

HOW TO SOLVE THE CLIMATE CHANGE PROBLEM? TWO LOW-TECH IDEAS: LOW-COST ENVIRONMENTAL SENSORS AND BIOMASS BURIAL FOR CARBON REMOVAL

Speaker

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Abstract

Climate change is the greatest challenge humanity faces in the 21st century. We can't count on just fancy technologies to solve this problem, but rather need a portfolio of solutions. Based on 15 year of research, here I discuss two low-tech technologies that offer exciting new opportunities: 1) low-cost high-density IoT sensors to monitor greenhouse gas emissions and air pollution; 2) Burying woody biomass to remove CO₂ from the atmosphere. These 'low-tech' technologies are practical and effective, with great potential to contribute to climate mitigation.

Biography

Ning Zeng is a professor at the Department of Atmospheric and Oceanic Science and the Earth System Science Interdisciplinary Center, University of Maryland, and affiliate professor with the Department of Geology and the Maryland Energy Innovation Institute. He earned a BS degree in Physics from the University of Science and Technology of China, MS degree in Physics and Ph.D. in Atmospheric Sciences from the University of Arizona. He worked at MIT, UCLA, NASA Goddard Space Flight Center, the Institute of Atmospheric Physics, and the Max-Planck Institute for Meteorology.

His professional interests include climate change and variability, carbon cycle and ecosystem, carbon sequestration and other technical solutions and policy implications of climate change. He is a Clarivate Highly Cited Researcher and on Reuters List of Top Climate Scientists. He was a founding co-chief editor of the journal Earth System Dynamics. He was Chair of the 9th International CO₂ Conference. He is a contributor to the Intergovernmental Panel on Climate Change (IPCC) Reports and the Global Carbon Project. He is a co-lead of the US Carbon Cycle Science Decadal Plan.

He has published 151 papers with 20181 citations and H-index 59 (Web of Science), and 29900 citations and H-index 79 (Google Scholars), including 10 papers in Science and Nature (5 first author).



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