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Title: Design and Implementation of a Low-cost Solar Charged Portable Disinfectant Chamber

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Abstract:

Health safety is always one of the key concerns for human lives. During this current pandemic, people have become more aware of this fact and have started following different precautions. In this paper, we have discussed a prototype of a cost-efficient and environmentally friendly disinfection chamber that can help to solve the public health risk that was brought to our attention. Currently, power generation costs have also increased due to inflation and fuel price hikes. There is a lack of power supply for that. To ensure the proper demand for power, the whole world focused on renewable energy. While developing the prototype, we tried to use the widely available resources in our local market so that it reduces the cost as well as can be easily repairable and upgradeable. Although we have used solar panels in the system, due to the portability and availability of power, we have also used a battery system which can supply power to the chamber for over 8 hours. We also discussed a few future works on the proposed system, with a focus on solar system improvement.