

Porous Media and Rethinking Assumptions

Kate Washburn, Evan McCarney, Yuesheng Cheng

Nuclear magnetic resonance has been used to characterize porous media for decades. Much of this research has been focused on a few types of materials, such as rocks or cement. As such, many standard analysis methods and interpretations in porous media were developed around these types of systems. In recent years, researchers are now starting to examine new types of materials, such as food or biological samples, through the lens of porous media. However, many of the assumptions and interpretations developed for geological samples break down when applied to different materials. In particular, the standard explanation of surface relaxivity does not appear to be valid in these systems. This talk will discuss challenges encountered as established NMR porous media methods are used to analyze a wider range of materials. Examples will range from oil bearing shale to hydrolysis of fish byproducts.