



**Fuel Research; Study Results from University of Texas Austin Update Understanding of Fuel Research
(Gas Flow Models of Shale: a Review)**

422 words

9 April 2021

Energy Weekly News

ENRGWK

678

English

© Copyright 2021 Energy Weekly News via VerticalNews.com

2021 APR 16 (VerticalNews) -- By a News Reporter-Staff News Editor at Energy Weekly News -- Investigators publish new report on Fuel Research. According to news reporting originating in Austin, Texas, by VerticalNews journalists, research stated, "Conventional flow models based on Darcy's flow physics fail to model shale gas production data accurately. The failure to match field data and laboratory-scale evidence of non-Darcy flow has led researchers to propose various gas-flow models for the shale reservoirs."

Financial supporters for this research include NanoGeosciences Laboratory, Mudrock Systems Research Laboratory (MSRL) consortium at the **Bureau of Economic Geology** (The University of Texas at Austin), University of Manchester, European Commission.

The news reporters obtained a quote from the research from the University of Texas Austin, "There is extensive evidence that suggests the size of the pores in shale is microscopic in the range of a few to hundreds of nanometers (also known as nanopores). These small pores are mostly associated with the shale's organic matter portion, resulting in a dual pore system that adds to the gas flow complexity. Unlike Darcy's law, which assumes that a dominant viscous flux determines a rock's permeability, shale's permeability leads to other flow processes besides viscous flow such as gas slippage and Knudsen diffusion. This work reviews the dominant gas-flow processes in a single nanopore on the basis of theoretical models and molecular dynamics simulations, and lattice Boltzmann modeling."

According to the news reporters, the research concluded: "We extend the review to pore network models used to study the gas permeability of shale."

This research has been peer-reviewed.

For more information on this research see: Gas Flow Models of Shale: a Review. Energy & Fuels, 2021;35(4):2999-3010. Energy & Fuels can be contacted at: Amer Chemical Soc, 1155 16TH St, NW, Washington, DC 20036, USA. (American Chemical Society - www.acs.org; Energy & Fuels - www.pubs.acs.org/journal/enfuem)

Our news correspondents report that additional information may be obtained by contacting Farzam Javadpour, University of Texas Austin, Jackson School of Geosciences, Bur Econ Geol, Austin, TX 78713, United States. Additional authors for this research include Harpreet Singh, Samira Enayati, Arash Rabbani and Masoud Babaei.

Keywords for this news article include: Austin, Texas, United States, North and Central America, Fuel Research, University of Texas Austin.

Our reports deliver fact-based news of research and discoveries from around the world. Copyright 2021, NewsRx LLC

Document ENRGWK0020210409eh49000gp