

Hao Xie

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EDUCATION	PhD in geochemistry	expected 2021
	<i>California Institute of Technology</i>	
	MSc. in geochemistry	2017
	<i>California Institute of Technology</i>	
	B.Sc in geochemistry	2015
	<i>University of Science and Technology of China (USTC)</i>	

TEACHING	Teaching Assistant, Ge 101 Introduction to Geology and Geochemistry, <i>Caltech</i>	Fall 2018-2019
	Teaching Assistant, Ch/Ge 127 Nuclear Chemistry, <i>Caltech</i>	Fall 2017-2018
	Teaching Assistant, Ge 1 Earth and Environment, <i>Caltech</i>	Spring 2016-2017

PUBLICATIONS Submitted:

Shuai, Y., **Xie, H.** et al., Recognizing the pathways of methanogenesis through methane isotopologues in the subsurface biosphere. In revision at *Geochimica et Cosmochimica Acta*

Jautzy, J., Douglas P. M., **Xie, H.** et al., CH₄ isotopic ordering records ultra-slow hydrocarbon biodegradation in the deep subsurface. In revision at *Earth and Planetary Science Letters*

In press:

Xie, H. et al., Position-specific distribution of hydrogen isotopes in natural propane: effects of thermal cracking, equilibration and biodegradation. In press at *Geochimica et Cosmochimica Acta*

Published:

Xie, H., Ponton, C., Formolo, M.J., Lawson, M., Peterson, B.K., Lloyd, M.K., Sessions, A.L. and Eiler, J.M., 2018. Position-specific hydrogen isotope equilibrium in propane. *Geochimica et Cosmochimica Acta*, 238, pp.193-207.

Thiagarajan, N., **Xie, H.**, Ponton, C., Kitchen, N., Peterson, B., Lawson, M., Formolo, M., Xiao, Y. and Eiler, J., 2020. Isotopic evidence for quasi-equilibrium chemistry in thermally mature natural gases. *Proceedings of the National Academy of Sciences*, 117(8), pp.3989-3995.

Thiagarajan N., Kitchen N., **Xie H.**, Ponton C., Lawson M., Formolo M. and Eiler J. (2020) Identifying thermogenic and microbial methane in deep water Gulf of Mexico Reservoirs. *Geochim. Cosmochim. Acta* 275, 188–208.

Eiler, J. M., Clog, M., Lawson, M., Lloyd, M., Piasecki, A., Ponton, C., and **Xie, H.**

(2018). The isotopic structures of geological organic compounds. *Geological Society, London, Special Publications*, 468(1), 53-81.

**CONFERENCE
PRESENTA-
TIONS**

Xie, H., Dong, G., Thiagarajan, N., Shuai, Y., Mangenot, X., Formolo, M.J., Lawson, M. and Eiler, J.M., Methane Clumped Isotopologues With High-resolution Gas Source Isotope Ratio Mass Spectrometry. AGUFM (invited talk), 2019, pp.V14B-05.

Xie, H., Ponton, C., Formolo, M.J., Lawson, M., Sessions, A.L. and Eiler, J.M., Position-specific hydrogen isotope distribution in natural propanes: thermal cracking, equilibration and biodegradation. Goldschmidt, 2019.

Xie, H., Dong, G., Formolo, M.J., Lawson, M., and Eiler, J.M., Formation mechanisms of thermogenic methane revealed from $^{13}\text{CH}_3\text{D}$ and $^{12}\text{CH}_2\text{D}_2$ measurements. International Clumped Isotope Workshop, 2019.

Xie, H., Formolo, M.J., Lawson, M., Peterson, B.K., Sattler, A., Sessions, A.L. and Eiler, J.M., Hydrogen isotope equilibria in C1-C5 alkanes. Goldschmidt, 2018.

AWARDS

Cyrus Tang Scholarship For Personal Development and Community Service

USTC 2011-2015

Outstanding Student Scholarship

USTC 2011-2015