



## Sensitivity of the Ocean Carbon Sink to DOM Production

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Mesocosm experiments have shown that phytoplankton will metabolize more carbon than the Redfield Ratio in surface waters when more carbon is available. The extra carbon has however, not been found in the particulate matter and is suggested to move into the dissolved organic pool. Here we use an ocean biogeochemical model to test whether potential CO<sub>2</sub> dependence of DOM production has an influence on marine carbon cycling and thus the oceanic sink for anthropogenic CO<sub>2</sub>. Our focus is on the role of DOC in particle aggregation.