**Research & Scholarship**

**CURRENT RESEARCH AND SCHOLARLY INTERESTS**

An objective of the research is to develop new experimental techniques to visualize polymer retention as a result of two retention mechanisms: the adsorption of polymer molecules on the rock surfaces and mechanical entrapment in pores matrices. Two-dimensional micromodels with uniformly constructed pore networks were used as the representation of simplified porous media. In preliminary experiments, retention of partially hydrolyzed polyacrylamide (HPAM) polymers was visually examined. For the pursuit of more fundamental and visual understanding of polymer retention mechanism, we examine the effect of polymer concentration, salinity, shear rate, and type of channel of micromodels on polymer retention.

**LAB AFFILIATIONS**

- Anthony Kovscek, SUPRI-A (9/1/2012)