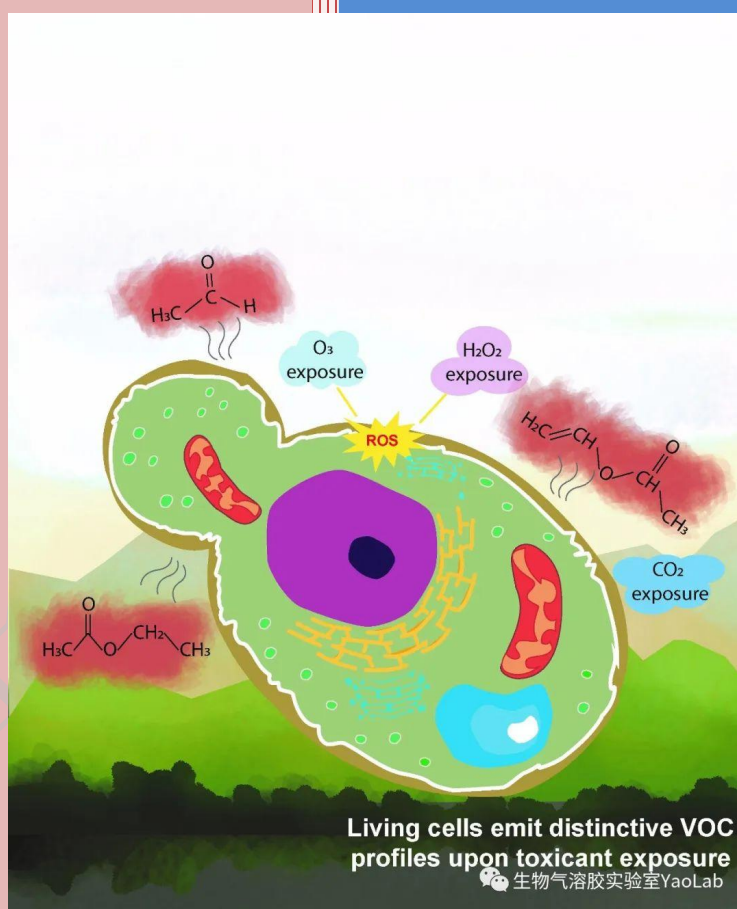


Peking University Bioaerosol Laboratory Bulletin (PKU-BLB) Volume 10, Issue 2

August
2022

Our laboratory discovered the VOC fingerprint emission mechanisms on cell level upon the pollutant challenge!

Our lab has found that the yeast cell would emit distinctive VOC profiles when challenged with different pollutants



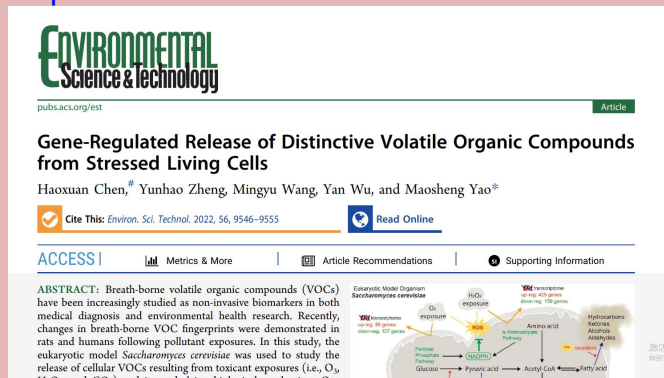
北京大学生物气溶
胶实验室

Dr. Yao was featured as “Author Close Up” by Chinese J of Chemistry ! Dr. Yao elucidates his work regarding “Smoke Detector for Human Diseases”

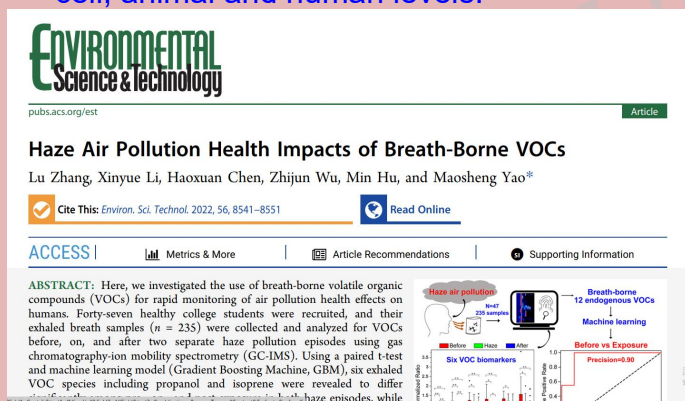
Beijing, China

Scientific Publications

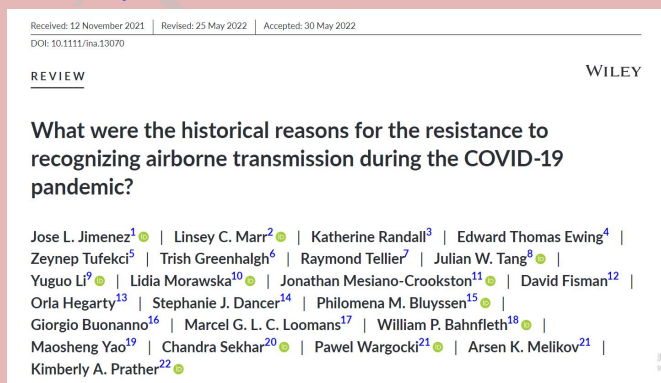
1. The work by Chen et al regarding the VOC emission mechanisms by a living system when challenged by various pollutants was published in ES&T.



2. Our laboratory has also found that the breath-borne VOC fingerprints would change upon haze air pollution. The relevant work by Zhang et al has been published in ES&T. As of this publication, our lab has finished the studies about “smoke detector” inside living system from cell, animal and human levels.



3. Dr. Yao co-authored an article regarding the history of infectious diseases, and the study was published in Indoor Air.



4. Dr. Yao co-authored an article regarding Antimicrobial Resistance in the Environment: Towards Elucidating the Roles of Bioaerosols in Transmission and Detection of Antibacterial Resistance Genes.



5. Dr. Yao was featured by Chinese J of Chemistry as “Author Close Up” and was published as a back cover. Dr. Yao elucidates his work regarding “smoke detector” for human disease.



Other Selected Scientific Activities

1. Dr. Yao was awarded the “Excellence in Review” award by ES&T Journal

June 21, 2022
Volume 55
Number 12
pubs.acs.org/est

ENVIRONMENTAL Science & Technology

2021 Reviewer Awards

Super Reviewer Award

| | | |
|-----------------------|--------------------------|----------------------|
| Jaesang Lee | William Mitch | Huizhong Shen |
| Rainer Lohmann | Armistead Russell | Weihoa Song |
| Jae-Hong Kim | | Lingyan Zhu |

Excellence in Review Award

| | | |
|----------------------------|---------------------------|-----------------------|
| Anne-Marie Aucour | Carl Lamborg | Ting Ruan |
| Joe Brown | Yi Luo | Jeroen Sonke |
| Jin-Li Cui | Garrett McKay | Zhiwei Wang |
| Razi Epsztein | Carla Ng | Xin Yang |
| Sergi Garcia-Segura | Kimberly Parker | Maosheng Yao |
| Shikha Garg | François Perreault | Lijuan Zhao |
| Mae Gustin | Carsten Prasse | Bingsheng Zhou |
| Haidong Kan | Albert Presto | Shulin Zhuang |

ACS Publications
Most Trusted. Most Cited. Most Read.

www.acs.org



4. Exhaled breath condenser developed by our lab was tested with COVID-19 by Jiangsu Center for Disease Prevention & Control.



Students

1. Congrats to Xinyue Li for completing his PhD study and won the PhD degree from Peking University.



2. Dr. Yao, as an international collaborator together with colleagues from Australia won a 5 million Australia dollar grant from Australia Government for studying indoor infectious disease transmission and control. A corresponding center was established, and the center was named as “ARC Training Centre for Advanced Building Systems Against Airborne Infection Transmission”. The chair is Prof Lidia Morawska.

| | | |
|---|---|--|
| <p>Professor Lidia Morawska; Associate Professor Lindy Burton; Professor Guy Marks; Professor Jason Monty; Professor Zoran Ristovski; Dr Duagan Agulis; Professor Richard Brown; Adjunct Professor Geoffrey Hamner; Dr Thomas Rainey; Associate Professor Robyn Schfield; Associate Professor Bo Xia; Mr Marc Dunn; Mr Anders Hedstrom; Ms Robyn Hendry; Ms Patricia Keady; Dr Gregor Plesler; Mr J Graeme McLeish; Dr Helge Neumeister-Kemp; Mr Brendan Pejlovic; Ms Jui Sim; Dr Tim van der Graaf; Dr Zulin Varghese; Mr Scott Wengert; Professor Giorgio Buonanno; Professor Dr Prashant Kumar; Associate Professor Tunga Sahbhamer; Emeritus Professor Gill Seppänen; Professor Boguang Wang; Professor Maosheng Yao</p> | <p>ARC Training Centre for Advanced Building Systems Against Airborne Infection Transmission. The aim of the Centre is to engineer building systems whose elements work together to reduce airborne infection transmission by improving indoor air quality while maintaining comfort and efficiency. The significance is in establishing clean indoor air as the norm, with Australian industry being the forerunner. In this process, the outcomes include new intelligent building systems, improved building technologies, quantitative methods for building control, evidence for policymaking and recommendations for operational guidelines. Wide-ranging benefits include reducing the health and economic burden of inadequate indoor air and increasing the competitiveness of Australian industry in the face of increasing demand for next-level building systems.</p> | <p>Queensland University of Technology AEROSOL DEVICES INC.; AIR CONDITIONING AND REFRIGERATION EQUIPMENT MANUFACTURERS ASSOCIATION OF AUSTRALIA INCORPORATED; ASPEN MEDICAL PTY LIMITED; THE AUSTRALIAN INSTITUTE OF REFRIGERATION; AIR CONDITIONING AND HEATING (INCORPORATED); BULCS HOLDINGS PTY LTD; INDOOR AIR QUALITY; MYCOTEC PTY LTD; PHILIPS DOMESTIC APPLIANCES; QED ENVIRONMENTAL SERVICES PTY LTD; SAMSUNG ELECTRONICS AUSTRALIA PTY LTD; TRANE TECHNOLOGIES</p> <p>44,939,486.00</p> |
|---|---|--|

3. The exhaled breath COVID-19 analyzer developed by our laboratory was tested with COVID-19 by Beijing Chaoyang Center for Disease Prevention & Control.

His PhD dissertation title is “Emission characteristics, airborne sampling and detection of exhaled aerosol”

2. Lu Zhang, a third year PhD student, won the prestigious Peking University President Award, the highest honor for graduate student at Peking University.



Lu Zhang

3. Welcome Zhu chenyu to join our lab as a PhD student. Chenyu graduated with BS in Environmental Science from Nanjing University.



Chenyu during graduation ceremony @ Nanjing University

Our next issue is expected to be in December and look forward to exciting news from our group. For other information, please visit our laboratory web site: www.yaopkulab.com. All

contents contained in this document are copyrighted and explained by PKU Bioaerosol Laboratory.