

Interactive comment on “Cloud Condensation Nuclei Activity of CaCO₃ Particles with Oleic Acid and Malonic Acid Coatings” by Mingjin Wang et al.

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We thank the referee for the constructive comments. The responses are attached as pdf-file, with an extra figure.

Please also note the supplement to this comment:

<https://www.atmos-chem-phys-discuss.net/acp-2017-897/acp-2017-897-AC2-supplement.pdf>

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2017-897, 2017>.

C1

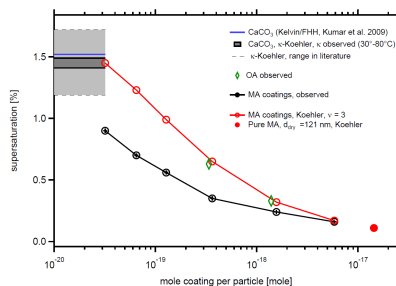


Figure S1: Comparison of SS_{crit} predicted by Köhler and Köhler/FHH theory with observations. The red circles are predictions by the Köhler theory for aqueous MA solutions assuming full dissociation, the black points present the observation. The red filled circle represents the Köhler prediction of SS_{crit} for 121.0 nm particles made of pure malonic acid. The horizontal lines give reference values for the bare CaCO₃ particles as calculated from our observed κ (black) and predicted by Köhler/FHH theory (blue). Light grey area between the thin dashed black lines indicates the range of SS_{crit} for 101.9 nm particles calculated from the range of κ in literature for wet generated CaCO₃ particles. Green diamonds show observed SS_{crit} for the two thickest OA coatings.

Fig. 1.

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