## **Department of Earth Sciences**

### **Research Interest**

My work is focused on the simulations of the structures and compositions of the neutral clouds of different origins with a plasma chemistry model based on the latest space mission data such as Cassini and Rosetta. In addition, I am particularly interested using the ground-based radio telescopes to study the small bodies in the solar system (i.e. Europa, Enceladus, Titan and comets), which can improve understanding of the sources, dynamics and evolution of their neutral exospheres and interactions with the ambient plasma environments.

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#### Background:

2009 Ph.D., Astronomy, National Central University, Taiwan

#### **Post-Degree Appointments**

Jan. 2012 – July 2014 Research Scientist Division of Space Science and Engineering, Southwest Research Institute, San Antonio, TX, USA Dec. 2009 – Nov. 2011 Research Associate (Postdoc) Department of Materials Science and Engineering, University of Virginia, Charlottesville, VA, USA





#### **Publications**

Waite, J. H. et al., (including **Tseng, W.-L.)**, 2018, "Chemical interactions between Saturn's atmosphere and its rings", Science, 362, 2382

Johnson, R. E., **Tseng, W.-L.**, Elrod, M. K., Persoon, A. M., 2017, "Nanograin Density Outside Saturn's A ring", Astrophysical Journal Letters, Vol. 834, No. 4

Gu, H., Cui, J., Liu, D. -D., Welbrock, A., **Tseng, W. -L.** & Xu, X. -J., 2019, "Monte Carlo calculations of the atmospheric sputtering yields on Titan", *Astronomy & Astrophysics*, 263, A18

Coulson, I. M., Cordiner, M. A., Kuan, Y.-J., **Tseng, W.-L.** et al., 2017, "JCMT Spectral and Continuum Imaging of Comet 252P/LINEAR", **The Astronomical Journal**, Vol 153, No. 4



# **Exploring the Solar System**

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