



**Frank H. Shu**  
University Professor Emeritus  
University of California at  
Berkeley and San Diego

# 2016-2017 Hildale Lecture in the Physical Sciences

Free and Open to the Public

*October 12, 2016*

Wisconsin Institute for Discovery (WID)  
330 North Orchard Street, Madison

Lecture 6:00 PM – 7:00 PM, H.F. DeLuca Forum  
Reception 7:00 PM – 8:30 PM, Atrium

## REVERSING CLIMATE CHANGE ECONOMICALLY

2015 saw an international agreement to limit the mean global temperature rise since the Industrial Revolution to 1.5-2 degrees C. I will present technologies developed by our team that can achieve a reversal of climate change. (1) Supertorrefaction uses the heat capacity of molten salts to convert waste biomass into biocarbon. (2) Two-fluid molten-salt breeder-reactors operate on the renewable thorium fuel cycle. With a combination of these technologies it should be possible to limit the rise of atmospheric carbon dioxide to 350 ppm before year 2100. Thus, children yet to be born may inherit the climate that the older members of the audience enjoyed when they were young.

**Hosted by the University of Wisconsin Astronomy Department through Hildale Fund**