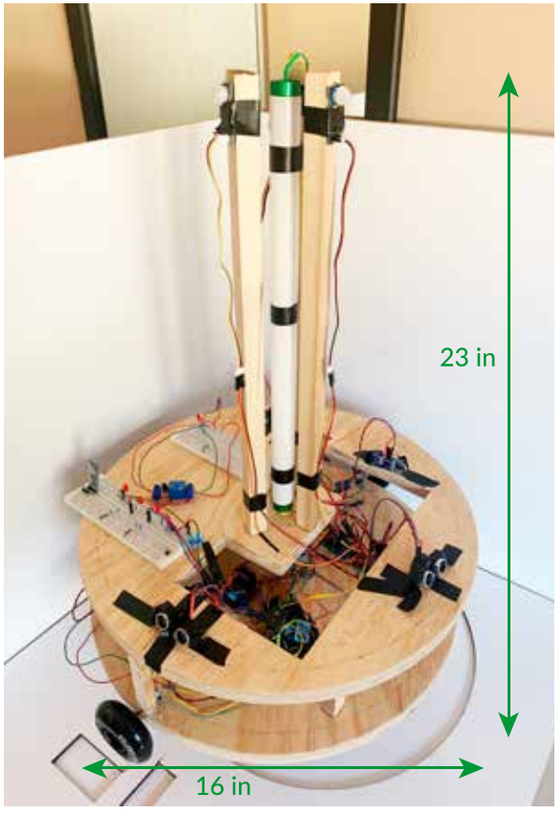
An autonomous germicidal UV-C device will drastically improve our sanitation methods

Germicidal UV-C Destroys DNA of Targeted Pathogens, Rendering the Replication Process Inert



[2]

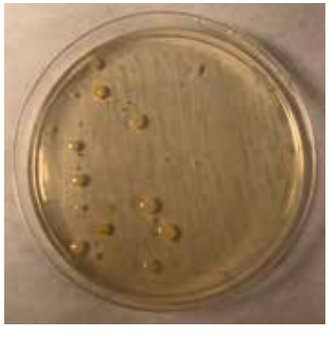
This characteristic of UV-C light provides a tool for minimizing the spread of disease



OUR SOLUTION: UV-CLEAN

- **Sanitizes 99% of common household germs: Salmonella, E. Coli, Staphylococcus Aureus, Influenza [3]**
- **Predicted to sanitize 90% of COVID-19 pathogens, based on the projected Coronavirus UV-C dosage requirements [4]**
- **Completes sanitation process without user presence or intervention**
- **Passive infrared sensors detect motion for user safety, preventing UV-C exposure**
- **Includes Android app for remote shut-off**
- **Navigates with obstacle avoidance**
- **Stationary mode for smaller rooms**
- **Lightweight (7 lbs) for easy handling**
- **Rechargeable battery powered**
- **Comparatively low cost**

Pathogen Testing Results



Pre-sanitation: 60 colonies

Post-sanitation: 10 colonies

[1] COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU). (n.d.). Retrieved May 30, 2020, from https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html

[2] What is UVC – Ask an Expert. [Online]. Available: http://www.cisu-vc.com/ask-an-expert/what-is-uvc. [Accessed: 15-May-2020].

[3] "Application Note #12 Ultraviolet Light Disinfection Data Sheet," Clordisys. [Online]. Available: https://www.clordisys-.com/pdfs/misc/UV Data Sheet.pdf.

[4] Kowalski, Wladyslaw & Walsh, Thomas & Petraitis, Vidmantas. (2020). 2020 COVID-19 Coronavirus Ultraviolet Susceptibility. 10.13140/RG.2.2.22803.22566.