ChE SEMINAR

Hybrid Techniques to Improve Oil Recovery

Prof. Kishore K. Mohanty
H. B. (Burt) Harkins, Jr. Professor of Petroleum Engineering,
Director of the Center for Petroleum and Geosystems Engineering
The University of Texas at Austin
Austin, TX 78712, USA
http://www.pge.utexas.edu/facultystaff/profiles/mohanty

Seminar Room
Dept. of Chemical Engineering
Friday January 02, 2015: 04:00 pm

ABSTRACT

Oil recovery can be improved by miscibility, low interfacial tension, wettability alteration, mobility control, and selective plugging. CO2 flooding uses miscibility; surfactant flooding employs low IFT. But hybrid techniques can be developed that combines several mechanisms. In this presentation foams combining surfactants, nanoparticles, and wettability alteration will be discussed. Improved oil recovery in core floods will be demonstrated. Mechanistic numerical simulations that match laboratory experiments and identify field conditions for successful application of the technology would be outlined.

About the Speaker

Kishore Mohanty is a professor and the director of the Center for Petroleum & Geosystems Engineering at the University of Texas, Austin. He received a BS from Indian Institute of Technology and PhD from University of Minnesota, both in Chemical Engineering. He worked at ARCO Oil & Gas Company for 10 years after his PhD. Then he moved to University of Houston where he taught for 18 years before joining UT. He has received many awards including the Lucas Gold Medal from the SPE-AIME in 2013.