

**Please bring a friend and join us for the next  
Olympia Science Café.**

**When: 7:00 p.m., Tuesday, May 13,  
2014**

**Where: Orca Books 509 East 4th  
Avenue, Olympia Phone 360.352.0123**

Our May topic is *Aerogels: past, present, and future*. Aerogels are unique materials that exhibit the lowest density of any porous solid and have an interesting history dating back to the early 1930s. Aerogels' low-density and mechanical strength have led to several interesting applications including NASA's recent STARDUST mission to return microscopic cometary dust particles to earth with the aim of learning more about the history of the solar system. There is also great interest in using aerogels for thermal insulation due to their ultra-low weight and thermal conductivity. Dr. Peter Pauzuskie will present basic concepts in the field of aerogels, novel processing routes, and exciting properties, with particular emphasis on recent developments in diamond and graphene aerogel materials. His talk will cover a range of interesting applications of aerogel materials, such as in electrical energy storage, and the versatile sol-gel processing approach that has led to aerogels made from technologically-important

materials including silica glass (SiO<sub>2</sub>), various forms of carbon (including diamond and graphene) and, more recently, catalytic metals. Dr. Pauzauskis is Assistant Professor in the Department of Materials Science and Engineering at the University of Washington (Seattle).

***June 2014 Speaker: An overview of air quality in Washington by Dr. Ranil Dhammapala Washington State Department of Ecology***