

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.

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Discussion paper



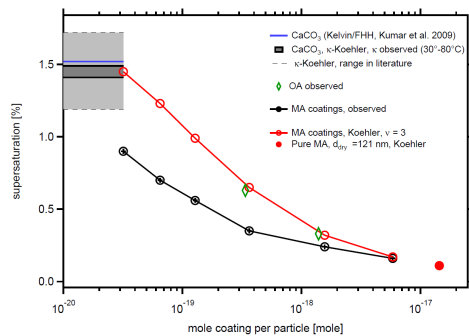


Figure S1: Comparison of SS_{crit} predicted by Koehler and Koehler/FHH theory with observations. The red circles are predictions by the Köhler theory for aqueous MA solutions assuming full dissociation, the black points present the observation. The red filled circle represents the Koehler prediction of SS_{crit} for 121.0 nm particles made of pure malonic acid. The horizontal lines give reference values for the bare $CaCO_3$ particles as calculated from our observed κ (black) and predicted by Koehler/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 $CaCO_3$ particles. Green diamonds show observed SS_{crit} for the two thickest OA coatings.

Fig. 1.

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