

Welcome to KFUPM

Dr. Nikolai Pedenchuk

Associate Professor

Geosciences Department

Affiliated with Center for Integrative Petroleum Research



Education:

Pennsylvania State University,
Stage College, USA, 2004

Previous Institution:

University of East Anglia, UK
Associate Professor
2017 - 2025

Research Profile (SCOPUS):

Total Citations: **2,377**
Total Journal Publications: **36**
H-index: **22**

Professional Interests:

Stable Isotope Geochemistry, Organic
Geochemistry of Sediments, Reservoir
Fluid Fingerprinting & Allocation, Carbon-
Flux Modelling & Coastal Monitoring

About Dr. Pedenchuk:

Dr. Pedenchuk is an organic geochemist specialized in stable isotopes ($\delta^{13}\text{C}$, $\delta^2\text{H}$, $\delta^{18}\text{O}$) and compound-specific isotope analyses (CSIA) of biomarkers to investigate carbon cycling and hydrocarbon systems. His work spans biogeochemical and petroleum applications, including source-rock evaluation, biomarker and isotopic oil–source correlation, and reservoir-fluid fingerprinting. At KFUPM's Department of Geosciences in Dhahran, he integrates field observations and laboratory analyses to support petroleum exploration, climate research, and environmental risk reduction. He mentors students and collaborates across biogeochemical and energy projects.