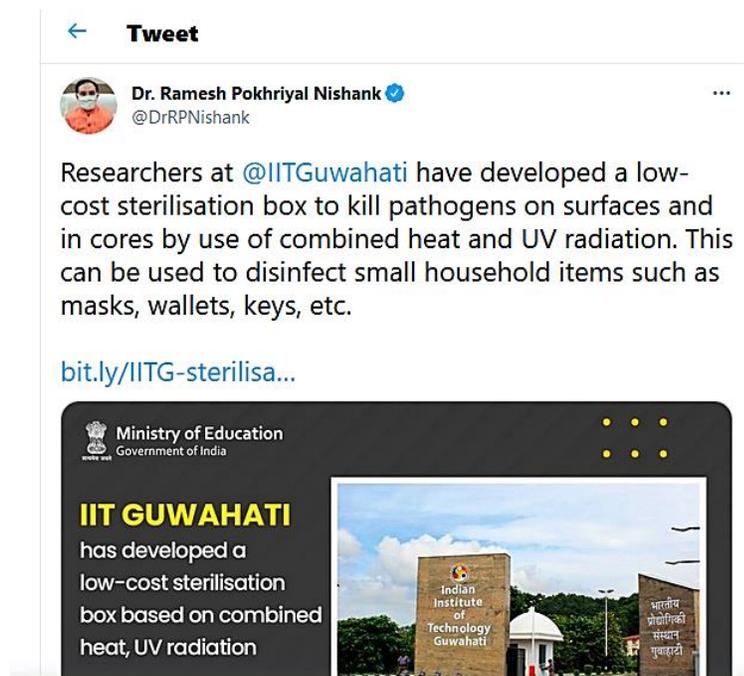


IIT Guwahati develops low-cost sterilization box based on combined heat, UV radiation

Media coverage

The research works of the team related to the development of low-cost sterilization box using a combination of heat and ultraviolet light irradiation for the prevention of COVID-19 has been published in media by PTI, Delhi. The story has got wide coverage in more than 50+ news apart from social media platforms i.e. Twitter, Facebook.

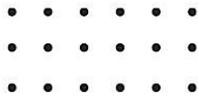




Ministry of Education
Government of India

IIT GUWAHATI

has developed a
low-cost sterilisation
box based on combined
heat, UV radiation



A few media clip can be seen in:

<https://www.abpeducation.com/news/covid-19-iit-guwahati-develops-low-cost-sterilisation-box/cid/1209612>

<https://twitter.com/DrRPNishank/status/1406508589359927298>

<https://www.theweek.in/wire-updates/national/2021/06/16/del87-virus-iit-sterilisation.html>

<https://www.ndtv.com/india-news/coronavirus-iit-guwahati-develops-low-cost-sterilization-box-based-on-combined-heat-uv-radiation-2465511>

'The developed device works using the combined effect of dry heat and UV-C irradiation'

IIT Guwahati develops low-cost sterilization box based on combined heat, UV radiation

NEW DELHI, June 16 (PTI): Researchers at the Indian Institute of Technology, Guwahati have developed a low-cost sterilization box to disinfect small household items by combining heat and UV radiation to prevent Covid-19.

The results of their investigation have also been recently published in Environmental Research (2021).

According to the team, the products available in the market use only UV-C irradiation facilities to disinfect items at a cost between ₹13,000 and ₹ 15,000, while the developed device has both heat and UV-C irradiation facilities to disinfect items



and costs around ₹ 3,500.

"The developed device works

using the combined effect of dry

heat and UV-C irradiation. UV-C ra-

diation is more effective in killing the pathogens at the surfaces and heat is effective in sterilizing the unexposed areas and pores.

"The combination of UV-C radiation and heat can be used for disinfecting small items like masks, wallets, currency notes, wrist-watches, and other routine items for their safe reuse or disposal to the environment," said Lalit M. Pandey, Professor at IIT's Department of Biosciences and Bioengineering.

"This published study suggests that the combination of heat and UV-C at 70 degrees Celsius for 15 minutes can be useful for the inacti-

vation of the virus through the unfolding of the proteins and killing of bacterial pathogens," he added.

The designed sterilization box comprises a wooden box, two incandescent bulbs for heating, two UV-C lamps for irradiation, one Digital Temperature Controller (DTC), and a timer.

The box also has the provision to maintain different inside temperatures through DTC. For operational safety, a limit switch-controlled top cover is used to prevent the direct exposure of UV-C light to the human eye and skin. The box was tested for (CONTD. ON PAGE-2)

IIT Guwahati develops low-cost

the sterilization or disinfection of virus and bacteria. The novel coronavirus (SARS-CoV-2) is composed of inner nucleic acid, which is covered with surface spike glycoprotein. The unfolding and disintegration of surface glycoprotein inactivate the virus. The developed device was found to unfold the glycoprotein and completely kill bacteria present on surfaces, even in an aqueous environment.

"Further, to assess the practical applicability, the designed sterilization box was also tested for daily use items and found to effectively sterilize or disinfect the surfaces. This broadens the effectiveness of the developed prototype," said Uday Shanker Dixit, Professor at the Department of Mechanical Engineering. The other members of the team included research scholars Nilkamal Mahanta, Varun Saxena and Priyanka Batra.

List of consolidated coverage:

Date: 22nd June 2021

Media: Time8

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M. Pandey

Headline: COVID-19: IIT Guwahati develops a low-cost sterilization box

URL: <https://www.time8.in/covid-19-iit-guwahati-develops-a-low-cost-sterilization-box/>

Date: 18th June 2021

Media: ABP Education

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M. Pandey

Headline: COVID-19: IIT Guwahati develops low-cost sterilization box

URL: <https://www.abpeducation.com/news/covid-19-iit-guwahati-develops-low-cost-sterilisation-box/cid/1209612>

Date: 18th June 2021

Media: Careers360

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M. Pandey

Headline: IIT Guwahati develops low-cost sterilization box based on combined heat, UV radiation

URL: <https://news.careers360.com/iit-guwahati-develops-low-cost-sterilization-box-based-on-combined-heat-uv-radiation>

Date: 17th June 2021

Media: Dy365

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M. Pandey

Headline: COVID-19: IIT Guwahati develops low-cost sterilization box based on combined heat, UV radiation

URL: <http://dy365.in/city-news/covid-19-iit-guwahati-develops-low-cost-sterilization-box-based-on-combined-heat-9504>

Date: 14th June 2021

Media: New111 (Hindi)

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M. Pandey

Headline: IIT गुवाहाटी के शोधकर्ताओं ने पानी की कमी के मुद्दों को हल करने के लिए 'आभासी जल प्रवाह' तैयार किया

URL: <https://bit.ly/3iMKoQw>

Date: 17th June 2021

Media: The News of the People

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M. Pandey

Headline: Covid: IIT Guwahati Develops Low-Price Sterilization Field...

URL: <https://thenewsofthepeople.com/covid-iit-guwahati-develops-low-price-sterilization-field/>

Date: 17th June 2021

Media: The Tribune (clip attached)

Edition: New Delhi

Page no: 12

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT develops low-cost sterilisation box

Date: 17th June 2021

Media: Amar Ujala (Hindi) (clip attached)

Edition: New Delhi

Page no: 9

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati made cheap sterilization box

Date: 17th June 2021

Media: Eenadu (Telugu) (clip attached)

Edition: Hyderabad

Page no: 15

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati develops low-cost sterilization box

Date: 17th June 2021

Media: The Hills Times (clip attached)

Edition: Guwahati

Page no: 1, 2

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati develops low-cost sterilization box based on combined heat, UV radiation

URL: <https://www.thehillstimes.in/national/iit-guwahati-develops-low-cost-sterilization-box-based-on-combined-heat-uv-radiation/>

Date: 16th June 2021

Media: The Financial Express

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: Covid-19: IIT Guwahati develops low-cost sterilization box based on combined heat, UV radiation

URL: <https://www.financialexpress.com/lifestyle/health/covid-19-iit-guwahati-develops-low-cost-sterilization-box-based-on-combined-heat-uv-radiation/2272702/>

Date: 16th June 2021

Media: Lokmat News (Hindi)

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: कोविड-19 : आईआईटी गुवाहाटी ने पराबैंगनी विकिरण आधारित उपकरण विकसित किया

URL: <https://www.lokmatnews.in/india/kovid-19-iit-guwahati-develops-ultraviolet-radiation-based-device-b421/>

Date: 16th June 2021

Media: Navbharat Times (Hindi)

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: कोविड-19 : आईआईटी गुवाहाटी ने पराबैंगनी विकिरण आधारित उपकरण विकसित किया

URL: <https://navbharattimes.indiatimes.com/india/covid19-iit-guwahati-develops-ultraviolet-radiation-based-device/articleshow/83575974.cms>

Date: 16th June 2021

Media: Outlook

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: Covid: IIT Guwahati develops low-cost sterilization box based on combined heat, UV radiation

URL: <https://www.outlookindia.com/newscroll/covid-iit-guwahati-develops-lowcost-sterilization-box-based-on-combined-heat-uv-radiation/2103407>

Date: 16th June 2021

Media: The Week

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: Covid IIT Guwahati develops low-cost sterilization box based on combined heat UV radiation

URL: <https://www.theweek.in/wire-updates/national/2021/06/16/del87-virus-iit-sterilisation.html>

Date: 16th June 2021

Media: NDTV

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Low-Cost Sterilization Box For Disinfecting Household Items

URL: <https://www.ndtv.com/india-news/coronavirus-iit-guwahati-develops-low-cost-sterilization-box-based-on-combined-heat-uv-radiation-2465511>

Date: 16th June 2021

Media: CNBCTV18

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: COVID: IIT Guwahati develops low-cost sterilization box based on combined heat, UV radiation

URL: https://www.cnbctv18.com/healthcare/coronavirus-india-news-live-updates-covid-19-vaccine-mumbai-maharashtra-delhi-tamil-nadu-karnataka-lockdown-news-9670771.htm?_gl=1*19doevk*_ga*NHQ1R3hyX0N6NmR3UnY1bkN2Sm1fWmtGU1g1M1dnb3huZIZuQjNUMzRDWkFjUDdGYi1ELWJfOGRhVWVoSGdyVg..

Date: 17th June 2021

Media: Money Control

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M. Pandey

Headline: IIT Guwahati Develops Low-Cost Sterilization Box For Disinfecting Household Items

URL: <https://www.moneycontrol.com/news/india/coronavirus-news-live-updates-mumbai-reports-575-new-cases-718-recoveries-and-14-deaths-7040001.html>

Date: 17th June 2021

Media: Arunachal Times

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: Covid: IIT Guwahati develops low-cost sterilization box based on combined heat, UV radiation

URL: <https://arunachaltimes.in/index.php/2021/06/17/covid-iit-guwahati-develops-low-cost-sterilization-box-based-on-combined-heat-uv-radiation/>

Date: 16th June 2021

Media: Devdiscourse

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: Covid: IIT Guwahati develops low-cost sterilization box based on combined heat, UV radiation

URL: <https://www.devdiscourse.com/article/science-environment/1615664-covid-iit-guwahati-develops-low-cost-sterilization-box-based-on-combined-heat-uv-radiation>

Date: 16th June 2021

Media: Morung Express

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati develops low cost sterilization box based on combined heat, UV

radiation

URL: <https://morungexpress.com/covid-iit-guwahati-develops-low-cost-sterilization-box-based-on-combined-heat-uv-radiation>

Date: 16th June 2021

Media: Yahoo

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: Covid: IIT Guwahati develops low-cost sterilization box based on combined heat, UV radiation

URL: <https://in.news.yahoo.com/covid-iit-guwahati-develops-low-135854781.html>

Date: 16th June 2021

Media: Aaj Tak Sweta

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Low-Cost Sterilization Box Based On Combined Heat, UV Radiation

URL: <https://aajtakshweta.com/iit-guwahati-develops-low-cost-sterilization-box-based-on-combined-heat-uv-radiation/>

Date: 16th June 2021

Media: Latestly

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT-Guwahati Develops Low-Cost Sterilization Box Based on Combined Heat, UV Radiation to Prevent COVID-19

URL: <https://www.latestly.com/agency-news/india-news-covid-iit-guwahati-develops-low-cost-sterilization-box-based-on-combined-heat-uv-radiation-2555552.html>

Date: 16th June 2021

Media: Funitech

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT-Guwahati has developed a low-cost sterilization box that combines heat and UV light to prevent COVID-19.

URL: <https://fuentitech.com/iit-guwahati-has-developed-a-low-cost-sterilization-box-that-combines-heat-and-uv-light-to-prevent-covid-19/76797/>

Date: 16th June 2021

Media: Indian Lekhak

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati develops low cost sterilization box based on combined heat, UV radiation

URL: <https://indianlekhak.com/india-news/iit-guwahati-develops-low-cost-sterilization-box-based-on-combined-heat-uv-radiation>

Date: 16th June 2021

Media: Tripurateer

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Low-Price Sterilization Field For Disinfecting Family Objects

URL: https://tripurateer.com/iit-guwahati-develops-low-price-sterilization-field-for-disinfecting-family-objects/?feed_id=18594&unique_id=60ca146696ef8

Date: 16th June 2021

Media: News Tribe

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Low-Cost Sterilization Box For Disinfecting Household Items

URL: <https://www.newstribes.in/iit-guwahati-develops-low-cost-sterilization-box-for-disinfecting-household-items/>

Date: 16th June 2021

Media: Daily News Catch

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati develops a low-cost sterilization box to disinfect household items

URL: <https://www.dailynewscatch.com/2021/06/16/iit-guwahati-develops-a-low-cost-sterilization-box-to-disinfect-household-items/>

Date: 16th June 2021

Media: SRT News

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Low-Cost Sterilization Box For Disinfecting Household

Items

URL: <https://srtnews.in/iit-guwahati-develops-low-cost-sterilization-box-for-disinfecting-household-items/>

Date: 16th June 2021

Media: The Bangalore Media

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Sterilization Box For Disinfecting Small Items

URL: <https://thebangaloremedia.com/2021/06/16/iit-guwahati-develops-sterilization-box-for-disinfecting-small-items/>

Date: 16th June 2021

Media: The Singapore Times (International)

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develop Low Cost Sterilization Box For Household Items Disinfection

URL: <https://www.thesingaporetime.com/iit-guwahati-develop-low-cost-sterilization-box-for-household-items-disinfection/>

Date: 16th June 2021

Media: NAMPA (International)

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: VIRUS-IIT-STERILISATION - Covid: IIT Guwahati develops low-cost sterilization box based on combined heat, UV radiation

URL: <https://www.nampa.org/index.php?model=categories&function=display&id=21346835>

Date: 16th June 2021

Media: Canada Express News (International)

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develop Low Cost Sterilization Box For Household Items Disinfection

URL: <https://www.canadaexpressnews.com/iit-guwahati-develop-low-cost-sterilization-box-for-household-items-disinfection/>

Date: 16th June 2021

Media: 247 News Around the World

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Sterilization Box For Disinfecting Small Items

URL: <https://247newsaroundtheworld.com/news/iit-guwahati-develops-sterilization-box-for-disinfecting-small-items/>

Date: 16th June 2021

Media: News Robin

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develop Low Cost Sterilization Box For Household Items Disinfection

URL: <https://www.newsrobin.com/india/iit-guwahati-develops-low-cost-sterilization-box-for-disinfecting-household-items/>

Date: 16th June 2021

Media: News Galaxy

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Low-Cost Sterilization Box For Disinfecting Household Items

URL: <https://newsgalaxymedia.com/india/iit-guwahati-develops-low-cost-sterilization-box-for-disinfecting-household-items/>

Date: 16th June 2021

Media: Pratidin Times

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: Covid: IIT-G Develops Low-Cost Sterilization Box To Disinfect Household Items

URL: <https://www.pratidintime.com/covid-iit-g-develops-low-cost-sterilization-box-to-disinfect-household-items/amp/>

Date: 16th June 2021

Media: Aaz Ka News

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Low-Cost Sterilization Box For Disinfecting Household Items

URL: <https://aazkanews.com/national/iit-guwahati-develops-low-cost-sterilization-box-for-disinfecting-household-items/>

Date: 16th June 2021

Media: UPC News

Edition: Online

Journalist: J Pradhan

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Low-Cost Sterilization Box For Disinfecting Household Items

URL: <https://upcnews.in/latest-stories/iit-guwahati-develops-low-cost-sterilization-box-for-disinfecting-household-items/>

Date: 16th June 2021

Media: Lives updates

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Low-Cost Sterilization Box For Disinfecting Household Items

URL: <https://livesupdates.com/news/iit-guwahati-develops-low-cost-sterilization-box-for-disinfecting-household-items>

Date: 16th June 2021

Media: Reformer News

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Low-Cost Sterilization Box For Disinfecting Household Items

URL: <https://news.reformertech.com/iit-guwahati-develops-low-cost-sterilization-box-for-disinfecting-household-items/>

Date: 16th June 2021

Media: India 07

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Low-Cost Sterilization Box Based On Combined Heat, UV Radiation

URL: <https://india07.in/iit-guwahati-develops-low-cost-sterilization-box-based-on-combined-heat-uv-radiation/>

Date: 16th June 2021

Media: Current NewsTV

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Low-Cost Sterilization Box For Disinfecting Household Items

URL: <https://www.currentnewstv.in/2021/06/16/iit-guwahati-develops-low-cost-sterilization-box-for-disinfecting-household-items/>

Date: 16th June 2021

Media: Karma Sangram

Edition: Online

Journalist: NA

Professor Mentioned: Prof. Lalit M Pandey

Headline: IIT Guwahati Develops Low-Cost Sterilization Box Based On Combined Heat, UV Radiation

URL: <https://karmasangram.com/news/iit-guwahati-develops-low-cost-sterilization-box-based-on-combined-heat-uv-radiation-to-prevent-covid-19/>