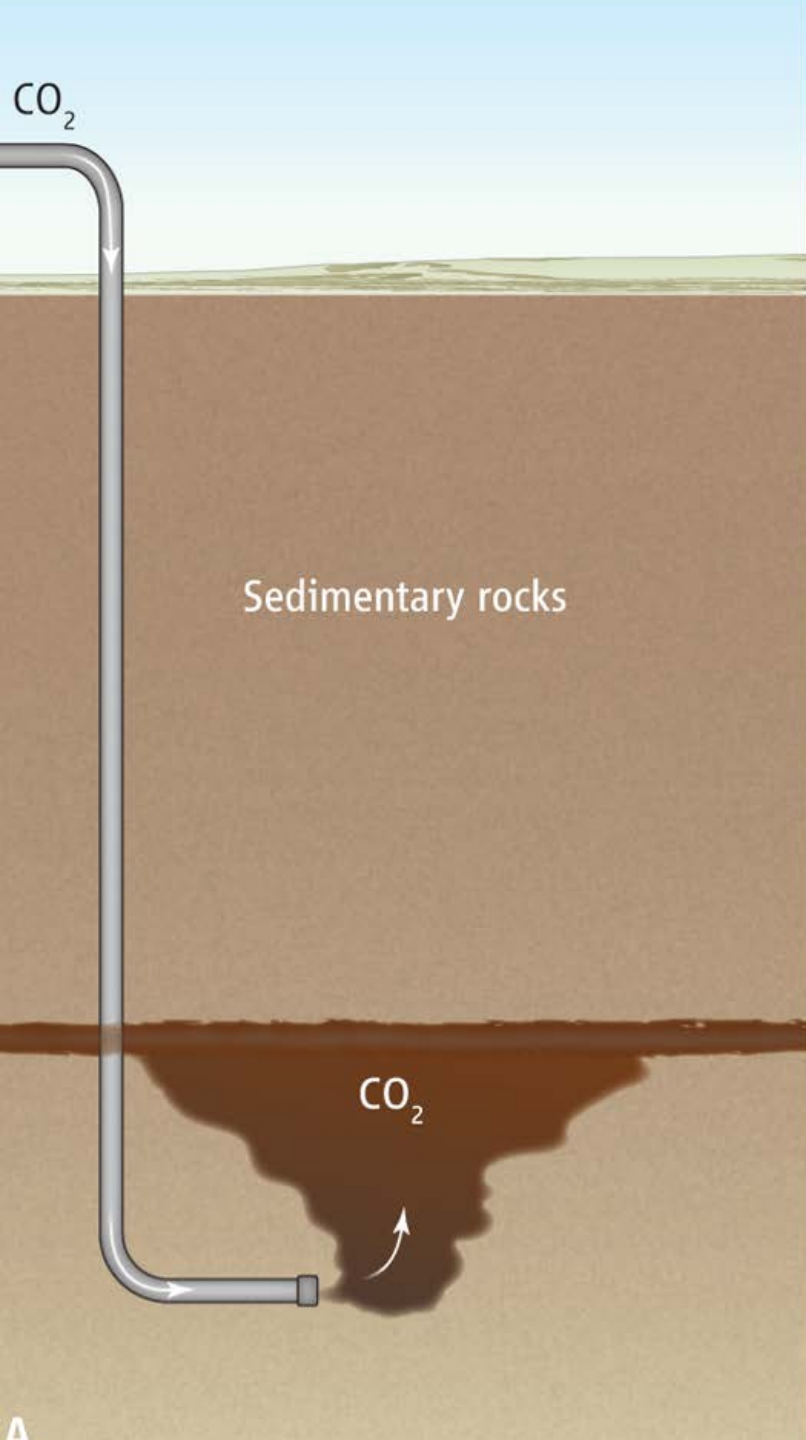
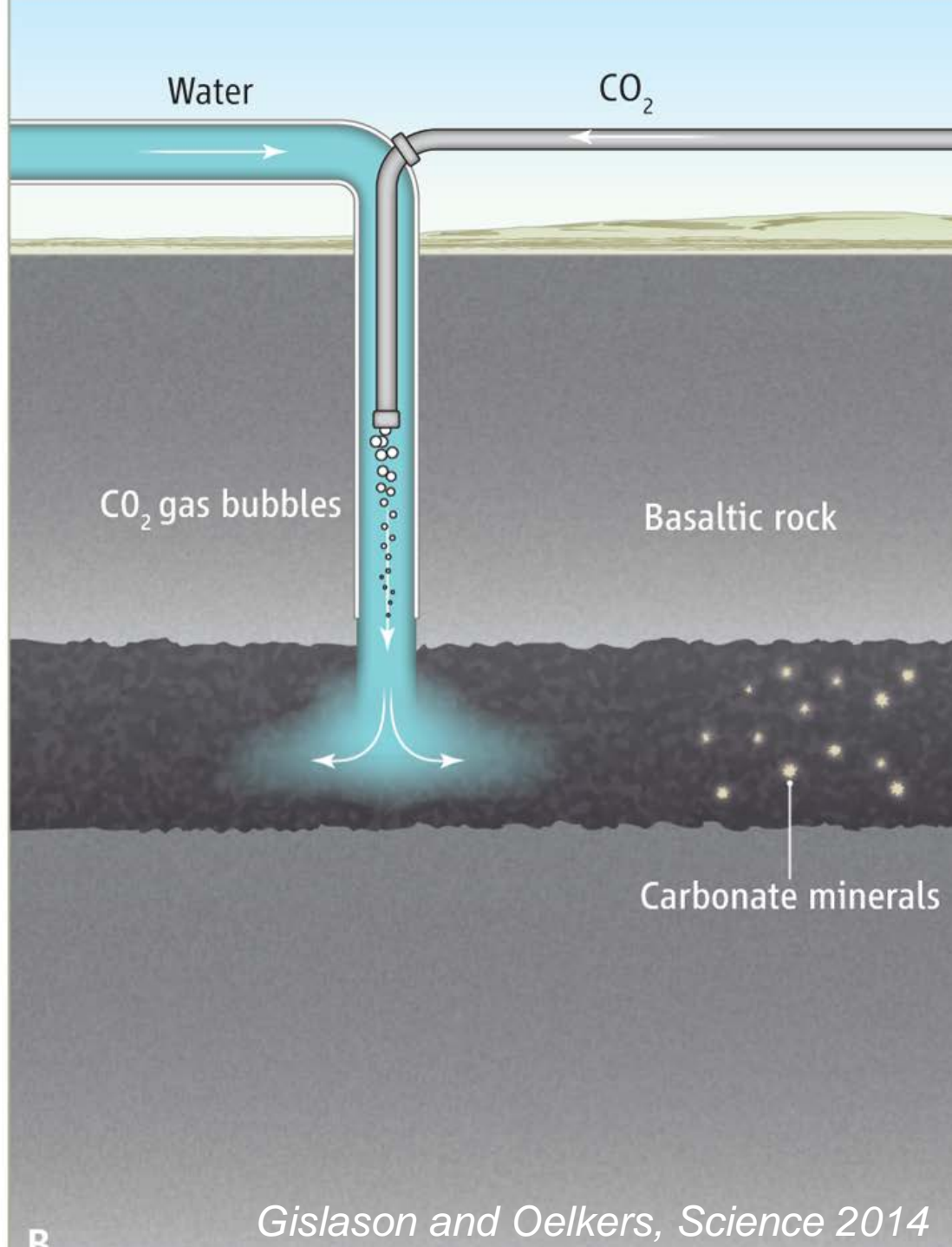
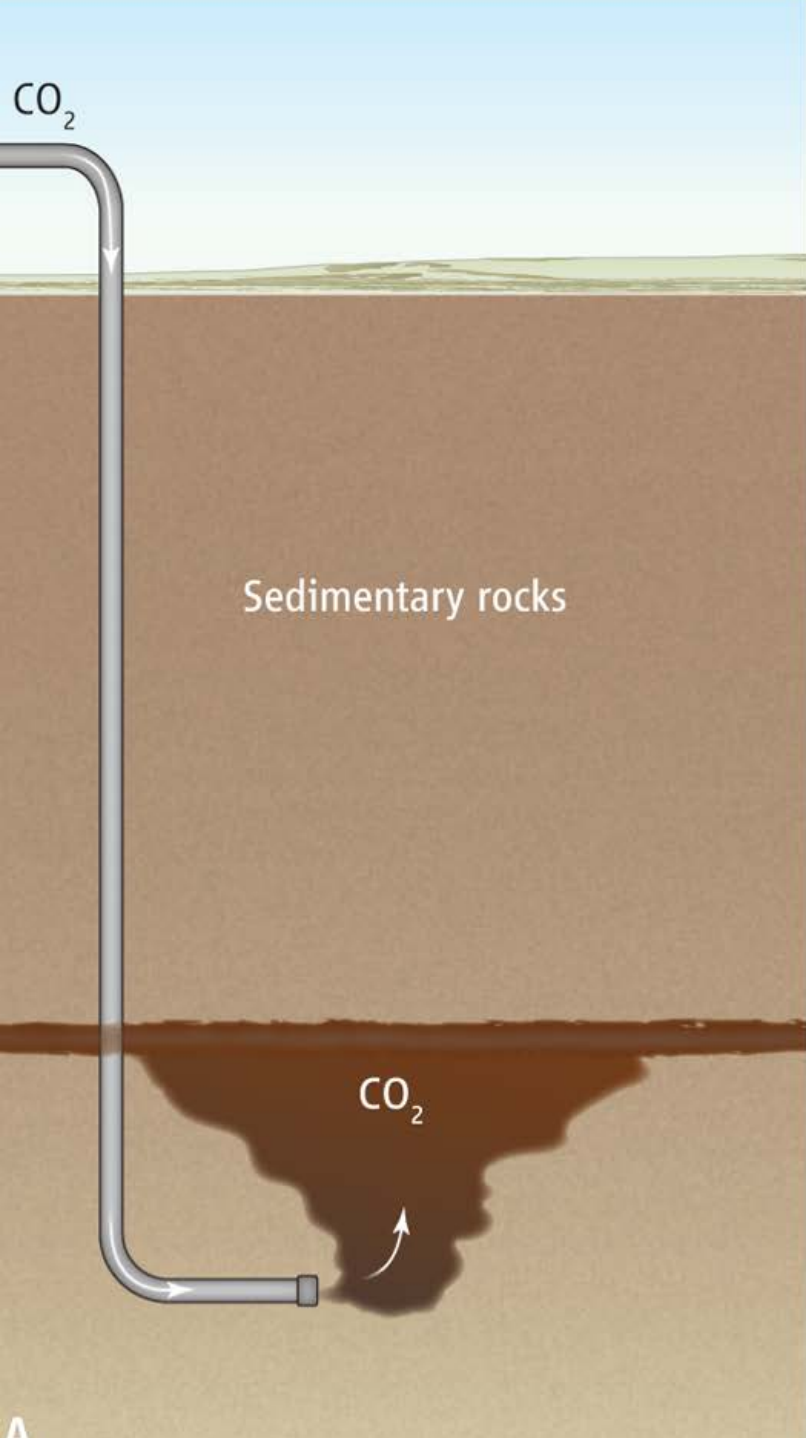


The rapid *in situ* mineralisation of CO₂ and CO₂-H₂S-H₂-gas mixture at the CarbFix site in SW-Iceland

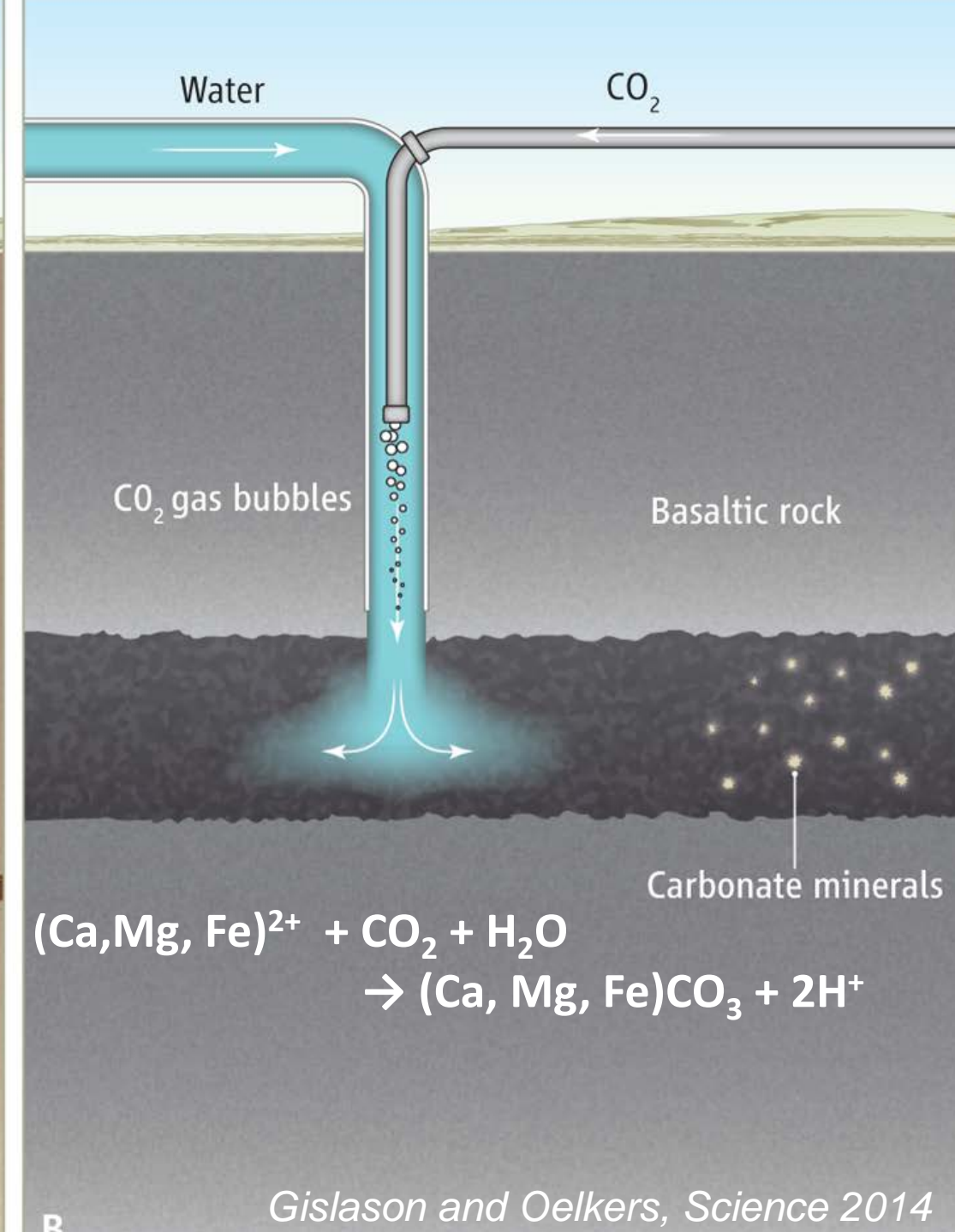
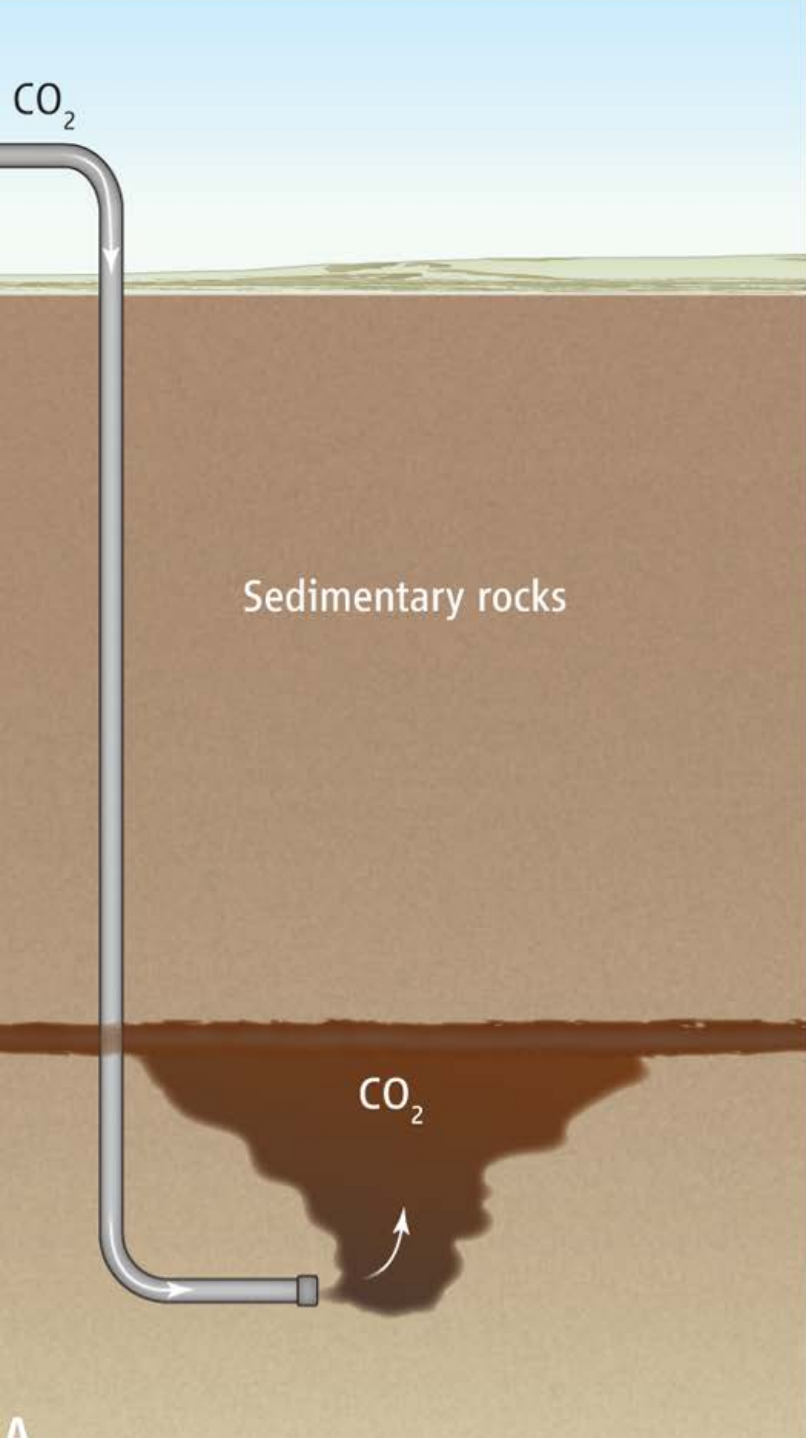
Sandra Ó. Snæbjörnsdóttir¹, Kiflom Mesfin¹, Ingvi Gunnarsson², Edda Sif Aradóttir², Juerg Matter³, Martin Stute³, Eric H. Oelkers⁴, Knud Dideriksen⁵, Susan Stipp⁵, Sigurdur R. Gislason¹

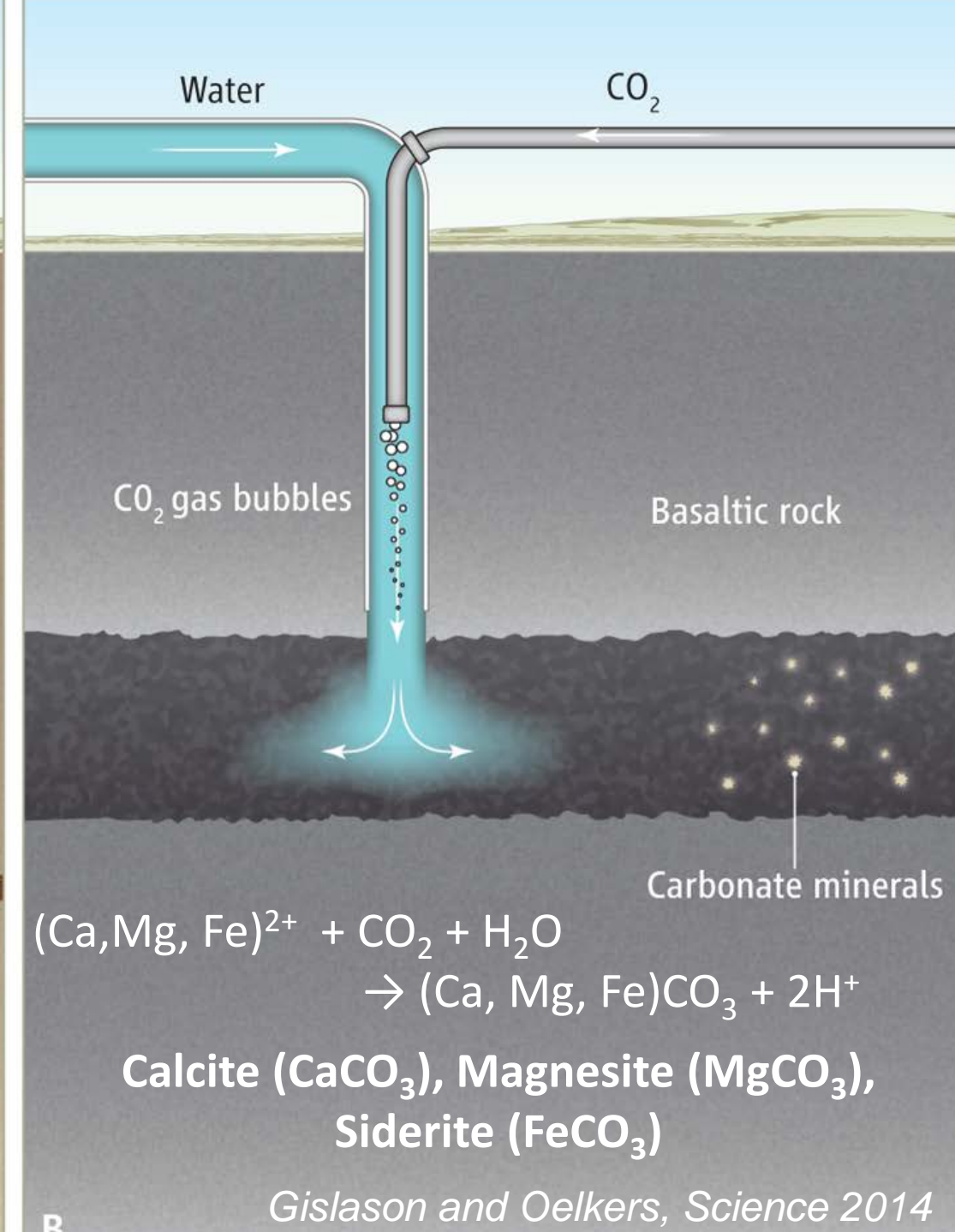
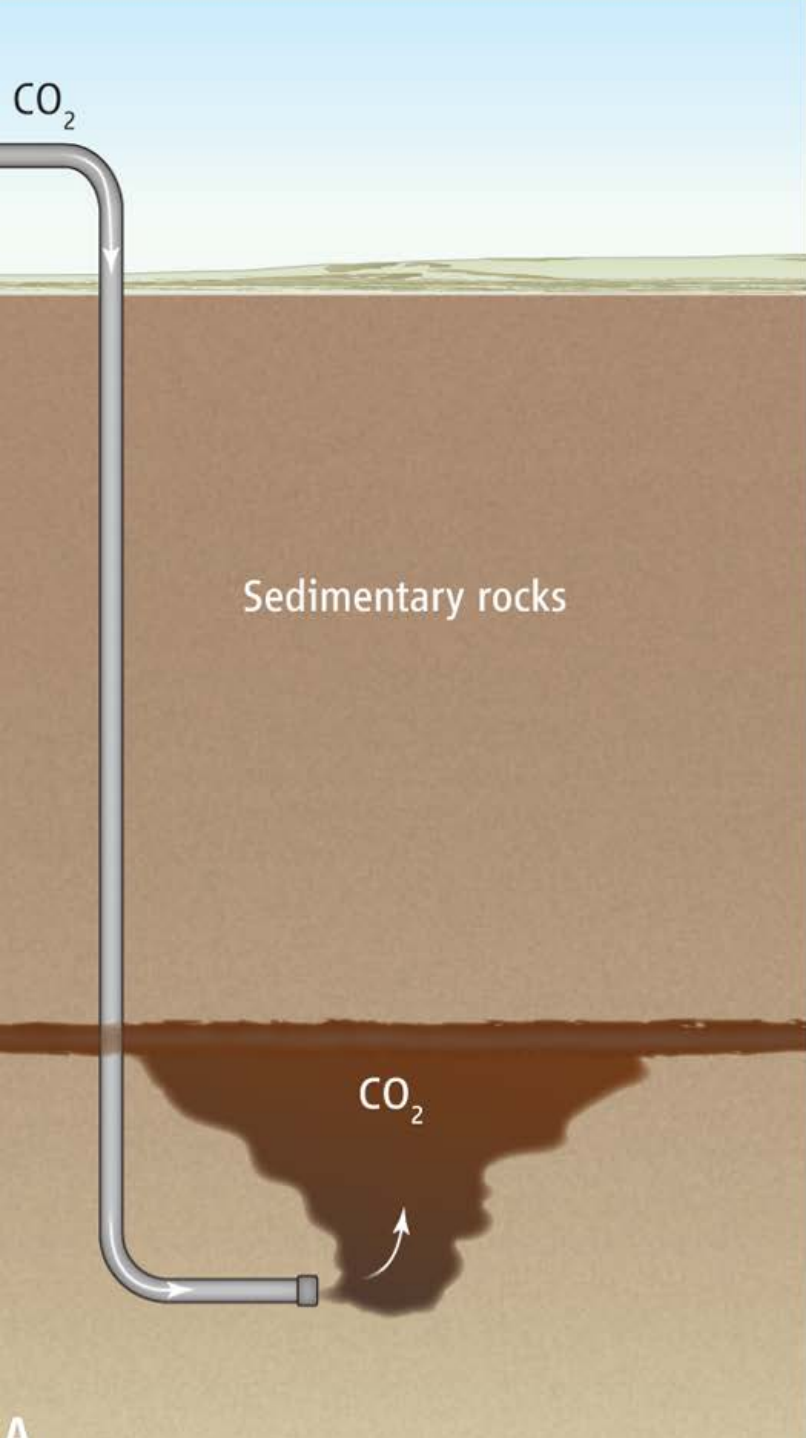
¹Institute of Earth Sciences, University of Iceland; ²Reykjavík Energy, Iceland; ³Lamont-Doherty Earth Observatory of Columbia University, USA; ⁴GET, CNRS/UMR 5563-Université Paul Sabatier, France, ⁵Nano-Science Center, University of Copenhagen, Denmark





Gislason and Oelkers, Science 2014







Basalt covers most of the oceanic floor and about 10% of the continents.





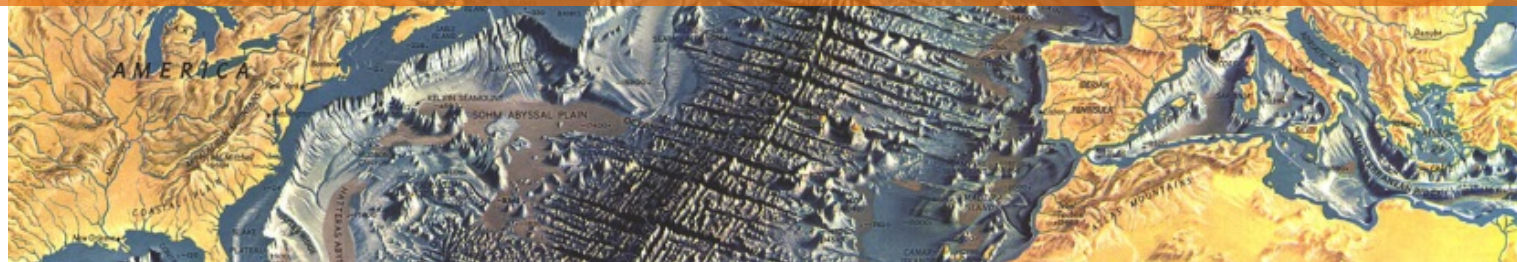
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“The largest storage potential lies offshore, where theoretically all CO₂ from burning of fossil fuel carbon could be stored with long-term advantages for safe and secure CO₂ storage in the mid-ocean ridges.”

Snæbjörnsdóttir et al. 2014, EP



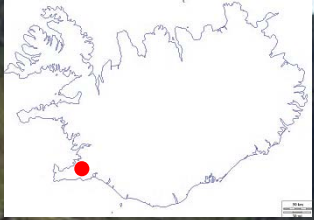
Iceland is the largest landmass above sea level at the mid-ocean ridges, mostly (~90%) made of young and fractured basaltic rocks



“The largest storage potential lies offshore, where theoretically all CO₂ from burning of fossil fuel carbon could be stored with long-term advantages for safe and secure CO₂ storage in the mid-ocean ridges.”

Snæbjörnsdóttir et al. 2014, EP





CarbFix injection site

Hellisheiði Geothermal Plant

Photo: Sigfús Már Pétursson

Chemical monitoring

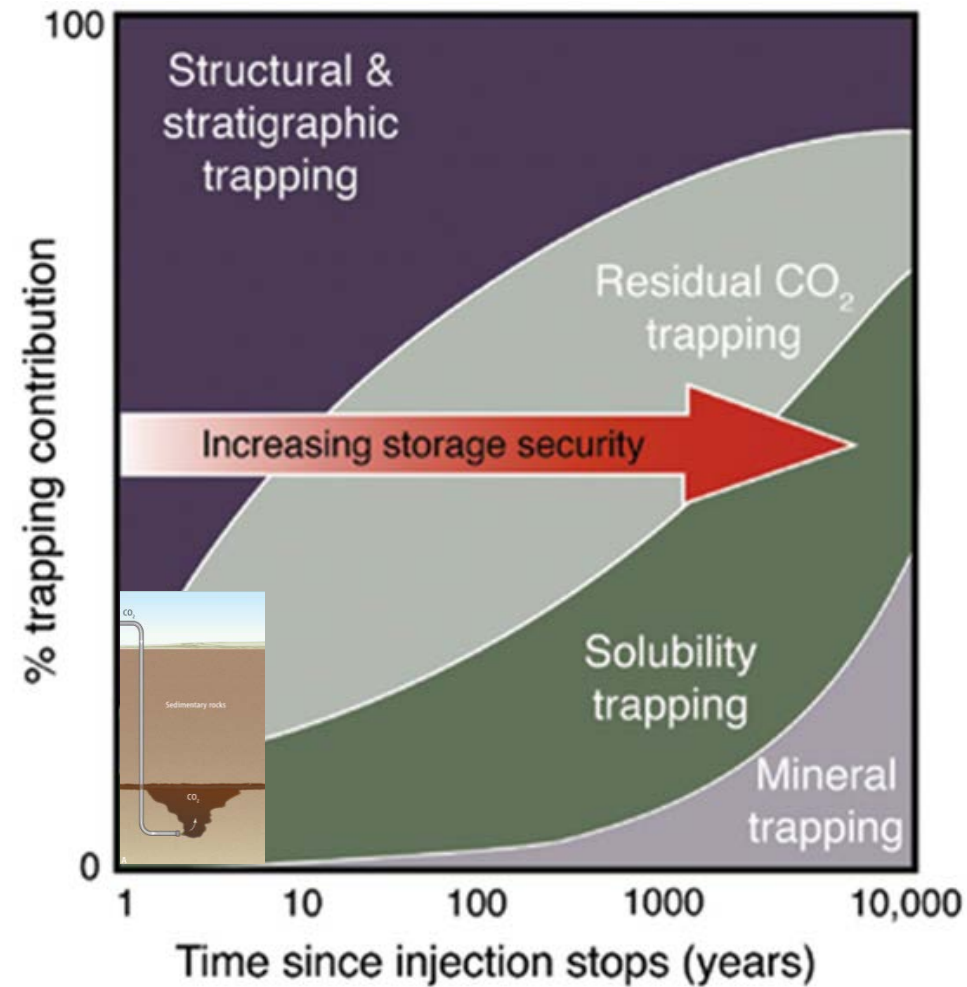




Burying a Mountain of CO₂



Photos: Bára Kristinsdóttir for NYT



Benson et al. IPCC report, 2005



**Thank you
for your
attention!**