


Stanford



Randall Holmes

Ph.D. Student in Environment and Resources, admitted Autumn 2017

 Curriculum Vitae available Online

Bio

BIO

After completing service in the U.S. Army, Randall transferred into Stanford University where he completed a BS in Civil and Environmental Engineering, Atmosphere and Energy track, as well as a master's degree in Earth System Science. Randall is currently working toward his PhD in Stanford's Emmett Interdisciplinary Program in Environment and Resources (E-IPER). Randall is considering research on the implementation of California's Sustainable Groundwater Management Act, with specific interests in geochemical processes that affect groundwater quality, water policy, and adaptive management with Prof. Scott Fendorf and Prof. Leon Szeptycki.

HONORS AND AWARDS

- Bronze Star Medal, U.S. Army (2006-2007)

PERSONAL INTERESTS

Music. Writing country music and singing pop songs "countrified." <https://www.reverbnation.com/certifiedcountrified>

Currently playing bass and singing in the Bay Area band Redshift. <https://www.reverbnation.com/redshiftstarsmusic>

Research & Scholarship

LAB AFFILIATIONS

- Scott Fendorf, Soil and Environmental Biogeochemistry (5/1/2015)

Publications

PUBLICATIONS

- **Idealized Shale Sorption Isotherm Measurements to Determine Pore Capacity, Pore Size Distribution, and Surface Area** *Energy & Fuels*
Holmes, R. T., AlJamaan, H., Vishal, V., Wilcox, J., Kovscek, A. R.
2019; 33 (2): 665-676
- **CO2 Storage and Flow Capacity Measurements on Idealized Shales from Dynamic Breakthrough Experiments** *ENERGY & FUELS*
Aljamaan, H., Holmes, R., Vishal, V., Haghpanah, R., Wilcox, J., Kovscek, A. R.
2017; 31 (2): 1193-1207
- **Selection of shale preparation protocol and outgas procedures for applications in low-pressure analysis** *ENERGY & FUELS*
Holmes, R. T., Rupp, E., Vishal, V., Wilcox, J.
2017; 31 (9): 9043-9051
- **Methane and CO2 adsorption capacities of kerogen in the Eagle Ford shale from molecular simulation** *ACCOUNTS OF CHEMICAL RESEARCH*
Psarras, P., Holmes, R. T., Vishal, V., Wilcox, J.
2017; 50 (8): 1818-1828

- **Tunable Polyaniline-Based Porous Carbon with Ultrahigh Surface Area for CO₂ Capture at Elevated Pressure** *ADVANCED ENERGY MATERIALS*
He, J., To, J. W., Psarras, P. C., Yan, H., Atkinson, T., Holmes, R. T., Nordlund, D., Bao, Z., Wilcox, J.
2016; 6 (14)
- **A 100% wind, water, sunlight (WWS) all-sector energy plan for Washington State** *RENEWABLE ENERGY*
Jacobson, M. Z., Delucchi, M. A., Bazouin, G., Dvorak, M. J., Arghandeh, R., Bauer, Z. A., Cotte, A., de Moor, G. M., Goldner, E. G., Heier, C., Holmes, R. T., Hughes, S. A., Jin, et al
2016; 86: 75-88