

# EES Solar

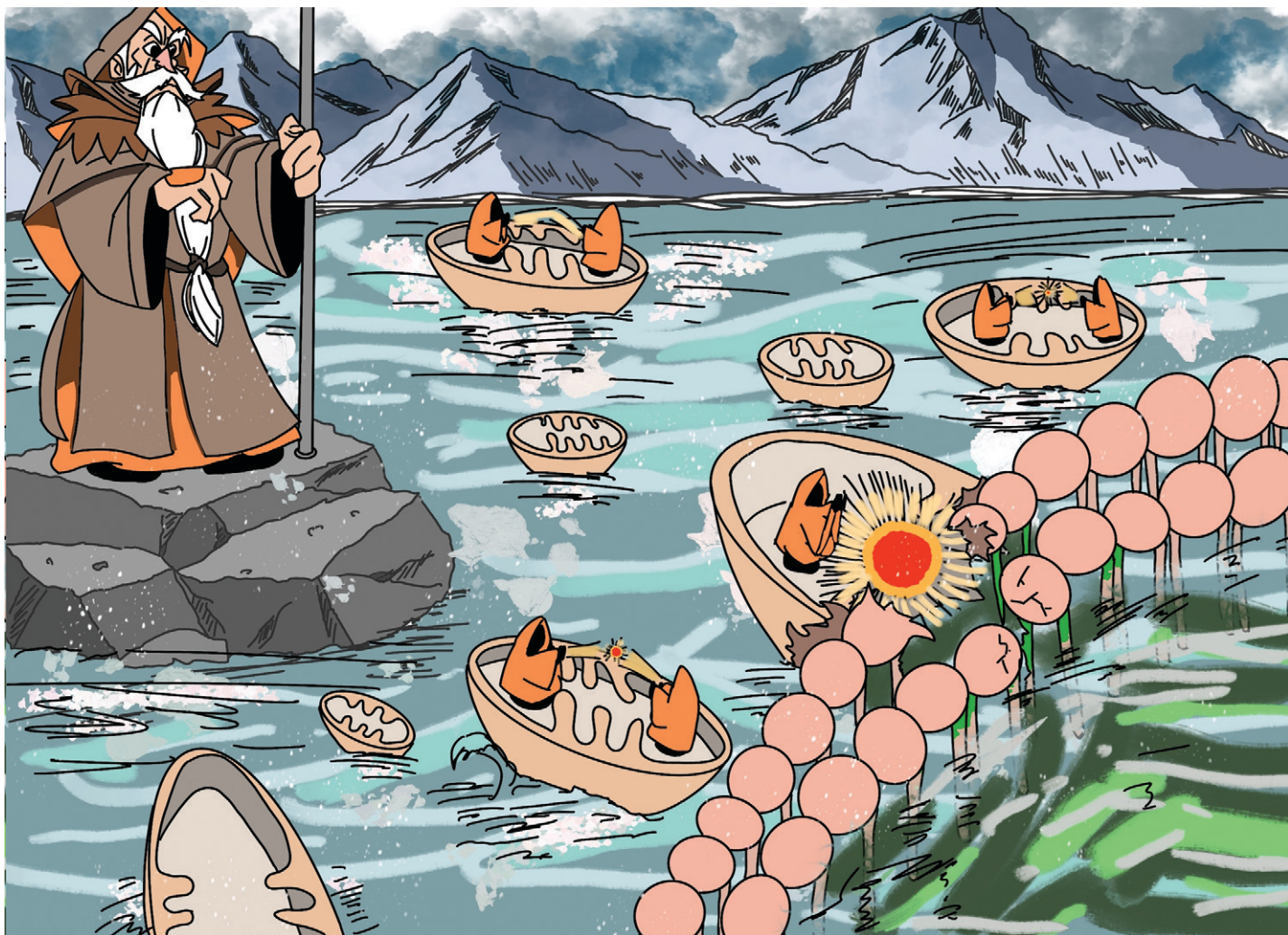
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Showcasing research from Professor Yang Song's laboratory, State Key Laboratory of Environmental Chemistry and Ecotoxicology, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Region, Country.

Copper oxide nanoparticles induce cuproptosis and ferroptosis through mitochondrial concatenation

This work demonstrates that cuproptosis and ferroptosis can be interconnected via mitochondria. Specifically, exposure to CuO NPs leads to cuproptosis in RAW264.7 cells through the accumulation of copper ions. Cuproptosis leads to the inhibition of mitochondrial membrane lipid synthesis, resulting in mitochondrial damage and disruption of intracellular redox balance, ultimately leading to ferroptosis. In vivo, both cuproptosis and ferroptosis were found to contribute to liver damage caused by CuO NPs, along with reduced lipid levels, mitochondrial impairment, and redox imbalance. Copyright owner: Muran Jiang.

### As featured in:



See Xiaoqi Tao, Yang Song *et al.*,  
*Environ. Sci.: Nano*, 2024, 11, 4089.