

UCSD NANO & CHEMICAL ENGINEERING
SPECIAL SEMINAR

February 21st 2023

Seminar Presentation: 9:30am – 10:30am

SME Room 248

*“Sustainable Nature Nanomaterials and Nanomedicine”***Dr. Xingcai Zhang***Research Fellow
Harvard University*

Abstract: Mother Nature provides us with abundant materials, ideas, possibilities, and sustainable solutions. Nature-derived/inspired materials shine the glory of Nature for diverse sustainable energy, environment, and especially biomedical applications due to their unique advantages including but not limited to excellent biocompatibility, biodegradability, vast abundance, low-cost, and diverse functionalities. This lecture will share and exchange research progress on nano-tea, sustainable living materials, nature-derived two-dimensional nanomaterials with FDA -approved compounds and related AI /microfluidics-powered sustainable nature materials for advanced applications.

Educational Development and Training: Tea has been a symbol of healthy harmony, pure nature, and balanced living for centuries. For trainees and researchers at all levels navigating academic and professional journeys, we can all learn from the Dao of Tea's principles and apply them to our lives and research. By savoring the simple pleasures in life, finding harmony in our work, and seeking balance in daily routines, we can cultivate a sense of calm and focus that will benefit us in all aspects of our lives. The Dao of Tea's philosophy can inspire us all to approach our educational and professional development with a sense of purpose, mindfulness, and self-awareness, leading to a more fulfilling and successful journey.

Biosketch: Dr. Xingcai Zhang is a Harvard research fellow with expertise in sustainable Nature/bio-derived, inspired, mimetic materials and technologies for advanced applications, especially biomedicine. He has published 150+ prestigious journal papers, including Nat. Nanotechnol., Nat. Med., Nat. Rev. Clin. Oncol., Nat. Rev. Mater., Nat. Commun., Sci. Adv., PNAS, JACS, Angew. Chem., Adv. Mater., Mater. Today, Prog. Mater. Sci., Chem. Soc. Rev., with many being top 0.1% highly cited papers and featured cover papers. He has served as a science writer/editor/advisory board member for AAAS, Nature, Springer, Elsevier, Cell Press, Materials Today, ACS, RSC, and Wiley. He has also received multiple awards including the Nature Nano Award. He has been acknowledged by Nature VP Richard Hughes for his contribution to the publication of Nature Outlook Tea. He has given multiple talks for the Nature publishing group and was the sole author representing Nature Communications for the Springer Nature 1 million golden open access journal publication video promotion. He and his work have been reported by Fox News, Boston Globe, Boston Magazine, Harvard Political Review, China Daily USA, Boston City TV, MIT Technology Review, Deep Tech, AAAS, MRS, etc., hundreds of times. Dr. Zhang has also hosted around 100 talks for female scholars and diversity, nature publishing group, materials today publishers, etc., at Harvard University.