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Colloids clustering in meniscus free surface with alternate electric fields¹ MAXIMILIANO GIULIANI², MOORTHY PICHUMANI³, WENCESLAO GONZÁLEZ-VIÑAS, Universidad de Navarra — To fabricate colloidal crystals of appreciable homogeneity by the vertical deposition method, it is necessary to maintain throughout the process: (a) a constant and homogeneous colloid concentration and (b) a constant speed of the contact line. We study the effect of alternate electric fields on charged colloidal particles suspended in water. The experimental setup recalls the vertical deposition configuration but without evaporation. We explore and report experimental results on clustering instabilities that appear due to electrowetting at electric fields and frequencies of the order of 1V/mm and 1Hz respectively.

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³Refer 2

Maximiliano Giuliani
Universidad de Navarra

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