



## **A new approach to investigate effects of CO<sub>2</sub> sequestration within the deep ocean using advanced pressure lab technology**

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Injection of fossil fuel derived CO<sub>2</sub> into the ocean is being discussed as a possible means of moderating the effects of rising CO<sub>2</sub> concentrations in the atmosphere. Several sequestration scenarios are possible, each of which is closely connected to the thermodynamic properties of the CO<sub>2</sub>-H<sub>2</sub>O system at release site conditions. To date, few in situ experiments on the behaviour of liquid CO<sub>2</sub> in the deep ocean exist. However, a well parameterised series of lab experiments is needed to understand phase transition effects at release sites for future modelling. For this purpose, a newly developed pressure lab rated to 55 MPa with an internal volume of 99 L was constructed. A first set of experiments was performed to parameterise the rise velocity of liquid CO<sub>2</sub> droplets as a function of P, T, and droplet diameter.