



Key Environmental Issue Webinar Series 13
for Overseas Chinese Environmental Engineers & Scientists Association
海外華人環境保護學會環境議題網上論壇(Thirteenth)

Green with phenology - A warmer and brighter city trick trees into thinking spring arrives earlier

July 16, 2023: 6:00-7:00 PM PDT (9:00-10:00PM EST) /

July 17, 2023: 9:00-10:00 AM 中国标准時間



[About the Speaker] Dr. Lin Meng is an Assistant Professor in the Department of Earth and Environmental Sciences at Vanderbilt University. She received her Ph.D. in Environmental Science & Geology at Iowa State University in 2020, and worked as a postdoc scholar in Climate and Ecosystem Sciences Division at Lawrence Berkeley National Laboratory before joining Vanderbilt for 2020-2022. Her research was published in Science, PNAS, PNAS NEXUS, and Global Change Biology etc. She was awarded as the Grand Prize winner of the 2021 Science & SciLife Lab Prize for Young Scientists by Science Magazine and AAAS, and Green Talents award by German Federal Ministry of Education and Research in 2022. Dr. Meng's research focuses on understanding the impact of climate change and human on urban ecosystems, and developing strategies for sustainable cities.

[Abstract] The timing of seasonal biological events—such as when trees leaf out, flowers open, and leaves turn yellow—is called phenology. Plant phenology is sensitive to climate change and variability; however, how complex urban environments affect plant phenology remains largely unexplored. I investigated how phenology responded to urban warming and artificial light in large U.S. cities using satellite data and phenology models. My work shows that the urban heat island effect and light pollutions trick trees into thinking spring has arrived earlier. As a result, cities have an earlier and longer growing season, which consequently affects pollen allergy season, water cycling, and plant-pollinator matchup. The findings contribute to better understanding urban ecosystem changes to inform more ecologically sensitive urban planning, design, and management.

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Moderator: Mr. Xin Song is co-founder of Enviroin, project manager at Michael Baker International. He graduated from Northwestern University with a master's degree in Environmental Engineering with broad interest in water environmental & machine learning sciences.