

DCO Symposium in Yokohama:

Deep Life, Deep Energy, Reservoirs and Fluxes, and Extreme Physics and Chemistry

Sunday, 26 June 2016

Pacifico Yokohama Conference Center, 5F Room 502 (Same location as Goldschmidt 2016)

Registration: Free

Webpage: deepcarbon.net/symposium-yokohama

Symposium Organizing Committee

Eiji Ohtani (Tohoku University), Fumio Inagaki (JAMSTEC), Kagi Hiroyuki (University of Tokyo) and Yuji Sano (University of Tokyo)

Symposium Goals

Recent progress of the Deep Carbon Observatory (DCO) is transforming our understanding of deep carbon in Earth. DCO leverages the knowledge and skills of a global, interdisciplinary research community of scientists with a shared passion for transforming our knowledge of carbon. Carbon is the most versatile and influential of all chemical elements, yet its nature, extent, and behavior remain largely unexplored on a planetary scale. The international DCO science community will expand our knowledge of deep carbon and its impacts on the lithosphere, biosphere, hydrosphere, and atmosphere.

The DCO Symposium in Yokohama will present recent exciting results from the Deep Life, Deep Energy, Reservoirs and Fluxes, and Extreme Physics and Chemistry Communities. We also take this opportunity to warmly welcome members of the Japanese geochemical, geophysical and geomicrobiological communities to join the [DCO Science Network](#).

DRAFT PROGRAM

8:30-9:00 Registration Open

9:00-9:15 **Symposium Organizing Committee**
Welcoming remarks

Robert Hazen, Carnegie Institution of Washington
Introduction of the DCO

Session 1: Deep Life and Deep Energy

9:15-9:30 **Mitchell Sogin**, Marine Biological Laboratory
Introduction to the Deep Life Community

9:30-9:45 **Isabelle Daniel**, Université Claude Bernard Lyon 1
Introduction to the Deep Energy Community

9:45-10:20 **Ken Takai**, JAMSTEC (Keynote)
Realistic Limits of Biosphere and Habitability under Deep Ocean

10:20-10:45 **David Wang**, MIT
Application of Methane Clumped Isotopologue Measurements for Tracing the Subsurface History of Hydrocarbon Gases

10:45-11:10 **Yohei Suzuki**, University of Tokyo
Deep Life in the Crustal Biosphere: Novel Insights from Recent Drilling Projects

Session 2: Reservoirs and Fluxes

11:10-11:25 **Marie Edmonds**, University of Cambridge
Introduction to the Reservoirs and Fluxes Community

11:25-12:00 **Hiroshi Shinohara**, AIST (Keynote)
Volcanic gas flux from subduction zone volcanoes

12:00-1:30 Lunch

Session 2: Reservoirs and Fluxes (continued)

- 1:30-1:55 **Takanori Kagoshima**, AORI University of Tokyo
Geochemical cycles of carbon and sulfur constrained by the mantle helium-3 flux
- 1:55-2:20 **Takeshi Ohba**, Tokai University
CO₂/H₂O ratio increase along the unrest of volcanic activity at Mt Hakone in 2015: Implication to the compression of magma chamber.
- 2:20-2:45 **Junichiro Ishibashi**, Kyushu University
Carbon flux related to submarine volcanic and hydrothermal activities
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2:45-3:15 Coffee Break

Session 3: Extreme Physics and Chemistry

- 3:15-3:30 **Craig Manning**, UCLA
Introduction to the Extreme Physics and Chemistry Community
- 3:30-4:05 **Toshiaki Iitaka**, RIKEN (Keynote)
Extreme Materials Science with Post-K Computer
- 4:05-4:30 **Koichi Mimura**, Nagoya University
Shock Compression of Organic Matters
- 4:30-4:55 **Hiroaki Ohfuji**, GRC Ehime University
Experimental Study on the Graphite-Diamond Transformation and Its Implication for the Formation Mechanism of Natural Impact Diamonds
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4:55-5:30 **DCO Executive Committee**
Discussion with symposium participants

Craig Schiffries, Carnegie Institution of Washington
Closing Remarks from the DCO
