

First IGBP–SCOR FTI Workshop on "Ocean Acidification - modern observations and past experiences"

Thursday, 28 September

8:30	Welcome/Intro -- T. Kiefer/Ed Urban/Co-Chairs
8:45	Overview Talk Theme A <i>Overview of long-term changes in ocean chemistry over Earth history to glacial-interglacial cycles -- Mark Pagani</i>
9:05	Discussion
9:30	Overview Talk Theme A <i>Chemistry changes at extreme events in Earth history (e.g. PETM, K/T, etc) -- Jim Zachos</i>
9:50	Discussion
10:15	Coffee - Lamont Hall (covered porch)
10:45	Overview Talk Theme B <i>Future ocean chemistry changes predicted on the timescale of decades to centuries -- James Orr</i>
11:05	Discussion
11:30	Overview Talk Theme B <i>Long-term fate of anthropogenic carbon-dioxide emissions -- David Archer</i>
11:50	Discussion
12:15	Lunch - Monell Building (lower lobby)
13:15	Poster Introduction by the Authors -- Chair Ken Caldeira <i>Brief (1.5 min/poster) introduction of the posters by the authors with 1-2 PPT slides. Slides are collated before the workshop.</i>
14:30	Poster session - Monell Building
15:30	Coffee - Monell Building (lower lobby)
16:00	Overview Talk Theme C <i>Controls on past [and future] ocean chemistry -- Andy Ridgwell</i>
16:20	Discussion
16:45	Breakout 1 <i>Ocean chemistry past and future</i>
18:00	
19:30	Workshop Dinner

Friday, 29 September

8:45	Reporting of Breakout 1 groups - Lamont Hall
9:30	Overview Talk Theme D <i>Biological mechanisms of calcification and other processes most likely to be affected by changes in ocean chemistry -- Jonathan Erez</i>
9:50	Discussion
10:15	Coffee - Lamont Hall (covered porch)
10:45	Overview Talk Theme D <i>Experimental results on effects of ocean chemistry changes on plankton -- Ulf Riebesell</i>
11:05	Discussion
11:30	Overview Talk Theme D <i>Experimental results on effects of ocean chemistry changes on benthos (incl. corals) -- Jean-Pierre Gattuso</i>
11:50	Discussion
12:15	Lunch - Monell Building (lower lobby)
13:15	Overview Talk Theme E <i>Marine planktonic response to long-term changes in ocean chemistry over Earth history to glacial-interglacial cycles - gradual and extreme events -- Jelle Bijma</i>
13:35	Discussion
14:00	Overview Talk Theme E <i>Marine benthic response to long-term changes in ocean chemistry over Earth history to glacial-interglacial cycles - gradual and extreme events -- Don Potts</i>
14:20	Discussion
14:45	Poster session - Monell Building
15:30	Coffee - Monell Building (lower lobby)
16:00	Overview Talk Modelling <i>Modeling biogeochemical aspects of ocean acidification -- Richard Zeebe</i>
16:20	Discussion
16:45	Breakout 2 <i>Species extinction and changes in species composition/diversity</i>
18:00	

Saturday, 30 September

8:45	Reporting of Breakout 2 groups - Lamont Hall
9:30	Overview Talk Theme E <i>Evolution of hypercalcifying organisms and their adaptation to ocean chemistry changes -- George Stanley</i>
9:50	Discussion
10:15	Coffee - Monell Building (lower lobby)
10:45	Breakout 3 <i>Physiological adaptation and (micro)evolution</i>
12:00	Lunch - Monell Building (lower lobby)
13:00	Reporting of Breakout 3 groups - Lamont Hall
13:45	Summary Strategy discussion Follow-up activities (e.g. 2nd workshop, sessions, ...) Products (publications, website, ...)
15:30	Coffee - Lamont Hall (covered porch)
16:00	Synthesis Talk <i>Wrap-up and outlook -- Wally Broecker</i>
16:20	Discussion
16:45	Wrap up Discussion
17:30	

Annotations to the program

Overview Talks (20min talk + 20min discussion): Inform community, in particular other disciplines about state of the art: what is and what is not known

Located in Lamont Hall

Themes

A: What were amounts and rates of change in ocean geochemistry in response to changes in atmospheric CO₂ as inferred from the geological record?

B: What are the predicted changes (and uncertainties) in marine geochemistry (pH, seawater chemistry, CCD etc.) for various future CO₂ emission scenarios?

C: What processes were responsible for past changes in ocean acidification?

D: What do present-day studies tell us about the response of biota to changes in ocean chemistry (biomineralisation and other biological processes)?

E: What does the fossil record reveal about the adaptation of marine biota to changes in ocean acidification?

Breakouts

1: Ocean chemistry past and future (How well do we know past ocean chemistry and how well can we predict future ocean chemistry?

What are the prospects for improving our knowledge of ocean chemistry changes and the dynamics that control them?)

2: Species extinction and changes in species composition/diversity

3: Physiological adaptation and (micro)evolution (or: "Oceanic chemical changes: physiological and evolutionary adaptations among ancient organisms")

Breakout Groups (up to 3 parallel): Complete the collection of big questions, challenges, requirements, .etc; all groups address the same questions; random grouping

Workshop Dinner (reservations now closed)

"Il Fresco" – www.il-fresco.com

L15 Kings Highway – across the road from the Holiday Inn in Orangeburg, NY

Phone: 1 845 398 0200

\$29.95 per person (not including drinks, tax and tip)

On-campus Contact

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