### Peking University Bioaerosol Laboratory Bulletin (PKU-BLB) Volume 8, Issue 2

August 2020

Our work discovered that COVID-19 patients in their earlier stages exhaled millions of SARS-CoV-2 per hour!





Our laboratory has developed a test-breath-now (TBN) system that is able to rapid screen COVID-19 patients!

北京大学生物气溶胶实验室

Beijing, China

### Scientific Publications

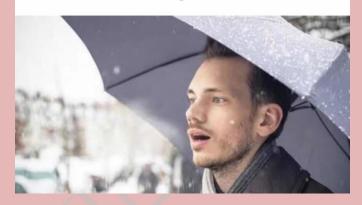
 Our work showed that COVID-19 patients in their earlier stages exhaled millions of SARS-CoV-2 per hour, and published in Clinical Infectious Diseases. The work has been featured by many prestigious media outlets.



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SCIENCE

Exhaled breath of COVID-19 patients can contain novel coronavirus, study finds







# Exhaled breath of COVID-19 patients found to contain novel coronavirus

JULY 11, 2020

 Our study has shown that air pollution causes health effects through downregulating specific microRNA such as mi-RNA-125b and miRNA-21. The study was published in Environ Sci & Technol (2020).

RETURN TO JUST ACCEPTED MANUSCRIPTS

PREV ECOTOXICOLOGY AND PU... NEXT

## EDVIRONMENTAL Science & Technology

# Ambient PM Toxicity is Correlated with Expression Levels of Specific MicroRNAs

Haoxuan Chen, Xiangyu Zhang, Ting Zhang, Xinyue Li, Jing Li, Yang Yue, Minfei Wang, Yunhao Zheng. Hanqing Fan, Jing Wang, and Maosheng Yac **Xinyue Li** 

3.Our study has shown that plant flowers during the Spring time could transmit biological agents through the air, including viruses, bacteria and fungi.

Research Paper | Published: 23 July 2020

Plant flowers transmit various bioagents through air

Siyu Xu & Maosheng Yao ☑

Science China Earth Sciences (2020) Cite this

articla

4.Our work "Microbial emission levels and diversities from different land use types" by Li Xinyue et al 2020 was published in Environ Intl.

Environment International Volume 143, October 2020, 105988

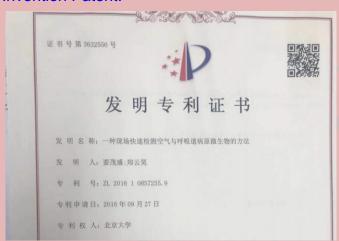
Microbial emission levels and diversities from different land use types

Xinyue Li  $^1$  ... Maosheng Yao  $^{\wedge}$   $\boxtimes$ 

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https://doi.org/10.1016/j.envint.2020.105988

5. Our patent regarding rapid onsite screening human pathogens is issued a National Invention Patent.



6. Our application regarding use of cold-plasma generated water for DNA extraction was issued a National Invention Patient.



7. Dr. Yao co-authored a publication regarding how to minimize indoor airborne transmission of COVID-19.



### Other Selected Scientific Activities

1. Dr. Yao was one of 239 experts globally for advocating the airborne transmission of COVID-19, and the claim was featured by New York Times.



# 239 Experts With 1 Big Claim: The Coronavirus Is Airborne

The W.H.O. has resisted mounting evidence that viral particles floating indoors are infectious, some scientists say. The agency maintains the research is still inconclusive.



### China Peking University Bioaerosol Laboratory Bulletin (PKU-BLB) Volume 8, Issue 2

 Dr. Yao's work on the breath-borne SARS-CoV-2 transmission was published in Clin Infect Dis and featured by Peking University.







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要茂盛教授团队阐述新冠病毒空 气传播新机制

该项研究首次证实人体呼吸本身就是 非常重要的新冠病毒排放传播的方 式,而呼出气中大部分颗粒都小于

PM2.5,从而进一步揭示气溶胶传播扩散新冠病毒的事实,为未来更好阻断空气传播、防控新冠病毒感染提供了重要的科学依据。

3. Our lab has developed a COVID-19 screening system named as TBN, which is able to screen the COVID-19 patients within 5 minutes.



**TBN system for Screening COVID-19** 

#### **Students Activities**

 Haoxuan Chen and Ting Zhang successfully passed their PhD dissertation defense, and were awarded the PhD degree from Peking University.



Dr. Haoxuan Chen's PhD defense day



Dr. Ting Zhang's PhD graduation Ceremony©2020

2. Haoxuan Chen (Dr. Chen) has won the Beijing Municipality and Peking University Outstanding Graduate Awards.

Our next issue is expected to be in December 2020 & we look forward to exciting news from our group. For other information, please visit our laboratory web site: <a href="www.yaopkulab.com">www.yaopkulab.com</a>. All contents contained in this document are copyrighted and explained by PKU Bioaerosol Laboratory.