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## A Review of Some Experimental Spray Methods for Marine Cloud Brightening

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### ABSTRACT

Marine Cloud Brightening (MCB), should it ever need to be deployed, envisions the formation of  $10^{17}$  salt Cloud Condensation Nuclei (CCN) per second coming from each of several thousand vessels deployed worldwide. The creation of this many nuclei on such a vast scale, from micron- or submicron-sized seawater droplets, preferably mono-disperse, poses a considerable engineering challenge. Various existing or experimental spray methods were investigated for feasibility, resulting in the identification of a few with promising results. Electro-spraying from Taylor cone-jets, using either silicon micromachined long capillaries or short capillary polymer substrates attached to a porous substrate, appears to have the best potential for implementation of all the methods that have been investigated so far.

### KEYWORDS

Marine Cloud Brightening (MCB); Cloud Condensation Nuclei (CCN); Taylor Cone-Jet

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