

**From:** Leticia Colmenares <leticia@hawaii.edu>  
**Subject:** **WCC Community Forum in Chemistry**  
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**To:** ACS-HI <leticia@hawaii.edu>  
▶ 1 Attachment, 0.1 KB

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Topic: Zeolites in Petrochemical Industry and Beyond  
Speaker: Dr. Karl Seff  
When: 1:30-2:30 pm, Thursday, March 12, 2009  
Where: Hale Imiloa 111, Windward Community College

Details: See [http://windward.hawaii.edu/Chemistry\\_Forum/2009\\_Spring/](http://windward.hawaii.edu/Chemistry_Forum/2009_Spring/)

Zeolites have a myriad of applications. They are catalysts, cation-exchangers, and agents for selective sorption. For the most part, they are porous crystalline aluminosilicates, but many framework types and compositions are known. Zeolite Y, because it is the main oil-cracking catalyst, is the most economically important catalyst in the world. Tons of it are in use right now at our oil refineries at Barber's Point. Zeolites are used to separate mixtures of gases and liquids on the basis of size and polarity, so, for example, the octane of gasoline can be increased by allowing straight-chain hydrocarbons to be sorbed into a zeolite. Some zeolites in common use cost less than 25 cents per pound to synthesize. This continues to be an active field for research with new zeolite frameworks and compositions, with associated new uses ranging from agriculture to water treatment, being reported annually.

Karl Seff earned his Ph.D. from MIT and has been a Professor of Chemistry at the University of Hawaii-Manoa for 41 years. He has authored more than 245 scientific papers, most of which are on zeolites, that have appeared in leading scientific journals.

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