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PhotoAir: Measuring indoor and outdoor PM2.5 with a mobile phone

#Award #MobileApp #Pollution

Indoor
Jan 15, 2020 15:46

Outdoor (day)
Nov 26, 2018 12:40

Outdoor (night)
Nov 26, 2018 20:16

PM2.5

PM2.5

PM2.5

PROJECT QUICK FACTS

Principal Investigator
Prof. HUANG Bo
DEPARTMENT OF GEOGRAPHY AND RESOURCE MANAGEMENT

- Patent**
1 China patent filed
- Award**
Gold Medal, International Exhibition of Inventions Geneva 2021

By simply taking a photo using a mobile phone, PhotoAir can measure PM2.5 concentrations indoor or outdoor, day or night in real time regardless of weather conditions. These functions are achieved through the development of advanced computer vision and artificial intelligence algorithms in the light of physical optics to extract complex features embedded in the photo accounting for different illumination attenuations. With real-time alerts on pollution levels and forecasting tools, users can then keep track of their exposure to PM2.5 to make informed travel plans by avoiding heavily polluted areas.

Uniqueness and competitive advantages:

- Indoor or outdoor, day or night
- Real-time
- 90% accuracy
- Simple and convenient to use

PhotoAir

Watch later Share

PhotoAir is an mobile APP allowing users to measure PM2.5 concentrations.

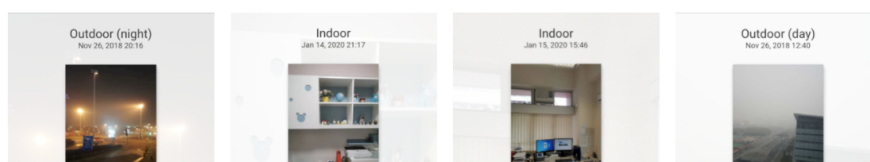
Indoor & Outdoor

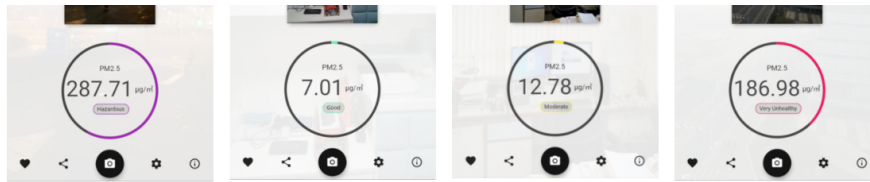
Day & Night

Efficient & Accurate

◆ indoor/outdoor, day/night by taking a photo with a mobile phone, super-convenient, low-cost, efficient and accurate.

Watch on YouTube





PhotoAir can measure PM2.5 concentrations indoor or outdoor, day or night



PhotoAir facilitates large-scale environmental monitoring by using data from multiple users.



The high accuracy of PhotoAir has been proven by comparing the readings of PhotoAir and the portable monitor.

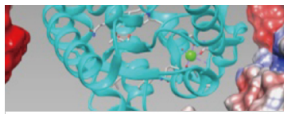
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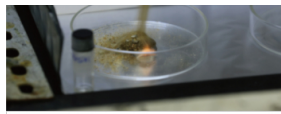




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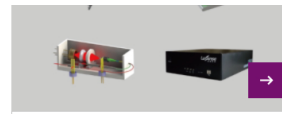
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